

FRAMEWORK BASED MOBILE LIBRARY USAGE AND SUCCESS FACTOR: REVIEW AND EXTENTION CONCEPT

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Abstract: The aim of this paper is to propose a framework based mobile library usage. The aim is to identify the factors toward the success usage of mobile library. This is because the usage of mobile application is very popular especially among student. Therefore, it is important to apply this technology in the library in order to improve the usage of library services. At the same time, the framework identify the factors toward the successfully implementation of the library services.

Key Words: Mobile Library, Application, Communication, Technology.

1. Introduction:

Mobile technology or known as handheld computers originates as a one of the trend nowadays, which people use in their daily life. Examples of mobile device are smartphones, and tablet. Mobile technology has been more widely and quickly adopted than any other innovation ever (Pope et al., 2010). As we know, in this new digital era, everyone has their own phone and they use it every day in order to communicate with others and get information. Jacobs (2009) stated that mobile access has become a universal form of communication. It means that everyone uses mobile technology everywhere and anywhere they wish. The increasing interest of mobile technology in providing library services has changed the transformations in computing and networking. This pattern was moderate to move into public libraries and different sort of academic libraries such as undergraduate libraries, in spite of the high quantity of mobile technology being used by university students and the people in general (Educause Center for Applied Research, 2009). In addition, according to the Ellyssa Kroski's (2008) on the change with the mobile web which are libraries and mobile technologies is one of the most systematic publications including mobile applications in library services.

In addition, mobile innovation allows resilience for library services and additional continuous access to advanced data (Herman, 2007; Karim et al., 2006). Vielmetti (2008), stated libraries looking to change over their site into a mobile-friendly idea must first identify the architecture of information offered on a mobile library site will be distinctive due to the little screen on handheld gadgets. Before create library mobile service, librarians need to recognized and decide their objective user, their user need, and they have to consider about the factors that will attract them. According to the Kroski (2008c), mobile web can be identified and divided into the three categories which are communicated, information and resources download and information search. Seema (2013) also stated that the successful deployment of a digital library implementation may depend on a specific set of success factors.

Nevertheless, a little screen is their essential vulnerability and regardless of the screen increase in recent years, it is still very hard to utilize them for review long messages. Users still prefer to read full texts, especially those in the PDF format, on a computer (Ballard & Blaine, 2013; Cummings et al., 2010). According to the Dresselhaus & Shrode (2012), some studies have shown that students also use mobile devices for finding academic contents, but academic community, including libraries has generally gradually recognized and acknowledged the requirements of this sort of users. At this point in time, libraries have turned to this kind of mobile users and today a vast number, especially academic libraries. At this point in time, libraries have turned to this type of mobile users and today a large number, especially academic libraries, intend to go in that direction mean to go in that guidance (Carlucci Thomas, 2010). At this new era technology, library needs to make changes to their services and make it be more sophisticated regarding the change development.

The aim of this paper is to evaluate the success factors that influence the usage of mobile library service among student. In order to achieve this aim, we propose a framework incorporating factors that influence mobile library service among student. The proposed framework elaborates based on previous model that can drive better

influence in using mobile library services. The contribution of this paper may serve as a first step in understanding the relationship between student needs and mobile library service.

The remainder of this paper is organized as follows. Section 2 discusses the background of mobile services in library together with the literature review. Section 3 discusses the research framework. Section 4 is future works and concluding remarks.

