User Perception Towards Tourism Mobile Application

Wan Ab Aziz Wan Daud[1], Mohammad Taufiq Abdul Ghani[2*], Ahmad Zaki Amiruddin[1], Wan Ahmad Ridhwan Wan Musa[3], Ahmad Hakimi Mohd Yasim[3]

[1] Faculty of Language Studies and Human Development
Universiti Malaysia Kelantan, Malaysia

[2] Faculty of Languages and Communication
Universiti Pendidikan Sultan Idris, Malaysia

[3] Universiti Malaysia Kelantan, Malaysia

* Corresponding Author
taufiq@fbk.upsi.edu.my

ABSTRACT

Mobile technology and applications are gaining popularity at a rapid speed, surely altering consumer and provider behaviour. The tourism sector is critical to Malaysia's economy since it provides revenue for the country. A significant increase in the number of high-spending tourists has recently visited Malaysia. Specifically, a mobile application for tourism in Malaysia is required to make their journey in Malaysia more comfortable and convenient. Therefore, this study explores the user perception of mobile tourism applications, namely "MehMakey" (Let's eat), which developed by using Flutter and WordPress as the central platform development. Developing this mobile application aims to provide smart and thorough guidance to tourists and enhance their technology experience. This is a qualitative study, and data were gathered via a semi-structured focus group interview with sixteen tourists who had been exposed to the mobile tourism application. The participants were purposefully picked based on a number of defining criteria. Prior to semi-structured interview conducted, an extensive testing has been performed to ensure the app is free from faults. The major finding illustrates that the MehMakey app offers adequate information to tourists. Besides, it provides a user-friendly interface and is interactive to sustain user engagement.

1. INTRODUCTION

Travelling is designed for various reasons, including pleasure, business, and educational pursuits. To be stated, tourism is the act of travelling to and staying in locations outside of one's immediate environment for not more than one year for pleasure and not less than 24 hours for business or other objectives. Tourism can be classified as either domestic tourist, in which travellers can only travel within their own country or international tourism, in which travellers can go to other nations. International tourism is a fantastic method for a country to showcase its distinct culture and lifestyle, food and traditions, as well as its natural assets, to people who are not native to the country. Since Malaysia's independence, the tourist industry has been critical to the country's economic prosperity. Recognising the significance of tourism, the government established the Ministry of Tourism, Arts, and Cultures (MoTAC). Previously, the tourist industry was regulated by the Tourism Development Corporation of Malaysia (TDC), a government organisation created on 10 August 1972 under the previous

Ministry of Trade and Industry. TDC was relaunched as Malaysia Tourism Promotion Board (MTPB) in 1992, following the creation of MoTAC on 20 May 1987. MTPB is dedicated to promoting Malaysia's local attractions to domestic and international travellers. At the moment, MTPB is referred to as Tourism Malaysia.

The new era of information and communication technologies has created a plethora of new instruments for the tourism sector. Given that the tourism industry is well-suited for substantial operational and corporate use of information technology, it's unsurprising that the concept of smart tourism destinations has grown pretty swiftly (Koo et al., 2016). Smart tourism is defined as the use of technology such as the internet, mobile communication, and augmented reality to collect massive amounts of data and provide real-time support to all destination stakeholders (Gretzel et al., 2015; Hunter et al., 2015).

Molz (2012) defines smart tourism as the following: connectivity via location-aware web applications; tourists as co-producers of destination content; enhancing experiences through new technologies (augmented reality); connecting and interacting with local communities and other tourists in the destination; and enhancing social and environmental sustainability.

In smart tourism, technology refers to the infrastructure that combines hardware, software, and network technologies to offer real-time data that enables all stakeholders to make more informed decisions (Gretzel et al., 2015). Mobile technology, particularly the use of smartphones and their applications, have a considerable impact on the development of smart tourism. The rapid advancement of mobile technology has sparked academic interest, and there is a need to explore in deep.

In Malaysia, there is currently a dearth of comprehensive mobile tourism applications (Daud et al., 2021). The market's existing uses are limited to specific industries, such as food and hospitality. As a result, travellers require a variety of applications for a variety of purposes. Thus, this study aims to investigate the design and development of a comprehensive tourism application that satisfies the desires and needs of tourists on a variety of levels. By utilising this application, travellers can gain easier access to information and streamline their travel arrangements while in Malaysia.

