

USERS READINESS TOWARDS MOBILE APPLICATION: A PRELIMINARY FINDINGS

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Abstract. *The existence of technology, especially in using the mobile application among users in promoting wireless communications has become essential as part of our life. Mobile application has penetrated in various fields including commerce, services, healthcare, marketing, transportation, finance and entertainment. However, the level of acceptance toward this new technology and the features or taxonomy of the application varies depending on the accessibility, users' behavioral intention and ease of use towards their satisfaction. The study explores the readiness of the users in term of the intention and the features or the taxonomy of the application in assisting the users to use ARUS, a mobile application which has been developed to furnish essential information on the ferry and boat service in two of the most highly travelled route in Southern Sarawak. The questionnaire focusing the readiness of the users in using the application and the features or taxonomy of the application was distributed online through a goggle form by applying a snowball sampling technique through WhatsApp groups. The results positively revealed that the respondents are ready to use the application and also agreed that the ease of use features or taxonomy of the application can influence them to engage themselves in using the application. In addition, they also agree that the availability of the application would assist them in planning their journey more efficiently. Further*

research needs to be carried out in order to pursue further investigation on the implementation of the mobile application which is named ARUS.

Keywords: *Mobile Application (Mobile App); Self Service Technology, Ferry Users, Boat Users, Commuters*

Introduction

Mobile application has penetrated in various fields, including commerce, healthcare, services, marketing, transportation, finance and even entertainment. The emerging technology has greatly changed users' approach toward life or work in general (Berman, 2016). In addition, mobile application which acts as the mean of communication is being used widely which can indirectly promote businesses. Smart phone applications which are defined as "end-user software application that extends the phone capability by enabling users to perform particular tasks." (Schmitz, Bartsch, & Meyer, 2016) This combination demonstrates the relationship between smart phone as the platform and mobile applications as the software which provide applicability and adaptability to the users. In fact, this affiliation reflects the new business trends where two different businesses join together for the benefits of their customers and in return accelerate the productivity of both businesses as well (Banker, Cao, Menon, & Natarajan, 2010).

Government sectors, for instance start to use mobile application as part of their communication. Private and public businesses are also moving towards this trend (Sherrell & Babakus, 2014). Searching for information, performing financial transaction, giving opinions or advices related to certain issues can be more efficient through the mobile application. Increasing number of businesses are incorporating their very own application as a business strategy to promote which their products (Schmitz et al., 2016). By installing the mobile application to the customers' smartphone, indirectly they are displaying a brand identity for a specific company. (Schmitz et al., 2016) Comparing to the traditional self-service, mobile applications can offer more user friendly and smart features to the users.

For this study, a mobile applications intended for ferry and boat services in Sarawak was developed. In Sarawak, waterways still form a considerable part of a road network throughout the state. In certain areas where the road vanishes at the river crossing, ferries, express boats and small boats are available to connect the missing link, often with minimal charges (Cheng, Sibon, & Law, 2017). The situation in itself presents uncertainties to the commuters and tourists to plan their journey. Although the schedule for high and low tides issued by the Department of Irrigation and Drainage Sarawak is available online, at times is not easily accessible (Department of Irrigation and Drainage Sarawak).

For commuters depending on the service provided by the ferry is very essential since it can reduce the time spend on the road to their work. However, with the present situation where there is no proper source which provide the schedule for the ferry, it is hoped that this application can ease their life in planning their journey to their work. For the tourists, this application can assist them to have a proper planning to enjoy their vacation while visiting Bako National Park. Knowing the exact time on the availability of the boat service make their planning more efficiently especially when they need to catch their next flight back home or plan to go to other places.

ARUS is one type of mobile application designed to help the ferry and boat users to travel more efficiently. With the present scenario where users cannot predict the time of service available, it creates a hassle for them to plan for their journeys. *ARUS* which can be defined as a private self-service technology enable the users to perform direct service when required and received prompt reply from the mobile application manager (Collier, Sherrell, Babakus, & Horkey, 2014). However, to what extent the users are willing to use this service is depending on the accessibility, intention and ease of use of the application. Thus, by applying Technology Acceptance Model (Davis, 1989), this research intends to investigate the level of readiness, acceptance and ease of use of the application among the ferry and boat users before the application is launched to public.