2. Mobile services in library:

The mobile device is one of the ways for librarians to connect with users easily and also be used to create a mobile website or library application that allow user to access library services. This statement agreed by Nowlan (2103) stated that as user expectations for mobile services increases, libraries have an exciting opportunity to engage their users in new and dynamic ways. In addition, kroski (2008) stated that mobile services to libraries are now considered conventional include access to the online catalogue, readers' advisory apps, downloadable audio books, access to databases, text notifications and text reference. According to the Griggs et al., (2009) in order to develop mobile library services, libraries need to consider various significant things which imply that they have to start an application that work on both cell phone and web-enable telephones similarly. As we already know, materials that provided by the libraries are manuscripts, journal and other sources either in printed or non-printed, but in this new era technology library have been changed into digital form. According to the West et al. (2006) stated that the Ball State University Libraries mobile site offers users a catalog, journal searching, information about library accumulations and administrations, recording about the library and connections to portable reference sites. Users can access the services that gave by the library at anywhere and anytime they wish by using their own mobile device. According to Choi (2009) he also admitted that a mobile library offers services wherever, at any moment, by adopting mobile devices and mobile internet service.

2.1 Service quality:

Service quality is a somehow neglected concept from a macro ergonomic perspective (Taveira et al., 2003). According to the Chen (2005a, 2005b) he found that quality has a positive effect on perceived ease of use. Service quality includes three dimensions which are responsiveness, assurance and empathy to assess service quality (DeLone & McLean, 2003). According to the Becket & Brookes (2006), he stated that there is a considerable debate about the best way to define service quality in higher education. Furthermore, quality in higher education is a complex concept that lacks one unique definition (Marshall, 1998).

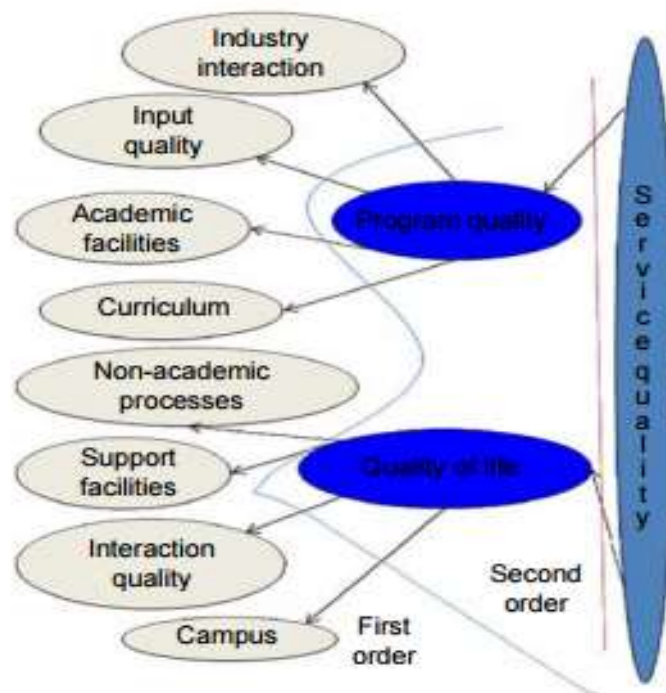


Fig. 1. Jain (2011)

Based on previous studies conducted by Chen (2016), stated that it is hard to utilize “use” to effectively evaluate service quality, this study supplanted it by “intention to use” as an option measurement under certain conditions. However, Petter & McLean (2009) were also stated that, they examined relationships within the IS success model at the individual level of analysis and found service quality and user satisfaction was not significant and service quality and use also was not significant but they have an ambiguous and powerful effect on attitude toward using through user satisfaction. According to the Chen (2016), the reason may be the attitude is mainly a user’s inner perception and opinion of the information system itself. In addition, there is a hypothesis that stated service quality of an information system has a significant and positive effect on attitude toward using (Chen 2016).

2.2 Perceived ease of use:

Functions such as generous and complete data, steady and well-organized system efficacy, and online continuous cooperation and reaction in reality, influence the perceived ease of use of the system (Chen, 2016). Furthermore, perceived ease of use reflects the duration to which an individual assumes that the self-service technologies (SSTs) will be simple to learn and utilize (Davis & Wiedenbeck, 2001). This fact is admitted by Van Dolen et al. (2007) that it’s easy to understand and run SST is some of the time engaging to consumers, since they would feel great while using that innovation. According to the Letchumanan (2011), he stated that perceived usefulness and perceived ease of use affected the effect that data quality and framework quality had on behavioural expectation.