2. LITERATURE REVIEW

When more consumers and vendors began to rely on ICTs for purchasing decisions and marketing campaigns, academics were interested in incorporating advances such as smartphone and wireless technology in the tourism business (Liang & Sun, 2014; Liu & Zhang, 2014; Zhong et al., 2013). Consumers are more likely to adopt mobile technologies and applications if they believe they are useful, simple to use, and compatible (Lu et al., 2015) for tasks such as searching for travel information (No & Kim, 2014), purchasing travel-related services (Morosan, 2014; Morosan and DeFranco, 2014), making hotel reservations (Ozturk et al., 2016; Fong et al., 2017; Park and Huang, 2017), or enhancing customers want to save time, be more efficient, and successful while using mobile technology and applications (Bader et al., 2012).

Numerous hotels and travel companies have developed mobile applications that provide service assistance, additional information, and the ability to make or change reservations. Developing strategies to encourage customers to download mobile applications continues to be a significant challenge in the hospitality industry. Dorcic et

al. (2019) and Mo Kwon et al. (2013) demonstrated that promotional information was not the sole motivation for mobile application downloads. Consumers' proclivity to use mobile applications is strongly influenced by content information (Rivera et al., 2016). According to a study conducted by Im and Hancer (2014), the primary reasons for downloading mobile applications in the hospitality industry are to obtain company information and to conduct a transaction via smartphone.

There is strong evidence that more and more people use their mobile devices when they go on vacation. There is no doubt that there is a connection between how well people can use the internet and how much they use mobile apps, as well as how they feel about mobile apps and how likely they are to use them (Abdul Ghani et al., 2022; Rivera et al., 2016). It's not just utilitarian values like perceived usefulness and ease of use that make people want to use mobile apps to book things, but also hedonic values like perceived enjoyment and pleasure. Kim et al. (2015) found that people who shop for tourism products and services on mobile sites do so because they enjoy it. Value is the most important factor in making people happy when they shop on mobile sites. To get more people to book hotels on their phones, booking systems need to be easy to find and use, let customers control the process during the transaction, and give them a safe place to shop (Ozturk et al., 2016).

Today's tourists are closely integrated, technologically savvy, and eager to interact with mobile devices. Nunes and Mayer's (2014) study indicated that tourists are receptive to adopting mobile games to enhance their experience if the application is practical, engaging, and compatible with the surroundings. With the advancement of smartphone technologies, augmented reality (AR) applications have grown in popularity.

Jung et al. (2015) performed one of the earliest attempts to quantify customer happiness and referral intent. Their study discovered that theme parks are an appropriate market for augmented reality applications and that content, customised service, and system quality substantially impact user happiness and willingness to suggest augmented reality applications.

Until recently, academics concentrated their efforts on the younger generation, but with the rapidly ageing population, studies on seniors' mobile device usage have become critical (Kim et al., 2015). It has been demonstrated that usefulness and enjoyment have a significant impact on seniors' use of mobile devices for tourism-related purposes and that prior knowledge of information technology has a significant impact on seniors' desire and behavioural intention to use mobile devices for tourism-related purposes (Kim and Preis, 2016).

3. DESIGN AND DEVELOPMENT OF *MEHMAKEY*

The purpose of this study was to develop "Mehmakey", a mobile tourism application for tourists in Kelantan, Malaysia. The Mehmakey; means let's eat, is an application that helps tourists to find signature cuisine and stores in Kelantan, Malaysia. It was created using a three-phase DDR approach (Richey & Klein, 2007). The analysis phase begins, followed by the design and development phase, and finally by the evaluation phase. Each phase will be described in detail below.

3.1 Analysis Phase

The first phase, Analysis, is used to elicit further data regarding target users, abilities, and attitudes toward using the product. The researcher will identify the users' instructional

problem, instructional objectives, environment, and current skill sets throughout this step (Dick, Carey, & Carey, 2014). There are several strategies for gathering data during the analysis process, including focus groups (Zundel et al., 2015; Stockley et al., 2014), one-on-one interviews, distributing questionnaires or surveys (Abdul Ghani et al., 2022; Ahn et al., 2016; Kondo & Swerdlow, 2013), expert consensus (Dinh et al., 2016), and mixed qualitative-quantitative studies.