Technology Acceptance Model by Davis (1989) focused on the perceive usefulness of the technology, ease of use of the technology and the behavioural intention of the users in using the technology. Even though technology has been around for decades, there are still some people who are phobic in using technology in running their daily lives. This is reflected from their own attitudes when dealing with information technology. As confirmed by Lee, Tsao and Chang (Lee, Tsao, & Chang, 2014), they stated that if the users of the mobile application recognized the benefits of the device such as it can enhance their lives and work efficiently, they will definitely satisfy and willing to use the applications. So in order to encourage people to be familiar with using technology, the companies which are offering high technology in their business transaction, need to strengthen their customers' demand and convenience through the device that they provide to their customers.

Objective

The objectives of this study have two phases. The first phase is to measure the level of readiness and preference on the taxonomy among the commuters and the visitors towards a mobile application called *ARUS* before it is introduced to them. Then, the second phase of this study is to measure the level of technology acceptance of commuters and visitors in accepting *ARUS* after the implementation of this application by applying TAM Model (Davis, 1989). The first phase of this research is presented in this article and the second phase will be presented later.

Problem Statement

Even though ample studies are being focused on the essential existence of smart phones and mobile applications (Chen et al., 2017; Hsiao, Chang, & Tang, 2016), notwithstanding less studies are focused on the readiness, intention to use or behavioural patterns of consumers in influencing them to use such application (Doom et al., 2010; Shafinah, Sahari, Sulaiman, Yusof, & Ikram, 2013) especially in the area of tourism and public transport and in particular in Malaysia. As cited in Tan and Lee (2017) Balacandran and Tan (2016) highlighted that m-device or mobile devices such as smartphone has become part of the Malaysian society for communication purposes. This is also another reason why the researcher decided to focus on this issue. For instance, a study done by Tarute, Nikou and Gatautis (2017) highlighted that the taxonomy or the design application based of the mobile application is one of the influence factors that can lead to higher engagement of the users to use the applications. It can be summarized that if the features or the taxonomy of the application is not attractive or efficient enough for the users to use, it may influence the users to withdraw from using the application. Thus the first part of this study intends to determine the level of readiness and the taxonomy preferences or features of the application among the commuters and the visitor before it is made

available to them. Next, the researcher will do the extension from this study where further investigation on the acceptance of the technology which is *ARUS* by applying TAM Model (Davis, 1989) after the implementation of the mobile application.

Methodology

Research Design

The research design for this study is descriptive in nature. As this is the first phase of the study, the researcher intends to determine the level of readiness and the preference taxonomy of the mobile application among the commuters and visitors travelling using the boat or ferry services for their journey.

Respondents

Since this is a preliminary study, the questionnaire focusing on the readiness of the users and the preference taxonomy of the mobile application has been distributed via a readily available online form service. Snow balling was used as the sampling technique to distribute the questionnaire by passing it through WhatsApp group. Questions in terms of the frequency of the usage, willingness, readiness to use and features of taxonomy of the mobile application were included in the questionnaire besides the demographic of the respondents. The distribution of the questionnaire and getting back the feedback from the respondents only took one week. To determine the sample size, this study is using the ratio 1:10 as suggested by Hair Black, Babbini and Anderson (2010) which means one variable equals to 10 respondents. Since this study consists of four variables, so the suggested sample size is 40 and the total respondents who involved with this study is 58, thus it fulfilled the suggested sample size.

Instruments

As this is the first stage of this study, the researcher intends to measure the readiness of the commuters and the visitors in using *ARUS* before the implementation of the application. Items on the preference taxonomy of the mobile application are also included in the questionnaire. Four areas are focused at this stage: the frequency of the usage, the timeliness of the service, readiness of the users to use and the feature or taxonomy of the mobile application. As mentioned earlier, the second phase of the study will be carried out after *ARUS* is made available for the public. Thus the conceptual framework for this preliminary study is shown in figure 1.

