The Development Ideas for Travel Applications Featuring Three Tourism Objects in Indonesia

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ABSTRACT: In recent years, digital transformation has changed the way an organization operates. In the tourism industry, such transformation becomes the necessity as technology keeps developing. Travel can be made easier in some ways, one of which is through the development of travel applications. It is crucial to identify the tourists' needs and the expectations regarding the user-friendly travel applications. There are in fact a number of applications sprung up in the tourism sector, however, only some of them fulfil the criteria. This study is conducted to develop applications that are considered users-friendly and meet both the needs and the expectations of the tourists. It further investigates what tourists need and expect concerning the related applications. The novelty of this research lies in identifying the expectations and needs of travel apps among millennial by raising case studies in three tourist destinations, namely Borobudur and Dieng, both are in Central Java, and Bayan Village in Lombok. This is a research with a qualitative method. The primary data were obtained through focus group discussions (FGD) and online interviews, whereas the secondary data were generated through literature study. The results indicated that the tourists' expectations and needs for travel applications are categorized into two groups, the first is the technical aspect and the second is the application content. It was found that tourists require applications with attractive look, supported by clear and updated information. In addition, the applications should be easy to use, help build the enthusiasm to visit, make travel more convenient.

Keywords: Bayan village, Borobudur, Dieng, Millennial, Travel Applications

INTRODUCTION

Indonesia with its diverse natural resources such as mountains, forests, lakes and parks has attracted a considerable amount of visitors to come and enjoy the scenic beauty of the nation. The tourism industry is considered an important part of Indonesia's economy since it has contributed to its gross domestic product. The steady growth spurred by the increasing number of foreign visitors has triggered not only central but also local government to provide and improve the facilities and the service for the tourists' comfort. Despite the efforts made, the poor information and the lack of communication technology infrastructure signifies a weakness the country faces

amidst the high competition at the global level. Therefore, building a digital tourism platform to integrate the entire ecosystem of Indonesian tourism stakeholders is required. The ecosystem includes tourist objects, hotels, travel agents, airlines and other supporting aspects.

The digitalization in tourism was pioneered by Arief Yahya who was assigned as the Minister of Tourism during the working cabinet (Kabinet Kerja) for the period of 2014-2019. The transformation was made for the ease of tourists in finding, ordering, and paying for the tourism services or popularly termed as *Look, Book* and *Pay*. This enabled a sharing in economy and had became a trend in the tourism sector. In fact, the business sharing had a huge impact on tourism, in which 90 percent had impacted on the information, 89 percent for accommodation , and 88 percent for transportation. Such percentages are crucial for Indonesian tourism, where the 22 percent marked an increase in tourism growth, three times higher than the regional and global market (Saputra, 2018).

Digitization is one of the three priority programs of the Ministry of Tourism of the Republic of Indonesia and has been implemented since 2017 under the names *digital tourism*, *home-stays*, and *air connectivity*. Digital tourism is a strategy that must be implemented to seize the global market, especially in the 12 focus markets spread across 26 countries in order to increase foreign tourist visits significantly. Several years ago, the digital tourism program launched ITX (Indonesia Tourism Exchange), a marketplace with digital platform in the tourism ecosystem that brings together buyers and sellers, and where all travel agents, accommodations and attractions providers gathered for business deals (Newswire, 2016).

Coves-Martínez et al. (2023) stated that the utilization of travel applications can greatly impact how people act and what they do when they are traveling. The nuances of digitizing the tourism industry can be seen in mobile applications, digital campaigns, interactive campaigns, and viral marketing (facebook, twitter, youtube, blog). It is obvious that digital promotion has a strong impact and a wider, faster reach. (Satrya, 2023) argued that the use of narration, storytelling on places, photos and videos about tourist destinations in one area help promote Indonesian tourism. Sia et al. (2022) further stated that to promote services and products effectively, tourism organizations can take advantage of mobile travel applications to incorporate tourists' preferences. This will serve as a marketing strategy to enhance users' adoption of these applications.