In this case, the study does a document analysis to ascertain the present tourist trend in Kelantan, Malaysia. The researchers discovered current issues and trends with the use of mobile applications for tourism purposes after conducting a thorough document analysis. Additionally, trends in tourist behaviour have been gathered and analysed. The researcher then conducted an observation at a tourist destination in Kelantan to ascertain the current state of tourism.

Kelantan is a Malaysian state on the east coast known for its diverse cuisine. The majority of domestic and foreign visitors to Kelantan are eager to sample the region's cuisine. The current tendency among tourists is to seek out famous cuisine, and many of them are unfamiliar with Kelantan's cuisine. They require time to research the local cuisine. Additionally, not all well-known restaurants are reviewed on popular tourism applications such as Tripit, AirBNB, and others.

After analysing the present trend and issue, this research requires an examination of the hardware, software, and materials required for the development. A computer and a smartphone are required for this project. The device used to conduct the test is described in the following specifications. The following specifications apply:

1. Smartphone

The smartphone is used to run the Mehmakey application that has been developed using Samsung Galaxy Note10. The specifications are as follow:

1.1 Operating system: Android 9.0 (Pie)

1.2 Chipset: Qualcomm SM8150 Snapdragon 855

1.3 RAM: 8GB

1.4 Main Camera: 12MP

1.5 Audio Quality: Noise -92.8dB

2. Computer

The computer is used to develop the Mehmakey application with specific specifications.

2.1 RAM: 8GB DDR3

2.2 Processor: Intel® Core i5 8th Gen

2.3 Storage: 1TB

In addition, multiple pieces of software were used to create the Mehmakey application. Each software used is described in detail below.

Software	Description	Purpose
Flutter	Flutter is a Google-developed open-source UI software development kit. It is used to construct cross-platform applications from a single codebase for Android, iOS, Linux, Mac,	Front-end app development

	Windows, Google Fuchsia, and the web.	
WordPress	WordPress is a free and open-source content management system written in PHP and paired with a MySQL or MariaDB database. Features include a plugin architecture and a template system, referred to within WordPress as Themes	Back-end development
Adobe Photoshop	Adobe Photoshop is a raster graphics editor developed and published by Adobe Inc. for Windows and macOS.	To edit the graphic, design logos and background.
Google	Google LLC is an American multinational technology company that specialises in Internet-related services and products, which include online advertising technologies, a search engine, cloud computing, software, and hardware	Incorporate a google account and google Maps.

Table 1: Software Employed

3.2 Design and Development

The most essential phase of DDR is the design and development phase. The researcher will create a Mehmakey; a mobile tourist application based on the analysis of current trends and issues. Additionally, a smart computing tourist guide system will be designed and developed. Details on each feature are explained below.

3.2.1 Main Menu

The main menu is a critical component of any application since it assists users in navigating the application. The main menu of the Mehmakey tourist application features a list of Kelantan's most famous cuisines. It is divided into different sections, including fast food, "keropok" (chips), "satay", notable restaurants, rice, and vegetables. The figure below depicts the app's main menu.
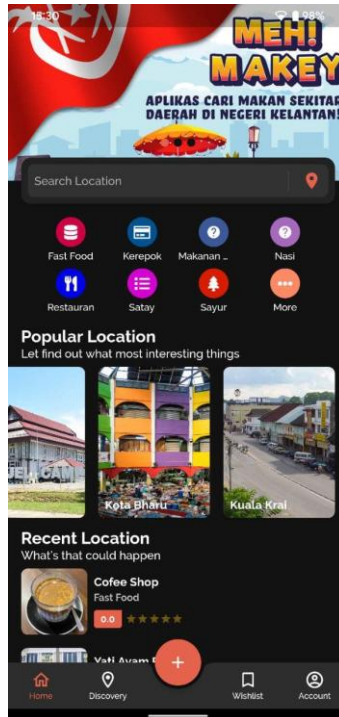
Figure 1: Main Menu

