

Users Satisfaction Towards Online Banking in Malaysia

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Abstract: Online banking was introduced in Malaysia on 1 June, 2000 due to progressive expansion of information and communication technology. It allows consumer to manage and handle their banking account and transactions by using internet facilities. However, this system has not been fully utilized in the country due to a high number of consumers still prefer to perform banking transactions at the counters. The statistic shows that online banking subscribers in Malaysia are relatively low, since 2006 until 2013. The objective of this study is to identify, the factors which determine users satisfaction level using online banking services. Based on the literature reviewed, 6 factors have been identified to influence the online banking satisfaction level namely; self-efficacy, performance expectancy, effort expectancy, social influence, service quality and information quality. The factor performance expectancy, effort expectancy and social influence are based from the UTAUT Model whereas the service quality and information quality are based from D&M IS Success Model. The study used survey by questionnaire approach. A total of 180 questionnaires were distributed among the randomly selected respondents. However, only 125 questionnaires were collected back which made up 69.4% of total questionnaires distributed. It was found that there were 54 users (43.2%) spending <1 h on online banking transactions, such as transfer money to profit organization, third parties, checking account balance, bill payment, make e-fixed deposit placement and other. There were about 32 (25.6%) spending from 1-2 h to use online banking. The 22 of respondents (17.6%) almost never spend the time to use online banking even if they have online banking accounts. There were 17 respondents (13.6%) spending 3 h and above for the said purpose. It was found that there were 41 respondents (32.8%) using online banking a few times a month. The 30 respondents (24%) used it once a month, 28 respondents (22.4%) also used it a few times a week. Then, 14 respondents (11.2%) never used it a month. The 9 respondents (7.2%) use it once a day and there 3 (2.4%) used it several times a day. The findings indicate that factors on performance expectancy, social influence and service quality are significantly positive on users satisfaction towards online banking. However, self-efficacy, effort expectancy and information quality are non-significant. This research provides recommendations to enhance online services and strategies in the banking sector.

Key words: Online banking, self-efficacy, effort expectancy, social influence, users satisfaction

INTRODUCTION

Commercial banks have 2 main functions namely; primary functions which include accepting deposits from clients and granting loans, as well as advances to those who are in need. Banks help the public to manage their financial matters and they are certified as a secured location. Amounts of interest on the total premium are paid to the public. Meanwhile, loans are granted for a specific time period, such as short-term for <3 years and the long-term are beyond 3 years.

Banks perform financial transactions to the third parties, mortgages, payment of bills or loans. It also provides clients with foreign exchange facilities, issuing

letters of credit or travellers draft, as well as providing reports on the credit worthiness to clients. Through online banking, users can manage their transactions with a single-click via internet connection. Online banking has become more essential and is broadly accepted around the world. This is due to a strong hype on the broadband services and multimedia super corridor. These have tremendously changed the users lifestyles. Users are able to acquire the services whenever and wherever as long as they are connected to the internet. According to the study on evolution of service and consumer reactions by Guru *et al.* (2000), the successful implementation of electronic banking in Malaysia or in any other part of the world, the adequate legal and physical infrastructure were

major prerequisites. By then, users will become more satisfied, high level of confident on the privacy and security issues associated to online banking.

Coelho and Easingwood (2003) claimed that bank clients become less willing to visit traditional branches, less royal and more receptive to new electronic channels and more demanding on better service quality, such as 24 h service availability. The Finnish Banker's Association 2003 reported that online banking has been accepted by clients in Finland consisting 55% of banking clients having an online banking account. It is also claimed that Europe is still leading in online banking innovation and greater usage. Furthermore, the Iran daily reported that Iranian government officials have announced to start replacing traditional banking systems with electronic banking, such as online banking, ATM or mobile banking.

Banking business in Malaysia has undergone a great transformation, since its independence in 1957. In 1981, the first visible form of electronic innovation, Automated Teller Machine (ATM) was introduced by Maybank. ATM allows users to conduct banking transactions from every other ATM in the world. ATM becomes more economic substitute for the brick and mortar branches. Eventually, banks introduced advance technologies, such as telebanking in 1990's and followed by PC-banking. With the proliferation of internet expansion and computer usage, the use of electronic delivery in banking services has become ideal for banks to meet bank clients expectations and increase their satisfaction. Rapid development of information technology had brought greater influence on the life of millions of people around the world. In 2001, online/internet banking was introduced through the development of ICT.

In Malaysia, it was found that the number of clients visiting banks is high and previous studies indicated that online banking was underutilised among the Malaysians. Table 1 presents the number of clients who visit banks monthly in Malaysia.