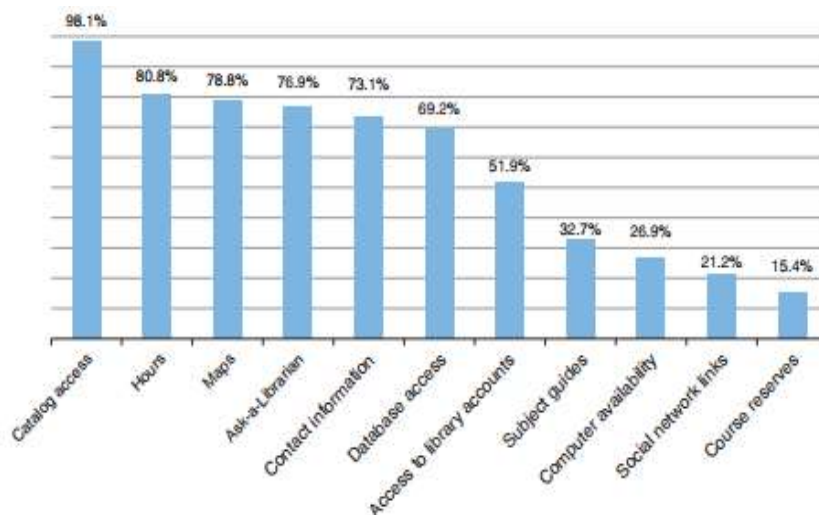


Fig. 2. Bamhold (2014)

Besides that, perceived ease of use appeared to have no significant effects on attitude (Chau, 1996; Moon & Kim, 2001; Nitish et al., 2004). However, Letchumanan (2016) also stated that ease of use has a significant effect on perceived usefulness. This statement admitted by Davis (1989), Wang et al. (2003) Selim (2003), & Shih (2004) that perceived ease of use is very connected with perceived usefulness in the adoption of technological products and services. It shows that perceived ease of use is a vital viewpoint to be perceived as useful.

2.3 Perceived usefulness:

According to the Letchumanan (2016), he stated that perceived usefulness plays an important role in order to attract intention of the student use the services. In addition, Davis (1989) & Hong et al. (2002) revealed that perceived usefulness has important commitment on students’ intention to utilize innovation. However, according to Hong et al. (2002), even though the technology product is easy to use and master, in the future, it can be neglected if it does not provide critically needed functionality. In addition, perceived usefulness reflects the extent to which a person believes that using SSTs will enhance the way he or she could finish a given work (Davis et al., 1989). Roughly, when users perceive a new innovation as valuable and functional, they will probably to receive that new innovation; this is particularly valid for youthful grown-ups (Sun & Zhang, 2006; Venkatesh et al., 2003).

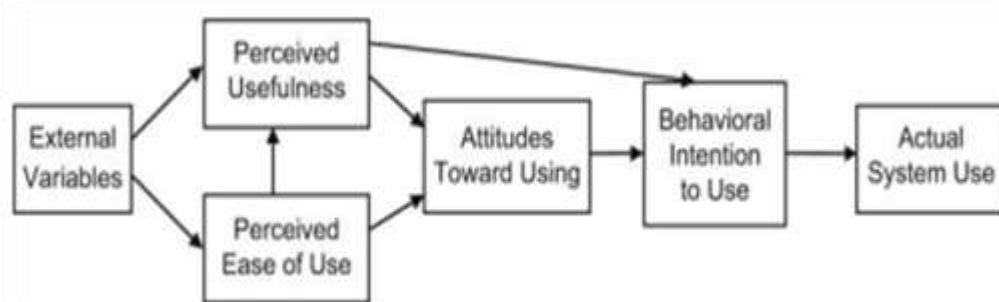


Fig. 3. TAM MODEL

Based on previous studies found that most of the analyst use technology acceptance model (TAM) that originally formulated by Davis (1986) is the outstanding theory that is extensively used to explain and predict user acceptance of new data framework. In the other hand, as indicate by the Aizen & Fishbein (1980), TAM was established in the theory of reasoned action (TRA), which is a model recommends that convictions impact attitudes, attitudes influence intention and may generate behaviors. According to the Letchumanan (2011), he stated that the main idea of TAM model is that the major factor to determine a person's system usage are based on people intention to use.