Furthermore, Nautiyal et al. (2023) emphasized that the nature-based destinations and the companies that provide facilities for tourists affect how people use their phones when they visit a tourism object. If a destination has a website or an application that gives information about where to go and what to see, it encourages technology savvy to get access to such information. According to Coves-Martínez et al. (2022), smartphones and applications have a significant impact in the tourism sector. This is in line with Shin et al. (2022) in his current research which focuses on technology experience in the hospitality and tourism industry. However, it is important to consider that different technologies used in the tourism industry may have unique characteristics. Therefore, the importance of different dimensions of technological experience may also vary depending on the type of technology used. For instance, if a consumer frequently uses mobile travel guide applications, their cognitive experience with technology would be significant. On the other hand, for consumers who use mobile applications for travel communities, the dimension of the relational

experience would be more crucial. Consumers have a relational experience since technology helps them connect with others. Technology in some ways replaces human interactions, yet, consumers can still interact with and access others through technology, thus it creates a sense of connection. Additionally, technology removes barriers such as time and place, allowing consumers to connect with a wide range of individuals. *Eatwith* and SoloTraveller are two examples of travel applications that enable consumers to locate local culinary or to meet other travelers of similar interests, thus, they help enhance the experiences at their destination.

(Kartajaya & Darwin, 2010) illustrated how all marketing practices in this world must be interconnected both offline and online. According to the marketing expert, the online world can indeed generate excitement and engagement, whereas the offline settings lead to intimacy and enthusiasm. Apparently, if these two are combined, it connects the two dimensions physically, intellectually, emotionally, and spiritually. To create a successful and holistic bonding, marketers need to be aware of the three levels of connection. First is mobile connection, the indicator can be traced through a question "are you well-connected?" both online and offline. The second level is experiential connection. The relevant question at this level is "how deep is your connection?" Not just "are you well-connected!" And, the highest level is social connection. The right question in this area is "how strong is the connectivity?"

Hossain & Rahman (2022) emphasized that the sentiment of the various types of reviews greatly affects the emotional experience of people reading them, and this leaves a positive review to the application. According to Wang (2018), how travelers use their smartphones has a significant impact on how they perceive the value of the device for their travel needs. This, in turn, leads to positive attitudes towards the price of a new mobile application specifically designed for travel and an intention to use it.

Moreover, Mang et al. (2016) stated that certain smartphone applications are more useful for tourists than others. The main functions include connecting to social networks, using maps for navigation, and finding information about transportation. In addition, Wang et al. (2012) emphasized that by providing tourists with various information, smartphones have a significant impact on their behavior and emotions. The instant access to information helps tourists solve problems, share experiences, and retain memories. These findings highlight the potential of smartphones to greatly transform the tourism industry.

Nowadays, modern travel applications offer a wide range of features such as real-time mapping, automatic upgrades, instant booking cancellations, bundled products, and advanced automated customer support (Wu et al., 2021). According to Dastjerdi et al. (2019) people use the apps to create more efficient trips, to have fun, to meet other people, and to be environmentally friendly. Moreover, people have different intentions for using the applications depending on how valuable the applications and what their travel plans are. People who have interest in technology are more likely to use the applications and come up with good reasons for using them. Similarly, people trusting their community and feeling connected to their city are more likely to use the applications. Linton & Kwortnik (2019) viewed that people who use mobile devices tend to engage more as there are a lot of activities they can do. Therefore, the new and better ways should be considered by the companies in the manufacturing of such devices.

Liu et al. (2023) specifically emphasized the needs for mobile companies to consider making applications, tools and programs for a group of people with impairment. The designed ideas will be crucial for visually impaired people as they find it useful. Dastjerdi et al. (2019) argued that since lots of people use smartphones and like to share things on social media, applications that assist people to travel in an eco-friendly way might be a good idea. In general, people use smartphones for several purposes, one of which is to share information on social media. Applications that are designed to support environmentally-friendly trips inspire other travelers to opt similar ways of traveling (Dastjerdi et al, 2019).

Furthermore, Baroutsou et al. (2021) stated that using a smartphone application is also a good way to collect information about how elderly people and people with chronic diseases behave when they travel to places around the world. Additionally, the fast growth of phones and tablets has also changed how airlines talk to their customers as well (Budd & Vorley, 2013). To attract people with their brand, airlines make use of the devices to promote easier and cheaper ways of flying. Such applications let users book flights, check in, and see the rewards.