There are four primary buttons on the application's bottom side: home, discovery, wishlist, and account. The tourist can access this application using the home button. It simplifies the navigation process for travellers. While, the discovery button guides tourists to the appropriate cuisine kind. The discovery button's operation is illustrated in Figure 2. The wishlist feature then enables tourists to save their preferred cuisine and location for future reference. The account button enables users to have complete access to this application by logging in with their Google account.
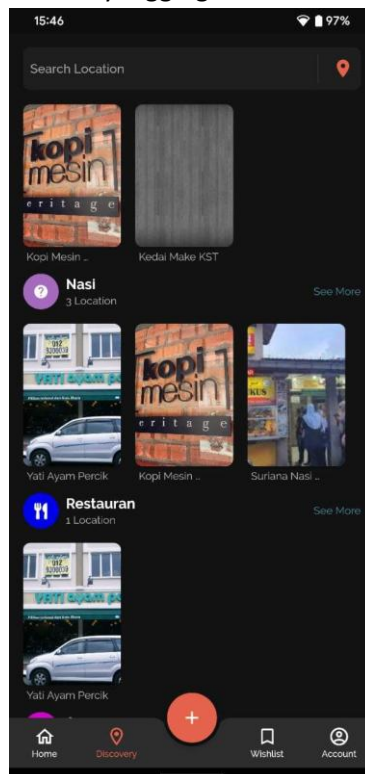

Figure 2: Discovery

3.3 Evaluation

The Mehmakey application was functionally examined in this study using a variety of tests. This is an internal assessment that verifies that all software features are running in compliance with the given functional requirements. The following are the outcomes.

Input	Expectation	Observation	Decision
Search Location	Enter the location, and the results appear	The location appears to be accurate and includes a suggestion for the nearest current location.	Approved
Discovery	Click and list of suggested cuisine appear	All suggested cuisines are displayed and classified according to food type.	Approved
Wishlist	All wishes cuisine or stores that have been starred are recorded.	The app records all the wishlists.	Approved
Stores	Click on a store, additional information, including a map, appears.	All the information on stores, including maps appear	Approved
Cuisine	Click on a cuisine, additional information, including a map, appears.	All the information on cuisine, including maps, appear	Approved
Map	When you click on the map, it integrates with third-party mapping applications such as Google Maps and Waze.	The map is well-integrated with the third-party mapping applications	Approved

Table *2*: Evaluation Series

The table above summarises the results of internal testing conducted on the Mehmakey tourism application. The Mehmakey application was built on a front-end platform called Flutter and a back-end platform called WordPress. The features in the Mehmakey application went off without a hitch. The search location section works well, and the location appears to be accurate, with a suggestion for the next closest current location. Following a series of tests, the search location functioned satisfactorily. The user must enable location services on their mobile phone for this application to detect their location. The users simply enter the destination, and the results appear, listing all of the recommended cuisines in the area.

Additionally, other features function well by meeting the user's needs. The discovery section listed a variety of cuisines and classified them according to food type. This will benefit tourists unfamiliar with Kelantan. The discovery section contains all of the signature cuisines. Additionally, tourists can save their cuisine or wishes for later reference. The information on cuisine and stores is included, as is a map to the preferred destination. The tourist may utilise either Google Maps or a third-party application such as Waze.

4. METHODOLOGY

Sampling

This qualitative study included semi-structured interviews with 16 tourists in Kelantan state in Malaysia who were exposed to the *MehMakey* app during their holiday. The tourists were purposefully picked based on their gender, language background, first language, and digital literacy. As a result, 16 visitors were chosen for this study, eight of whom were male students, and eight of them were female tourists. Half of them have an English language background, while the remaining half do not communicate in English on a daily basis. They are all non-native English speakers who are now in Kelantan for varied vacation purposes. The table below summarises the demographic characteristics of the students.

Item	Sub-item	Frequency (N)	Percentage (%)
Gender	Male	8	50
	Female	8	50
	Total	**16**	**100**
English Language Background	Yes	8	50
	No	8	50
	Total	**16**	**100**
Digital Literacy	High	8	50
	Low	8	50
	Total	**16**	**100**

Data Collection

The semi-structured interview was performed in Malay language with 16 tourists as part of a focus group. This interview lasted approximately 45 to 60 minutes. Fundamental questions guided the semi-structured interviews, and several others evolved as the sessions continued. During each interview session, field notes were gathered, and audio was captured.

Data Analysis

The semi-structured interview session was designed to elicit tourist perceptions about the MehMakey app based on their prior experiences and expectations. Qualitative analysis of the data was conducted using the Atlas.ti8 software, which generated open codes from the interviews. Ten codes were discovered during the first cycle coding process. After completing the open coding procedure, the second cycle coding process was completed by categorising the codes into three distinct categories. Following this, thematic analysis was utilised to generate the topics. The results and conclusions section explored the coding process's emergent themes.