Based on previous studies conducted by Letchumanan (2011) has revealed that the behavioral intention to use the system is affected by attitudes towards utilizing the system. The study also stated that the TAM model focuses on two beliefs which perceived ease of use and perceived usefulness. This two theory has relationship between with a specific end goal to attract intention users utilize the system. Furthermore, according to the Chang and Chang (2009) confirmed the impact of every one of the variables in the TPB/technology acceptance model (TAM) incorporated model on user goals, including perceived usefulness (PU), ease of use, attitude, subjective standards, and perceived behavioral control. Meanwhile, the study of Letchumana (2011) used TAM models to investigate the intention of using e-books as learning material among undergraduates. Based on their finding they found that perceived usefulness has a powerful effect on attitude and students' intention towards the use of e-book.

Previous studies on mobile library services done by Li, (2013) ; Mavuso, (2012) stated that mostly they focussed on general definition, such as SMS reference, mobile websites, OPAC and many more. UTAUT is meant to be adjusted to fit the technology being queried (Venkatesh et al., 2003). This model focused on ways of user's intention to use the system and behavioral intention. Cheng & Huang, 2013; Oliveira et al. (2014) the technology acceptance model and unified theory of acceptance and usage of technology (UTAUT), as the classical adoption models, were regularly connected to study the utilization expectation factors of various end-customer mobile services. This two model can be used to identify the usage intention of the users in order to make an improvement. Several studies examined to observe that UTAUT model studied the users' behavioral intention well (Chang, 2013).

Mouakket (2015) found in his study the importance of the innovative and organizational characteristics in impacting the PU of framework and, ultimately, user continuation intention to utilize it among students. This is necessary to know the factors of influencing students' intention to use the mobile library service.

3. Research framework:

Davis developed TAM in 1986 based on the theory of reasoned action (TRA) that has been proposed by Fishbein & Ajzen (1975) in social psychology. The model shows the relationship between perceived ease of use, perceived usefulness, attitude toward using and the intention to utilize mobile library services that influenced dependent variable of mobile library provision.

The foremost impartial of the TAM model is to deliver a support network that will trace the effects of external variables on internal convictions, attitudes and intentions, also to examine and assess the relationship between real behavior, behavioral intentions, attitudes, subjective standards and beliefs (Chen, 2016). Davis (1986) determined that TAM external variables will affect both perceived ease of use and perceived usefulness and further affect attitude and behavioral intention. It means that, external variables related to each other to

determined users’ attitude. Chen (2016) also suggests that to applying the TAM to various models for checking data systems, the subsequent concentrates likewise included external variables and certain dimensions trying to better explain usage behaviors.

External variable have a powerful and specific effects on attitude toward using and user satisfaction and lead to positive effect on attitudes toward using. In addition, the study of Chen (2016) suggested that attitude is the antecedent affecting usage behavior, and the intention to use still belongs to the construct of attitude and psychological dimension, rather than actual usage behavior.

The first independent variable in this research is perceived ease of use, which is important in order to attract student intention towards the system. Library need to develop such system that provide and will satisfy users need. According to the Davis (1986) perceived ease of use will influence the attitude of an individual through two main mechanisms which are self-efficacy and instrumentality. This two main mechanism is important for perceived ease of use. In addition, self-efficacy is a ideas that clarify the more a system is easy to use the better should be the user’s feeling of efficacy (Bandura, 2012). Lepper (1985) stated that a tool that is easy to use will make the user feel that he control over what he is doing. According to the McFarland & Hamilton (2006) examples of perceived ease of use are task structure, anxiety, prior experience and organizational support.

