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The Perception of Intangible Digital Tourism Heritagetowards the Development of Collaborative Heritage Digital Industrial Revolution 4.0 (IR 4.0) Model

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Abstract
Cross-border digital tourism is possible, and international cooperation has been expanding recently. Performance in the tourism sector makes up a significant portion of Malaysia's service economy (The World Factbook, 2019). Malaysia experienced an economic crisis in 2021, which has an impact on the tourism industry. Additionally, according to data from the Ministry of Tourism, the number of visitors decline by 1.5% in March 2020. The most crucial aspects of the performanceof the tourism industry, such as Intangible Cultural Heritage, will be evaluated by the model definition. This study will improvise the model by including digital viewpoints by using the hybridization technique. The preservation of intangible cultural assets is important for the economy. Therefore, safety precautions must be taken. Unfortunately, among all agendas in 21 Action Plans, none of it mentions digital heritage tourism. Therefore, participation insafeguarding efforts from society, the populace, and, when appropriate, those who are descendants of such legacy is always required. To sum up, intangible cultural heritages build links between the past, present, and future; they maintain continuity; and they alter the social structure as a result of experiences. Hence, the main objective of this study is to adopt a new Heritage Digital Industrial Revolution 4.0 (IR 4.0) Model for National Ecotourism Plan. The findings will help the government in updating the National Ecotourism Plan under NKEAs. Lastly, it will guide the government by understanding the important need of visitors and it can apply to other heritages sites in Malaysia.
Keywords: Digital Industrial Revolution 4.0 (IR 4.0) Heritage Model, National Ecotourism Plan, Tourism Sector Performance, Intangible Cultural Heritage

Introduction

The Covid -19 pneumonia of unknown cause jolted Wuhan, Hubei Province, China, in December 2019, spread like wildfire across Asia and the world, and was declared a public health emergency of international concern by the WHO by the end of January 2020. This event had a negative impact on tourism, as hotels and tour operators experienced cancellations from vacationers. The simultaneous disappearances of Malaysia Airlines System (MAS) flights MH370 and MH17 over a four-month period have resulted in a significant drop in tourist numbers for this country. The majority of the passengers on the missing MH370 were Chinese, and as a key source of visitor arrivals in Malaysia, Malaysia has pinned much of its hopes for future development on this sector. Aside from that, false reporting and acts of some yellow journalism about Malaysia should be viewed asa new threat to the country's image. Some websites also named Kuala Lumpur as one of the world's ten most dangerous cities. In this regard, the heritage revenue management model seeks to maximise revenue through price differentiation while taking willing to pay and purchase behaviour into account. However, when these principles are applied to tourism heritage sites, a conflict may arise. In the case prices are raised, a portion of the population will not be able to afford access. Lowering prices may result in an overabundance of visitors, resulting in collateral damage such as wear and tear, littering, crowding, and so on, resulting in a low-quality tourist experience. Heritage site ownership is frequently linked to a national, regional, or even local trust-type enterprise. The cost of maintaining a historic asset is frequently only partially covered by profits from visitor fees. Malaysia aims to increase business tourism arrivals to 2.9 million by 2025, contributing RM3.9 billion to the GDP and creating 16,700 new jobs through the National Ecotourism Plan. The government has recently organised a number of interesting cultural heritage activities. Indeed, according to Malaysia's Ninth Plan, several strategies under the Ecotourism Plan have already been implemented to ensure the tourism industry's long-term viability.

Literature Review

Heritage tourism is one of the oldest forms of travel for leisure, and more recently an important resource for the tourism industry (Navarrete, 2019). In the age of globalization and in the face of today's fast-paced consumer society, the identification and interpretation of historical information and cultural value embedded in the cultural heritage of a country/nation-state has become the key for establishing both self and national identity (He et al., 2017). Positioning heritage as economic resource has led to a thriving heritage tourism industry becoming "one of the most powerful economic, social, cultural, ecological and political forces in the world today" (Timothy & Boyd, 2006). Intangible heritage has become more important as a unique territorial value that must be experienced firsthand. Richards (2018) highlighted that the relevance of studying intangible tourism for destinations for two big reasons: tangible heritage is increasingly hard to conserve over time and new visitors want to enjoy new experiences. The tourism sector, which extensivelyrelies on technology for the provision and delivery of services, illustrates the needs of smart tourism development for the benefits of tourists, the host and the destination. Although it does not currently prioritise digital well-being as a key goal, smart tourism development emphasises government-industry collaboration and new governance systems, which may aid in this process. It is noteworthy that different researchers make a distinction between smart tourism and e-tourism (Gretzen, 2015). He added that ICTs and IoT can improve the experience and increment the competitiveness of the destinations by providing personalized

products and services during the travel. Recent advances in science and technology have drastically transformed how people share knowledge and communicate, as well as transformed several traditional industries. The E-tourism uses the benefits of ICTs to create channels in order to exchange information through digital chains and the virtualization of tourism and smart tourism destination services while Smart Tourism adopts the benefits of virtual processes and tools, combining it with the physical world to build a strong destination experience for the tourist. The new tourism concept opens an online tourist market which allows interaction among the visitors/tourists and the territory via tourism digital market. It enables smartphone-based engagement between the hosts, the travellers and the destination at present time. Anticipating methodological challenges to quantify these digital tourists, limitations of time, place and activity may be proposed, in line with the defining characteristics of leisure (Henderson, 2008). For instance, the Intangible Cultural Heritage (ICH) represents the spiritual height of human cultural heritage, and has gradually become an important part of tourism resources. In the process of promoting the ICH protection, local governments have realized that the combination of ICH and tourism development is a harmonious way for both protection and utilization, which not only creates a good ICH environment but also promotes the exploitation and inheritance of the value of ICH through tourism development (Aph & Dacia, 2016). Digital heritage intergrates cultural heritage with the natural environment and the human activities at the destination. The importance of digital heritage is not only seen in the application of digital technologies, but rather in the openness, adaptability, and capability for constant information exchange (sharing ideas via internet platforms and social media). In relate to that, Zhang et al (2017) emphasized that heritage digitization has a great value and significance for contemporary people and future generations in terms of long-term protection and conservation, relies on new especially digital-born resources that are produced, disseminated, applied, and preserved as important information data and innovative forms of representation. Therefore, Intangible Digital Tourism Heritage should be adhere to rigorous academic standards towards the Development of Collaborative Heritage Digital Industrial Revolution 4.0 (IR 4.0) Model.