1985

Ethical Consideration

Each participant signed an individual consent form for the interview. After getting their consent, a schedule for the interview was prepared. To protect their identity, just their basic demographic information is published and the researcher using the capital letter of P to address the as participant. To ensure conformity, the study's analysis was shared with participants in order to confirm that the conclusions were backed up by interview data.

5. RESULTS AND DISCUSSION

Sixteen tourists in Kelantan were engaged in a semi-structured interview. They used this app while on vacation in Kelantan. Prior to their return to their homes, the researcher conducted a focus group interview. Thematic coding was used to analyse the qualitative data using the Atlas.ti8 software. The results of the semi-structured interview can be divided into three major themes, which are user perspective, technological Perspective, and authorities perspective.

5.1 Users Perspective

Users are more likely to use an application if they believe it is beneficial, user-friendly, and suitable for tasks such as searching for travel information, enhancing the trip experience, and making some purchases (Park & Huang, 2017). Participants' responses demonstrate this, as they stated, "*this app is beneficial and meets my expectations (P1)*." Additionally, the P2 stated, "*yes, this app is very useful and has guided me during my stay here. I enjoy using it because it is easy to use, compatible with my phone, and is not overly affect my phone space*" and was backed up by P5 when he stated, "*For sure I will use this app since this is my first time here and I need this app to guide me throughout my vacation*." Utilising this application motivates users to save time, be more efficient, and be more effective (Bader et al., 2012). Tourists in Malaysia rely heavily on information obtained over the internet. By using the Google search engine, tourists can obtain a wealth of information, which they must filter on their own. This process requires time to complete in order to reach their designated locations. As mentioned by P8, "*this app is very helpful for me as it stated the hotspot directly, provide relevant information and map*".

According to previous surveys, the majority of tourists rely on their mobile devices to assist them on their trips (Jelena et al., 2018). There is no question that there is a correlation between users' online proficiency and their use of mobile applications and their attitude about mobile applications and their intents to utilise them (Rivera et al., 2016). As mentioned by P4 "*I like this app since I am a heavy user of the smartphone. I prefer to do everything through my Samsung Note*", as well as P7 who said, "*I am fortunate to find this app. It helped me during my vacation, and I rely mostly on this app*". The fact that users are motivated to use this application demonstrates that it provides them with perceived benefits, perceived ease of use, as well as perceived enjoyment and pleasure. According to Kim et al. (2015) and Ozturk et al. (2016), these factors psychologically urge them to use mobile applications for tourism-related transactions such as hotel bookings, food purchases, and other uses. Today's tourists are more connected, digitally savvy, and enthusiastic about interacting with mobile devices. Nunes and Mayer's (2014) study indicated that tourists are receptive to adopting mobile games to enhance their experience if the application is practical, engaging, and compatible with the area.

Numerous studies have demonstrated that smartphones significantly influence the tourist experience while on vacation (Tussyadiah & Wang, 2016; Lalicic & Weismayer, 2016).

Most scholars explored the beneficial effects of mobile applications, including inspiration and enthusiasm (Lalicic & Weismayer, 2016), the utility of smartphone recommendation (Tussyadiah & Wang, 2016), and being more knowledgeable and confident when travelling. As stated by P6 and P7, "This app is incredibly user-friendly and beneficial. Our vacation was made more enjoyable because of it". In addition, P3 also said that "*In Kelantan's hotspots, I was able to seek out wonderful cuisine recommended by locals, as well as visit a variety of other interesting locations, thanks to this app, it made my vacation awesome*".

5.2 Technological Perspective

Smart tourism is a relatively new breakthrough in mobile technology that enables both tourists and providers to resolve issues that arise in the location. One of the most significant technical issues is the bugs system. Typically, problems impair the application's performance, impairing the user experience. As mentioned by P6, "*I used this application throughout my vacation. For me, this app is just fine as long as it is free from bugs. Besides, I found that this app did not require a high-end smartphone to use*".

To increase the chances of the app being accepted by users, the developer must make certain that it is free of technical faults (Wan Daud et al., 2021). The P8 said "*Since day 1 I use this application, all the features are well functioned. The map provided are accurate. Besides, this app integrates with google product such as google map*". The tourism application must be interactive and capable of two-way communication in the event that a doubt or question requires consultation or assistance (Roswati et al., 2019).