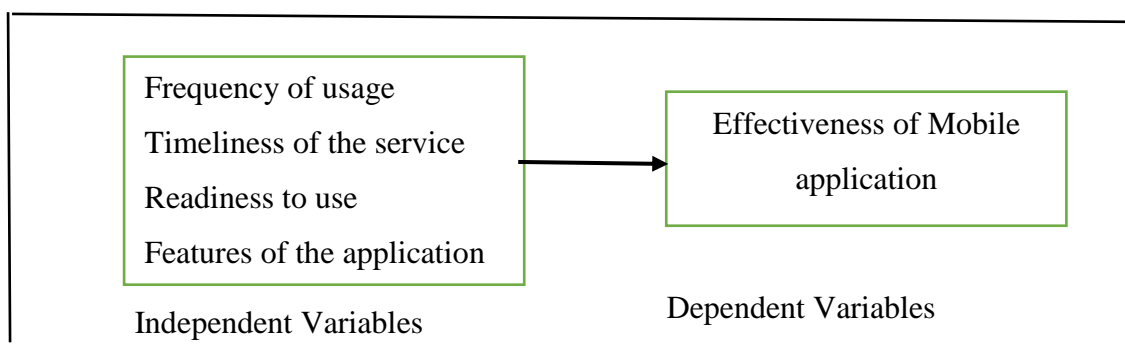


Figure 1: Conceptual Framework for the Study of User Readiness towards Mobile Application: *ARUS*

Data Analysis

Since the first objective of this research is to determine the level of readiness among the users of ferry and boat services and the preference features of the mobile application, descriptive analysis was chosen. The collected data was analysed using descriptive which is frequency. Reliability test was also done to determine the reliability of the items.

Discussion of the findings

The data was tabulated and analysed by using SPSS version 24. The total number of respondents was 58 of which majority were female Malay with substantial numbers have experienced using the boat or ferry service at least once.

85% of the respondents agreed that the service provided is not punctual. In other word, it can be explained that the schedule for the service is not consistent and reliable. The information about the service is hardly available, and if they do in some instances, it is unreliable. In any cases, users have to reach the jetty to find out for sure. From the interview with the technician who work with the ferry provider, the researcher was informed that there is no standard schedule was issued. The operation of the service depends on the experience of the ferry driver and his knowledge on the cycle of the tides. This scenario can cause inconvenience to the users to plan their trip. 86% of the respondents agree that a mobile application can solve the problem on the uncertainty of the service. With the several features available in the application, it can provide a reliable ferry and boat schedules. Thus, it can help the users to plan their journey more efficiently.

In addition, 55% of the respondents also agreed that with the application, users can save their time. This is due to the fact that the time that the users need to travel by road can take nearly 30 to 45 minutes for them to reach to the other side compared to only 5 to 10 minutes by ferry. In terms of readiness, 80% of the users agreed that using the application is very convenient to them. With the existence of the smartphone, which has taken place in running our daily lives and has become the necessity today, the readiness of using technology is very high among the community nowadays. In terms of the features in the application, 82.5% of the respondents agree that displaying the real time schedule of the services is the most important feature need to be in the application. For the feature of booking or buying the ticket online, 70% of them agree that it is very convenient for them rather than queuing at the jetty to purchase the tickets. There is also a feature in the applications which provides weather forecast, which can also give useful information for the motorists, where especially nearly 40% of the commuters are using motorbikes. 61% of the respondents agreed that the application can help users plan for any bad weather during their journey.

Conclusion

This preliminary research is the extension from other researches in mobile application where further evidence on the readiness and features or taxonomy of the application is gathered and proved to be significant. The ferry and boat users are willing to use the application because it can provide reliable information within their fingertips regarding the availability of the services. This can help them save time and plan their trip more efficiently. With the existence of *ARUS* the ferry users can save their time from travelling extra miles. The features of the application are also important in order to encourage the users to keep on using the applications. The features which reflect the ease of use, convenience and simple instruction to follow through are the reasons for the users to continuously use the application. Since the mobile application is just like other ordinary mobile application, the level of readiness and the effectiveness of the

features or taxonomy of the application are considered high. However, further study needs to be conducted to identify the level of acceptance in terms of ease of use, the usefulness and the behavioral intention of using the application once the implementation of the application is made to public.

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