Similarly, a smartphone application is a good way to gather information about how older people and people with long-term illnesses travel to different parts of the world and how their health is affected during the trips (Baroutsou et al., 2021). A lot of airlines use mobile technology to make flying better (Baroutsou et al. , 2021). The special phone applications let users book the flights and check in online. By doing so, airlines save money and passengers are able to keep track of their rewards. Sunio & Schmöcker (2017) stated, There are lots of applications for mobile phones that can help change people's lifestyle. Some of the most popular ones are for staying healthy, whereas some others are to encourage people to travel in a more eco-friendly way. It is likely that travel applications with advanced weather features make people happy, thus they will behave better (Wu et al. ,2021).

Travel applications can greatly impact how tourists act and what they do during their trip (Martínez et al., 2023). Nautiyal et al. (2023) stated, when people go on trips to natural places, the websites and applications of those places inform tourists what to do and see. This helps technology-savvy people plan their trips better. A number of features tourists use the most when visiting particular tourism destinations are the applications that show them around the city, how to pay online, how to use Google maps, and which tourist attractions to visit (Azis, 2020) . Hua et al. (2021) argued that the elderly may be hesitant to use new technologies because they fear that the applications may not work well. Therefore, it is important to design users-friendly and trusted applications they find comfortable to use. Moreover, Turulja (2021) emphasized that when customers perceive online reviews as helpful, it indirectly nurtures their trust and positive attitude towards the travel applications, thus there will be a higher intention to download the applications. Nevertheless, the presence of vendor cues does not always affect the relationship between perceived helpfulness of customer reviews and intention to download travel apps.

Another application tourists find helpful is on hotel availability and services. Kim et al. (2021) found that there is a strong connection between the fun and entertainment features of hotel applications with the overall satisfaction and endorsement of the hotel guests. It is suggested that hotel applications focus on creating enjoyable experiences for users, and at the same time

prioritizing convenience and ease of use. Castañeda (2019) argued that the unified theory of acceptance and use of technology model effectively describes loyalty towards tourism applications. Additionally, the variables within the model play a mediating role in the impact of user and mobile device characteristics. Ho et al. (2021) stated, facilitating conditions in the mobile application environment include factors such as internet connectivity, the functionality of mobile devices, and other technological features. Moreover, the quality of the system, the information, and the service of smartphone travel applications have a strong positive influence on user engagement (Ali et al., 2021). Hence, it can be concluded that user engagement has a positive and significant effect on satisfaction with the app, one's affection for the app, and their intentions to use it.

Camilleri et al. (2023) further stated that the quality of information, credibility of the source, and functionality of travel applications have a significant impact on people's perception of usefulness and their intentions to continue using such applications in the future. The study also reveals the important indirect effects within the model of technology adoption. Lee (2018) stated, that both the quality of arguments and the credibility of the source had a positive impact on the usefulness of branded applications and para social interactions. The results also confirmed that the usefulness of the branded application and para social interaction had a positive effect on the intention to continue using the branded application. According to Lim et al. (2022), people's attitudes towards shopping for travel applications are mainly influenced by how they perceive the benefits, compatibility, and complexity of using these apps. The results also indicated that people's intentions to purchase certain type of smart phones are influenced by their attitudes, how easy it is to communicate within the application, and their perceived control over their actions, and these intentions are affected by users' inertia.

The idea of developing travel applications to make it more concrete is to raise certain objects. The case study in this research is the idea of developing travel applications for tourism objects such as Borobudur and Dieng in Central Java, in addition to Bayan Village in Lombok. Their Nature, traditions and culture of the people scattered in various villages, alongside with the tourist objects the places are blessed with, have competitive advantages for rural residents to build a better life. The problem is how to make their competitive advantage sustainable. The basic requirements for building sustainable rural tourism lie in the villagers and the local government's commitment, awareness and shared vision to advance the development in the areas. MotoGP, an international event held in Lombok in March last year was proven to have benefited tourist villages in Lombok, including Bayan Village. The event would not be a huge success without the hard work and the collaboration between the central and local governments, and the support from the villagers. Learning experiences are indeed important for the growth of quality resources so that visitors are welcomed, looked after and served properly. The increased service quality is the ideal hopes and goals for the progress of tourism in Lombok, particularly after the national and international events were held.