Even though, the internet users are dramatically increasing, clients still prefer to visit the actual branch to do banking transactions. Around 70% of users still think that security matter is still a major factor for not using online banking. Thus, some clients are still willing to visit

banks every week or month, queue in and do transaction with banks. They are even willing to pay transportation costs to settle their things with bank officers rather than using online banking system which is useful and save time. Previous studies indicated that factors influencing user not to opt for online banking is due to less study on factors affecting users satisfaction towards online banking, especially in Northern Malaysia (Perlis, Kedah and Penang). Most clients prefer to personally interact with bank officers, as compared to online transactions. In order to change clients negative perceptions about online banking transactions and security issues, it should begin with a research of clients motivation, understanding of their need. It is not only about security but also behaviours and attitude of clients.

Under these backdrops, this study attempts to explore the factors affecting users satisfaction towards online banking services in Malaysia. Today, online banking services are known to most of banks clients. However, the numbers of users satisfaction toward online banking is still limited. Thus, it is the main goal of banking sectors to put efforts to attract more users to deal with them through online. It is imperative for bankers to understand and focus on users behaviours, needs and demands for the development of online banking. The banks need to provide the best services and products. However, the main issue is the security of the online banking among users. Most of the previous studies found that the reasons on high level of satisfaction for online banking are usefulness and easy access. Yet, most of the users are still concerned about online banking frauds without being noticed. Thus, future research is needed to understand on how the banking sectors are able to develop and provide secured online banking services to users.

MATERIALS AND METHODS

Online banking in Malaysia: On 1 June 2000, Malaysian Central Bank has authorised local commercial banks to offer online banking services. Maybank, the largest domestic bank was the first to offer this service in Malaysia at www.maybank2U.com. The online banking services were considered, as new technology product in Malaysia. According to Malaysian Central Bank, there are only 13 commercial banks out of 23 have offered online banking to the bank clients. Online banking is one the systems offered by banks to allow their clients to access the account detail and manage banking transactions via internet. Local banks in Malaysia have started to offer other services, such as applying initial issues (not too sure on this statement) of shares from stock market. According to Kasiran *et al.* (2006), the acceptance of

Table 1: No. of client visiting to banks every month

No. of visit to bank branch every month	Frequency	Percentage
Never	3	10.0
Once	14	46.7
Twice	6	20.0
Three or more	7	23.3
Total	30	100.0

Study of Electronic Banking in Malaysia: A note on evaluation of services and consumer reactions, 2003

online banking usually depends on 2 types of trust, technology and procedural trust. Technology trust refers to the ability of a bank to provide reliable technology in handling electronic transactions and fraud preventions. Procedural trust is referring to procedures that manage electronic transactions.

Recently, there were many fraud cases brought by phishing through online banking but there was no evidence on security breach involving local commercial banks. It is also claimed that banks had placed adequate protection to ensure the safety of online banking systems. There are many scam e-mails or fraudulent banking websites designed to trap the users. Thus, it is important to users to avoid browsing on unfamiliar links and should contact the banks instead for confirmation. This is because banks never send any promotional messages through online for bank account updates.

Online banking fraud in Malaysia has not been perceived, as threats in the banking services by association of banks, since there are several relevant tools or systems to deal with it. For example, users authentication techniques, data protection, audit trail procedures and users privacy standards are provided to protect benefits of users. Besides that, the association of banks constantly increase users awareness in term of fraud tactics to ensure their personal information is secured. Furthermore, users should not reveal password to unknown party via websites or Short Messaging System (SMS).

Issues on secured banking account are the reason why clients still visiting banks instead of using online banking. This new innovation is still not implemented by all banks, since there is lack of adequate legal framework and security concerns. The issue of quality and availability of service, also are very important determinant for success introducing online banking in Malaysia.

There are few studies on users satisfaction towards online banking, especially in Northern Malaysia (Perlis, Kedah and Penang). From the figures, as indicated in Table 2, it has shown that online banking services are not fully practised by Malaysian even there are high percentage of internet users.

Table 3 shows the number of internet users in Malaysia is high and keep on increasing from year 2006 until 2010, since they are well equipped with technology knowledge. The awareness among the online banking users have allow them to get the pin code or password via ATM and click to banks website to register in order to access online banking successfully. Some of them are still practising traditional method by going to retail branch banks. In this study, the statistic of internet bank subscribers.