As suggested by P3, "*I would suggest if this app has a real-time tracking function because it is more interactive and it would engage user and app*". In addition, P2 also suggested ensuring the function in the tourism

application meet the user expectation as she said that "*I would use the application which provides the function that I need.*" When designing a tourism mobile application, the developer must carefully evaluate the functional elements. Individualised user experiences are a recent trend that tourist applications are embracing. Customers seek smartphone-enabled services that are exclusive to mobile platforms, such as real-time travel tracking and the shaking function for randomly selecting restaurants. These services provide customers with innovative experiences and empower them to make unique choices and consume destinations (Wang & Xiang, 2012).

5.3 Authorities Perspective

According to a previous study by Lin (2017), the most significant success element for adopting mobile technology is top-level government backing and consumer needs. For instance, star rating and brand association are related to the hotel's and smartphone's visibility in the hotel sector. According to Adukaite et al. (2013), the primary motivations for releasing applications are developing loyalty, promoting special offers, enhancing interactions with guests, and giving destination information. As comment by P5 "*This sector could benefit from government support for technology adoption. This application can be used as a hub for Kelantan's tourism, with a wide range of functions*".

The tourism industry's stakeholders and authorities have not yet recognised the critical significance of mobile application development, availability, and benefits. As a result, great opportunities are lost. As stated by P4, "*this app should collaborate with goevrnment agency or ministry, so that the authorities will provide a good infrastructure to support this mobile application*". Smart tourism must include wearable gadgets and

applications that enhance the on-site experience for travellers. Implementing mobile applications yields positive returns and competitive advantages (Wang & Xiang, 2012). Tourism service providers profit from attracting a broader user base by providing customised services, transferring and analysing data in real-time, and collecting vital tourist information about their experiences and emotions at places (Shoval & Ahas, 2016).

6. CONCLUSION

A successful application must be well-structured and configured in such a way that it operates without errors. *MehMakey* is a successful mobile tourism application that has been developed for the Android and iOS operating systems. This research study's covers the user perception towards tourism application. There are three major themes covered from the semi-structured interview Major findings found that this app has high perceived acceptance, interactive and user-friendly. In addition, the participants are also suggest to embed new technology such as real-time tracking and collaborate with government agency for embracing smart tourism country. Following extensive testing, the features function properly. The map is tightly integrated into this application and can be used in conjunction with third-party applications to direct users to their desired destination. This application contains a comprehensive list of signature cuisines and restaurants. This application benefits a large number of tourists who are unfamiliar with Kelantan. For future research, the researchers propose concentrating on the usability of the *MehMakey* application through fuzzy Delphi analysis and directly implementing it among tourists via a survey study to determine its acceptance.

References

Abdul Ghani, M. T., Hamzah, M., Wan Daud, W. A. A., & Muhamad Romli, T. R. (2022). The Impact of Mobile Digital Game in Learning Arabic Language at Tertiary Level. *Contemporary Educational Technology, 14*(1), 344. doi:https://doi.org/10.30935/cedtech/11480

Adukaite, A., Reimann, A. M., Marchiori, E., & Cantoni, L. (2013). Hotel Mobile Apps: The Cases of 4 and 5 Star Hotels in European German-Speaking Countries. In L. &. Cantoni, *Information and Communication Technologies in Tourism* (pp. 45-57). Berlin: Springer.

Ahn, J., Jones, D., Yarris, L. M., & Fromme, H. B. (2016). A National Needs Assessment of Emergency Medicine Resident-as-Teacher Curricula. *International and Emergency Medicine*.

Bader, A., Baldauf, M., Leinert, S., Fleck, M., & Liebrich, A. (2012). Mobile Tourism Services and Technology Acceptance in a Mature Domestic Tourism Market: The Case of Switzerland. In M. R. Fuchs, *Information and Communication Technologies in Tourism* (pp. 296-307). Vienna: Springer.

Bernama. (3 September, 2018). Kementerian Kewangan Jangka 2 juta Pelancong Penjagaan Kesihatan Menjelang 2020.

Bernama. (05 May, 2019). Malaysia Seeing Sharp Increase in Arab Tourist Arrivals.