Research Methodology & Findings

Table 1

Respondents' Perception on Intangible Digital Heritage

Intangible heritage		Frequency	Percent %
Perception	Moderate	7	1.6
	High	432	98.4

Based on the result, the researcher can understand that majority of respondents in this study are having a high perception towards intangible digital heritage in Melaka or Penang which covering up to 432 or 98.4 % of respondents, and on 7 or 1.6 % of respondents have a moderate perception on intangible digital heritage in Melaka or Penang. Plus, this can also have explained that most of the respondents taking cultural heritage in Melaka and Penang are highly valued and well conserved. Besides, the result proved respondents taking Melaka or Penang's cultural heritage as one of the best destinations for cultural heritage tourism which can be good for Malaysia in bringing a better intangible digital heritage reputation in

this type of industry. Plus, the researcher also can justify that cultural heritage in Penang or Melaka are very attractive and interesting to local and international tourists.

Table 2
Respondents' intangible perception on digital tourism performance.

Digital Tourism Performance		Frequency	Percent
Perception	Moderate	9	2.1
	High	430	97.9

Based on table 2, there are 430 or 97.9 of respondents have a high intangible perception on digital tourism performance, and only 9 of respondents have moderate perception towards this dependent variable or equal to 2.1%. This can be considering that all respondents agreed that Melaka or Penang can be taken as one of the best destinations for heritage tourism and all respondents are willing to revisit heritage sites in Melaka or Penang for virtual tourism. Besides, most of the respondents also agreed to recommend Melaka or Penang to other friendsas heritage digital destination and this proved that respondents also admit economic activities across heritage sites or places in Melaka or Penang is well manage and help local people to generate better income through digital tourism development. Besides, 97.9% of respondents agreed to visit Melaka or Penang because the culture and souvenirs in heritage sites are unique if compared to other heritage places and destinations.

Table 3
Respondents' Intangible Perception on Heritage Digital as Brand Identity

Heritage as a brand identity IntangibleDigital		Frequency	Percent
Perception	Moderate	12	2.7
	High	427	97.3

According to the table 3, 427 or 97.3% of respondents agreed that heritage digital should be as a According to table 3.3, 427 or 97.3% of respondents agreed that heritage digital should be as a brand identity which they havea high intangible perception towards heritage tourism in Malaysia. Plus, there are only 12 or 2.7% of respondents that only have moderate perception in these variables. Besides, this can indicate that majority of the respondents also agreed that UNESCO help in building a better brand for heritage sites in Melaka or Penang which this can show that UNESCO creates awareness to local and international tourist on the heritage sites in Malaysia. Plus, 427 respondents taking heritage sites across Melaka or Penang as a national treasure of Malaysia and they also agreed that heritage culture and building within Melaka or Penang is important in developing a better understanding of the uniqueness of Malaysia's identity.

Conclusion
The result in this research could provide up-to-date information and data to be used by the government or other important parties in order to meet the tourist's needs and wants.The implication of the findings in this study can give focus on the upcoming national strategy plan that parallel with the objective of the Economic Transformation Programme (ETP) and also

National Ecotourism Plan whereby the result in this study already prove the importance of heritage digital model in tourism performance in Malaysia. Then, the government should realize and bring an alternative to heritage tourism through a new digital technology strategy plan in which can have a great project that preserves and taking heritage as an attraction to local and international tourists (Azman et al., 2020). As being highlighted, UNESCO is a worldwide brand that already assists and help in promoting Malaysia as a heritage tourism destination but sadly government does not aware on the opportunitywhereby there are no alternative or projects that can build better facilities across heritage sites or places across Malaysia through National Key Areas (NKEA). In conclusion, this study confirms that a tourism heritage digital now connects with three aspects that associates with digital aspects, tangible aspects, and intangible aspects towards the community and tourists (Abd Rashid et al., 2020). The digital narrative method is considered as a new method of entertainment element and transmission of knowledge of the museum. Although the development of the digital field is growing steadily, its adaptability to the application of tourism heritage remains low. This is because the adaptation of digital technology is one of the aspects that promotes a more interactive economy based on tourist heritage and serves as a means for the development of knowledge. Expand the new dimension of tourism heritage digital technology development, attract tourists to engage in tourism heritage business, such as the recommendation of exhibitions. With the development of digitization, digital exhibitions of tourism heritage present new forms. Technology-based on the needs of the community on this day(Samah et al., 2015). The implementation of digital technology in tourism heritage is not only more active, it even provides a continuation of the paradigm for socio-economic communities through cultural tourism. This is because the digitization of tourist heritage is one of the main drivers of cultural tourism in a country. This is important because the community's culture and cultural objects, such as crafts, customs, and culture, serve as thecommunity's median income through tourism. Finally, this research shows that the digitization of tourism heritage is not established as a data storage center, but is related to education, competition, and communication. This is because the importance of tourist heritage figures can be assessed by the presence of tourists.

Acknowledgements

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