Table 2: Statistic of internet users in Malaysia

Years	Internet users (million)	Population of Malaysia	Percentages of users
2006	11.0	28,294,120	38.9
2007	13.5	28,294,120	47.8
2008	15.9	25,274,133	62.8
2009	17.0	25,715,819	65.7
2010	17.0	26,160,256	64.6

Internet world states from www.Internetworldstats.com

Table 3: Statistic of online banking subscribers

Years	Individual (million)	Corporate (million)	Total (million)	Penetration to population (%)
2005	2.5	0.1	2.6	9.8
2006	3.2	0.0	3.2	12.0
2007	4.5	0.1	4.6	16.9
2008	6.1	0.1	6.2	22.5
2009	8.0	0.2	8.1	28.9
2010	9.6	0.2	9.8	34.4
2011	11.6	0.2	11.9	41.0
2012	13.4	0.2	13.7	46.6
2013 (Up to Sep.)	14.8	0.3	15.1	50.0

Malaysia Central Bank

From Table 3, the figures of internet subscribers are growing from year to year. In the year 2010, there are 9.6 million clients was register with banks as online banking users to access online services.

From all the figures, 9.6 million out of 26 million populations are subscribers to online banking services. Thus, numbers of clients accepting to online banking in Malaysia is considered, as low and unfavourable. Most consumers prefer to interact face to face compared through online. The satisfaction towards online banking among them is still low, even though they have been registered as online banking users. In order to change, the users perceptions and bad impression about online banking in managing their finance has to begin with research on users motivation in order to understand what they needs. It is not only about security but also behaviours and attitude of people.

Empirical studies of online banking: Delivery the banking services such as payment of bills, financial transactions, checking on account details and so on via the use of internet is defined as online banking (Yiu *et al.*, 2007). Besides that, clients who use online banking services are considered, as online banking users. In this century, the use of internet has become a channel of banking sectors to provide the services to their clients. Internet has become a requisite element in the daily life and it provides convenience due to rapid development of Information Technology (IT). They can easily access variety of information with a simply click and able to perform online activities at their convenience. There are several advantages for banks providing their services through online. First, banks are able to save their cost.

This is because it is recognized, as a cheapest channel for banking products and services once established (Robinson, 2000; Giglio, 2002). Second, it allows the banks to reduce their branch networks and decreased the number of staffs (Karjaluo *et al.*, 2003). The main reason for banking sectors to accept the online banking is time, cost saving and freedom from place (Polatoglu and Ekin, 2001).

Online or internet banking services was launched by the Malaysian Central Bank in Malaysia officially on 1 June, 2000. According to Pikkarainen *et al.* (2004), an online banking has been defined, as an internet portal where users can use various type of banking services. Banking services provided by most banks are ranging from payment of bills, credit card payment, funds transfer, banking enquiry functions, loan account management, investment planning's and purchasing insurance. Maybank is one of the largest banks in Malaysia was considered, as the first bank to practise online banking.

As reported in Asian Strategy and Leadership Institute (ASLI) in 2002 that most of major banks in Malaysia have aggressively utilised the internet in response to the increasing competition. The local banks were given period of 18 months early in launching the use of online banking compared to foreign banks, such as HSBC (Hong Kong and Shanghai Banking Corporation). Even though, there are widely use of online banking transactions but the traditional branch-based retail banking is still preferred by clients to conduct banking transactions. However, there are many views and studies suggesting that online banking may not in fact, able to achieve the levels of transformation expected (Carniffe, 2000; The Sunday Times, 2000; Poulter, 2000; Cuevas, 1998; Ensor, 2000). Cruz *et al.* (2010) in their study indicated perception of cost, risk, low perceived relative advantage and complexity were revealed to be the main reasons behind the reluctance to use the online banking services. Other reports such as CSFI, showed that e-banking is believed to be too costly to be delivered, non-profitable; fraud threats and potentially downgraded clientele relationships. Now-a-days, the internet has significantly impacting on many businesses. The online shopping and sales are important manifestations whereby the internet is used as a platform to conduct businesses. Internet shopping behaviour is closely related to online financial activities. The activities include online banking and payment transactions. Online banking is the combination of internet services and self-service which are under the online and WWW context (Song, 2010). This scenario is able to provide great benefits to both bank sectors and the online banking users.

In addition with the functionality of broadband services and close competition among telecommunication companies in Malaysia, more consumers and Business to Business (B2B) transactions are made via online. Based on a study by Bradley and Stewart (2002), most of banks make their online services available by the end of year 2011. All the banks shall benefits from the emergence of internet usage. Besides that, the banks will also strengthen their position in this competitive environment. Luneborg and Nielsen (2003) mentioned that banks are gaining significant positive impact on different performance measurement such as sales, market share and number of newly established client relationships via online services.