Perceived usefulness is used as an independent variable in this research. Perceived usefulness is measured based on the users’ probability that he or she use specific application system that will increase his or her performance. Advantages of measured perceived usefulness are increased productivity, effectiveness of the work and make the job easier.

Service quality is one of the independent variable in this research. Service quality plays an important role in order to attract student’s intention towards using the mobile library service. It shows that, libraries that develop a successful service will attract user’s intention to use the system. In conclusion, based on literature review a few important variables are determined in this research. In addition, variables are identified by review of the above mentioned studies and other related studies. In this research, active variables will be; perceived ease of use, perceived usefulness and service quality. Meanwhile, attribute variables will be Student intention.

The view of the conceptual framework and the relationship among the variables are shown in Fig. 4.

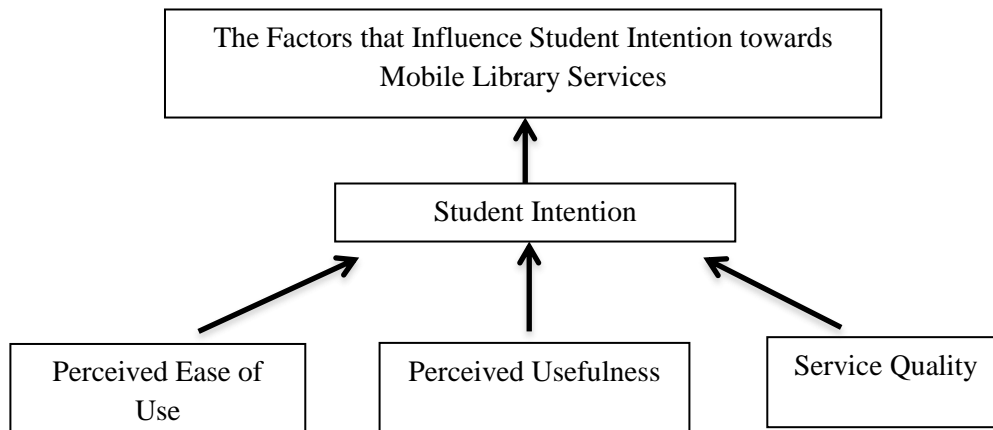


Fig. 4. Research Framework

Fig. 4 represents the direct relationship between student’s intention and the factors influencing the relationship and the generous analysis of these influences.

4. Conclusion:

These research paper concentrations on factors that influenced student’s intention towards using mobile library services. Smartphones became across the broad in the 21st century and most of people in this world have their own phone. Smartphone have turned out trendy either to youthful and old era. Smartphone also be made as a trend for people using it to communicate with each other’s, get information and entertainment. Libraries are one of the organizations that use this chance to make a change in their services and develop mobile library services. Mobile library services are the new services that library provide to ease users access to the library that provide self-service wherever they are without having to the libraries but can access it through their smartphones.

As their goals are to provide better services and to meet the needs of users, so they need to improve their services in order to achieve those goals. Librarians play an important role to attract student intention towards using the mobile library services. In order to meet the needs of users, they need to know the factors that influence student's intention to use mobile library services. There is abundant content that usually libraries provided on the mobile library services such as asks a librarian, OPAC, online catalogue, databases, library SMS services and many more. In this study, factors that been found in order to influence student's intention towards using mobile library services are based on technology acceptance model (TAM). The TAM model focuses on two convictions that known as perceived ease of use and perceived usefulness. In addition, based on this study were also found that service quality is one of the factors that will influence students intention. Ahn et al. (2007) noted that information quality, system quality and service quality all significantly effect on perceived ease of use and perceived usefulness. These three factors have a relationship with each other and used as an external variable. The external variable will support the internal variable in order to influence student intention and behavior. According to the Zeithaml et al. (2002), easy and understandable service system may be attractive to consumers and can enhance customers' commitment to the service providers. The mobile library services allow users to feel free and allow them to enjoy the services provided by the library without having to go to the library.

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