Dick, W., Carey, L., & Carey, J. (2014). *The Systematic Design of Instruction* (8th ed.). Pearson.

Dinh, V. A., Lakoff, D., & Hess, J. (2016). Medical Students Core Clinical Ultrasound Milestones: A Consensus Among Directors in the United States. *Journal Ultrasound in Medicine*, 241-434.

Dorcic, J., Komsic, J., & Markovic, S. (2019). Mobile Technologies and Applications Towards Smart Tourism - State of Arts. *Tourism Review, 74*(1), 82-103. doi:https://doi.org/10.1108/TR-07-2017-0121

Fong, L. H. N., Lam, L. W., & Law, R. (2017). How Locus of Control Shapes Intention to Reuse Mobile Apps for Making Hotel Reservation: Evidence from Chinese Consumers. *Tourism Management, 61*, 331-342. doi:10.1016/j.tourman.2017.03.002

Gretzel, U., Sigalam, M., Xiang, Z., & Koo, C. (2015). Smart Tourism: Foundations and Develoments. *Electrinic Markets, 25*(3), 179-188. doi:10.1007/s12525-015-0196-8

Hunter, W. C., Chung, N., Gretzel, U., & Koo, C. (2015). Constructivist Research in Smart Tourism. *Asia Pacific of Information Systems, 25*(1), 105-120. doi:https://doi.org/10.14329/apjis.2015.25.1.105

Im, J. Y. & Hancer, M. (2014). Shaping Travelers' attitude Toward Travel Mobile Applications. *Journal of Hospitality and Tourism Technology*, 177-193.

Jelena, D., Jelena, K., & Suzana, M. (2018). Mobile Technologies and Applications Towards Smart Tourism - State of Art. *Tourism Review*.

doi:https://doi.org/10.1108/TR-07-2017-0121

Jung, T.,Chung, N., & Leue, M. C. (2015). The Determinants of Recommendations to Use Augmented Reality Technologies: The Case of a Korean Theme Park. *Tourism Management, 49*, 75-86. doi:10.1016/j.tourman.2015.02.013

Khoo, C. S. (2016). Conceptualization of Smart Tourism Destination Competitiveness. *Asia Pacific Journal of Information System, 26*(4), 561-576. doi:http://dx.doi.org/10.14329/apjis.2016.26.4.561

Kim, M. J. & Preis, M. W. (2016). Why Seniors Use Mobile Devices: Applying an Extended Model og Goal-Directed Behavior. *Journalof Travel & Tourism Marketing, 33*(3), 404-423.

Kim, M., Chung, N., & Lee, C. (2015). Motivations and Use Context in Mobile Tourism Shopping: Applying Contingency and Task-Technology Fit Theories. *International Journal of Tourism Research, 17*(1), 13-24. doi:10.1002/jtr.1957

Kondo, K. L. & Swerdlow, M. (2013). Medical Student Radiology Curriculum: What Skills Do Residency Program Directors Believe are Essential for Medical Students to Attain? *Academic Radiology, 20*(3), 263-271.

Lalicic, L. & Weismayer, C. (2016). Being Passionate About The Mobile While Travelling. *Current Issue in Tourism, 21*(8), 950-963.

Liang, S. & Sun, W. J. (2014). Research on Microblogging Original Posts Release Behavior Based on Panel data of Mobile Application. In H. &. Lua, *International Conference on Management Science & Engineering* (pp. 43-49). Helsinki: IEEE.

Lin, S. W. (2017). Identifying The Critical Success Factors and Optimal Solution

for Mobile Technology Adoption in Travel Agencies. *International Journal of Tourism Research, 19*(2), 127-144.

Liu, J. N. & Zhang, E. Y. (2014). An Investigation of Factors Affecting Customers Selection of Online Hotel Booking Channels. *International Journal of Hospitality management*, 71-83.

Lu, J., Mao, Z., Wang, M. & Hu, L. (2015). Goodbye Maps, Hellp Apps? Exploring The Influential Determinants of Travel App Adoption. *Current Issues in Tourism*, 1059-1079. doi:https://doi.org/10.1080/1368350 0.2015.1043248

M Kwon, J., Bae, J. & Blum, S. C. (2013). Mobile Applications in The Hospitality Industry. *Journal of Hospitality and Tourism Technology, 4*(1), 81-92. doi:10.1080/19368623.2018.1423251

Molz, J. G. (2014). *Travel Connections: Tourism, Technology, and Togetherness in a Mobile World.* Routledge.