Indonesian government's development program stipulates five super priority destinations through Presidential Regulation number 18 of 2020 concerning the National Medium Term Development Plan (RPJMN or Rencana Pembangunan Jangka Menengah Nasional), namely Toba, Likupang, Borobudur, Mandalika, Labuan Bajo. Of the five super priority destinations, three are designated as integrated tourist areas with authority bodies (Borobudur, Labuan Bajo, Toba) and the two

others as special economic zones (Likupang and Mandalika). In the RPJMN, the government has targeted that by 2024 the contribution of the tourism sector to the national GDP (Gross National Product) will increase to 5.5%, the foreign exchange from the tourism sector up to 30 billion USD, around 350-400 million of domestic tourists traveling to the areas and 22.3 million visits of foreign tourists . In addition to the available infrastructure, amenities, and promotions, the government is focusing on developing MICE (Meeting, Incentive, Convention Exhibition), a representative of a lucrative part of the tourism mix across the globe, in 5 super priority destinations.

Nevertheless, in 2022 there was a heated discussion regarding tourists visits to Borobudur Temple. For years, visiting (traveling) to the temple has become mass tourism (mass tourism) since the entrance ticket is affordable. People come to see the historical temple, admire its beauty, and take some shots, causing a shift in the function and sacredness of the temple. The temple, used to be a sacred place with the values of the noble teachings of life, great architecture, and beautiful art of a high taste, now becomes a superficial monument, and serve as a mere photographic object. It is expected that visitors to specific sacred objects pay respect and appreciation for the authenticity, originality and scarcity considering that the conservation, protection and sustainability require a considerable amount of money to spend.

With the advancement in technology, tourist visits can be organized more properly. The implementation of online bookings for scheduling visits, the mechanisms for incoming and outgoing flows, the designing of the the time length for the visits to avoid re-routing and visitors accumulation are some of the technical parts the providers of tourist destinations must carefully prepare.Thus, the formulation of the research problem is connected to particular travel applications tourists expect and need.

METHOD

This is a study that employs a qualitative methods where the primary data were obtained from focus group discussions and online interviews comprising three focus discussions. The first is on technical aspects related to the Applications, the second is on Applications content, and the last one is on case studies at Borobudur and Dieng tourist destinations in Central Java, in addition to Bayan Village in Lombok. The secondary data for this research were obtained through literature study.

RESULTS AND DISCUSSIONS

The internet helps tourist destinations promote and fight unfavorable publicity. As for travel applications, it is suggested that a website on travel provide complete services such as route schedules, interactive road maps, currency exchange rates, hotel reservations, dictionaries, time markers, online payments, and interactive voice response or call center services. In addition, more advanced touches of technology for an interactive website to be accessed is the one with flash animation, images and links for potential customers to access more detailed explanation. The

packaging of a tourism promotion website necessitates targeted promotion strategies to work on each market segmentation. In other words, a tourism promotion website presupposes an in-depth intuition and research on the interests, expectations and travel behavior of foreign tourists in diverse prospective countries. Website highlighting various tourist interests and attractions should meet the demand of various market segments. Furthermore, such website packaging should not be limited only in the use of two languages -Indonesian and English- but expanded into Japanese, Korean, Mandarin, German, Dutch and so forth.

Website is indeed an ideal channel and a powerful tool to promote tourist destinations at a very low cost, thus the quality of information should carefully be considered. Tourists' decision to visit a holiday getaway is based on the availability of complete information on the website. Once they are misinformed, such website will be useless.

People access mobile phones and tablets for a number of purposes. However, the developers of travel applications find it hard sometimes to create an application that suit the needs. Therefore, they should think of new ideas and work hard to solve the problems (Linton & Kwortnik, 2019). The urgency to develop useful travel application is believed to provide maximum benefits for tourists, stakeholders, owners and managers of travel destinations.