Morosan, C. & DeFranco, A. (2014). When Traditional Meets The New Technology: An Examination of The Antecedents of Attitudes and Intentions to Use Mobile Devices in Private Clubs. *International Journal of Hospitality Management, 42*, 126-136. doi:10.1016/J.IJHM.2014.06.009

Moroson, C. (2014). Toward an Integrated Model of Adoption of Mobile Phones for Purchasing Ancillary Services in Air Travel. *International Journal of Contemporary Hospitality Management, 26*(2), 246-271.

No, E. & Kim, J. K. (2014). Determinants of the Adoption for Travel Information on Smartphone. *International Journal of Tourism Research*. doi: https://doi.org/10.1002/jtr.1945

Nunes, M. & Mayer, V. (2014). Mobile Technology, Games and Nature Areas: The Tourist Perspective. *Tourism & Management Studies, 10*(1), 53-58.

Ozturk, A. B., Nusair, K., Okumus, F., & Hua, N. (2016). The Role of Utilitarian and Hedonic Values on User's Continued Usage Intention in a Mobile Booking Environment. *International Journal of Hospitality Management, 57*, 106-115.

Park, S. & Huang,Y. (2017). Motivators and Inhibitors in Booking a Hotel Via Smartphones. *International Journal of Contemporary Hospitality Management, 29*(1), 161-178. doi:https://doi.org/10.1108/IJCHM-03-2015-0103

Richey, R. C., & Klein, J. D. (2007). *Design and Development Research.* New Jersey: USA: Lawrence Erlbaum Associates.

Rivera, M., Croes, R., & Zhong, Y. (2016). Developing Mobile Services: A Look at First-Time and epeat Visitors in a Small Island Destination. *International Journalof Contemporary Hospitality Management, 28*(12), 2721-2747. doi:10.1108/IJCHM-02-2015-0052

Roswati, A. R., Radhiah, I., Mazlina, A., Nurul Ain, C. A., Rosdi, Z., & Roslina, M. (2019). Mobile Apps in Tourism Communication: The Strengths and Weakness on Tourism Trips. *Journal of phusics*. doi:doi:10.1088/1742-6596/1529/4/042056

Shoval, N. & Ahas, R. (2016). The Use of Tracking Technologies in Tourism Research: The First Decade. *Tourism Geographies, 18*(5), 587-606.

Stockley, A. J. & Forbes, K. (2014). Medical Professionalism in The Formal Curriculum: 5th Year Medical Students' Experiences. *BMC Medical Education, 14*(1).

1989

Tussyadiah, I. P. & Wang, D. (2016). Tourists Attitudes Toward Proactive Smartphone Systems. *Journal of Travel Research, 55*(4), 493-508.

Wan Daud, W. A. A., Abdul Ghani, M. T., Amiruddin, A. Z., Abdul Ghani, K., & Abdul Rahman, A. (2021). THE USABILITY OF I-SUYYAH: A MOBILE TOURISM APPLICATION FOR ARAB TOURISTS IN MALAYSIA. *ENLIGHTENING TOURISM. A PATHMAKING JOURNAL, 1*(11), 263-286. doi:https://doi.org/10.33776/et.v11i1.5090

Wan Daud, W. A. A., Ghani, M. T. A., Rahman, A. A., Yusof, M. A. M, & Amiruddin, A. Z. (2021). ARabic-Kafa: Design and Development of Educational Material for Arabic Vocabulary with Augmented Reality Technology.

Journal of Language and Linguistic Studies, 17(4), 1760-1771.

Wang, D. & Xiang, Z. (2012). The new Landscape of Travel: A Comprehensive Analysis of Smartphone Apps. In M. R. Fuchs, *Information and Communication Technologies in Tourism* (pp. 308-319). Vienna: Springer.

Zhong, L., Leung, D., Law, R., & Wu, B. (2013). eTourism in China: A Review of The Chinese-Language Literature. *Asia Pacific of Tourism Research, 18*(5), 464-482.

Zundel, S., Wolf, I., Christen, H., -H., & Huwendiek, S. (2015). What Support Students' Education in the Operating Room? A Focus Group Study Including Student's and Surgeons' Views. *American Journal of Suegery, 210*(5), 951-959.