Another evidence an application helps to save life is also found in the transportation sector. Tang et al. (2020) argued that the development of application-based ride hailing makes it easier for people to travel and reduces their need for private car ownership. With the increased availability of such applications, the use of existing transport resources can be maximized and the demand for private cars can further be reduced. In addition, Tan et al. (2017) believed that the use of mobile applications has significantly affected consumer shopping habits. As a consequence, it makes the physical location and the ambience of traditional markets less important.

The attractive look and the ease mobile applications offer have driven the high frequency of people getting access to the designed applications. Nevertheless, indirect reasons such as being familiar with the application, the feeling of loneliness, the sense of excitement when using the apps, the new insights they get and the practicality in using the applications are also detected (Kamboj & Joshi, 2021).

Features on medical and emergency information, travel information, entertainment highlights, and travel reviews are considered crucial in the development of the travel applications. They have a significant impact on users' intention to use travel applications, except for the travel information service. Therefore, these attributes are crucial for attracting holiday makers to access travel applications (Fakfare & Manosuthi, 2023). Similarly, the results of focus group discussions and online interviews are in line with the above description.

The following are some suggestions given by informants regarding the development of applications for Dieng as one of the most popular tourist sites:

1. Comprehensive information about the regular *Jazz over the Clouds* event, Cultural Festival and local cultural events. These include detailed information such the dates, the hours, the venue, the cost of the events and all related aspects needed by the tourists to come.
2. A thorough education about waste and cleanliness while traveling to the site
3. Information about public facilities such as the availability of clean and adequate toilets, parking lots, local transportation, accommodation, and local restaurants.
4. Empowerment of the local workforce with necessary skills to welcome and serve the tourists

For the content of travel applications on Borobudur tourist site, the informants point out as follows:

1. Clear information on the reservations for accommodation, restaurants and entrance tickets to Borobudur.
2. Information on the do's and don'ts when traveling to Borobudur.
3. A review about Borobudur.
4. The displays of interesting villages and destinations around Borobudur for the tourists to visit
5. Information about the availability of multilingual tour guides

For the application content on Bayan Village, the important details the informants suggest to provide are as follows:

1. Information about the uniqueness of Bayan Village with a sustainable local culture
2. Visualization of the Bayan Village tracking tour from the entrance to the exit gates.
3. Information about souvenirs locations.
4. Availability of travel packages

Regarding the applications content in general, the informants emphasized the following:

1. Information about the recommended destinations along with the reviews.
2. Information about the closest travel distance, route and travel time.
3. Information related to locations to purchase merchandise and souvenirs
4. Information about weather forecasts at the tourist sites
5. Recommendation about culinary locations
6. Recommendation about business opportunities, be it micro, small or medium scales in the tourist areas.
7. Availability of more detailed information which include landmarks, attractions, accommodations, accessibility, ancillary, and amenities.
8. Tips and tricks for traveling to the intended destinations.
9. Lodging information
10. Guidance on how to reach remote areas
11. Information about the contact numbers of tour guides to hire
12. The use of Indonesian language for an easier communication
13. Utilization of online payment facilities, such as Shopee pay, OVO and so forth

14. Information on promotional offers
15. The facility of question-and-answer feature.
16. The marking of the current and popular tourist destinations
17. The availability of public facilities around tourist sites
18. Fun facts in all tourist destinations

Finally, in regard to the technical matters related to the development of the travel applications features, informants prioritize several aspects such as:

1. Accessibility
2. Travel facilities
3. Attractive application displays.
4. Simple and easy to understand instructions

CONCLUSIONS

This study has investigated the development ideas for travel applications. It is stated that tourists need and expect to use travel applications with an attractive appearance. In addition, the applications should be easy to understand, able to increase the desire to visit, help make travel easier, informative, and up to date. The idea for developing the travel applications coincides with the digitization of Indonesian tourism. Furthermore, the focus group discussions raised hopes for more equitable provision of data and information, assistance and development of human resources, provision of telecommunication supporting facilities and infrastructure, and the utilization of information access the public in tourism destinations to support the tourism sector.

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