Users could perform business transactions with banks at their convenience as long as they are connected to the internet. Today, the public prefer banks which are able provide quality services due to their awareness and non-reluctant of pursuing online transactions. Internet has now been recognized, as a powerful and strategic business tool and revolutionizes on ways banks operationalize, deliver and compete against one another in which traditional branch networks are eroding fast (Nehmzow, 1997).

Riquelme and Rios (2010) conducted a study in the context of Singapore and found that usefulness, social norms and social risk are the factors that influence the intention to adopt mobile banking services the most. Ease of use has a stronger influence on female respondents than male whereas relative advantage has a stronger effect on perception of usefulness on male respondents. Social norms (or the importance of others in the decision), also influence adoption more strongly among female respondents than male. Puschel and Mazzon (2010) offers an integrated view, taking into account of users and non-users. For non-users, the framework was able to explain approximately 69% of the dependent variable (intention to adopt mobile banking) variation which is a figure higher than those obtained in previous studies. However for current users of mobile banking, only 27% of the dependent variable variation was explained by the framework.

An study by Suping and Yizheng (2010), they mentioned that there are several theoretical models which root in Information System (IS), psychology and sociology are explaining >40% of the variance in individual intention to use some new technology (Venkatesh, 2000). Understanding behaviour and retaining on bank clients is hard because they are easily to switch to other competitors. Thus, it is imperative for banking sectors to enhance their awareness between perceived quality service and clients satisfactions

(Parasuraman *et al.*, 1988, 2005). Users satisfactions toward online banking's are closely related to security and privacy which have been indicated in many banking studies.

It is imperative to fulfil any legal requirement and physical infrastructures in order to implement the online banking system in Malaysia or elsewhere. The internet usage has become a challenge in banking sectors, since perceptions of its clients have become more essential for its success. Clients are expecting the banks to provide more on the types of services from time to time. Birch and Young (1997) mentioned that bank clients prefer convenience, flexibility and easy to use tools of financial management, as well as products or services which traditional retail banking that could not offer.

Empirical studies of model of behaviours: In regards to the online banking services, many studies were conducted on the users satisfaction behaviours by using various theories such as:

- Unified Theory of Acceptance and Use of Technology Model (UTAUT)
- Success Information System Success Model by Delone and McLean (2003a)
- Technology Acceptance Model (TAM)

The intention of adoption the online banking was affected by level of satisfaction of using technology. Satisfied online banking users shall have intention to use the online banking system frequently.

Unified Theory of Acceptance and Use of Technology (UTAUT): UTAUT was developed by Venkatesh *et al.* (2003) which consists of 8 models, such as performance expectancy, effort expectancy, social influence, facilitating conditions, gender, age, experience and voluntariness of usage. This model had proposed different variables to determine the acceptance on technology whether it is related or non-related. UTAUT Model was developed to enhance TAM and is explained as:

Performance expectancy and effort expectancy are used to incorporate the variables of perceived usefulness and ease of use in TAM. The variables such as gender, age, experience and voluntariness of usage can affect the usage decisions.

Performance expectancy means that degree to which an individual believes that using a system will help them to attain gains in term of performance and productivity (Venkatesh *et al.*, 2003). Performance expectancy is seen, as strongest predictor of intention in both voluntary and mandatory setting. Effort expectancy has been defined, as

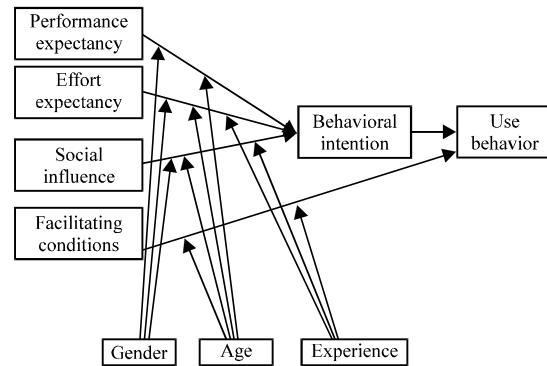


Fig. 1: Unified Theory of Acceptance and Use of Technology (UTAUT) Model; Venkatesh *et al.* (2003)

degree of ease in system usage which comprised of perceived ease of use. Social influence is defined, as degree of an individual's perception on the importance of others to use the system which is considered as direct determinant of behavioural intention. UTAUT may be insufficient to analyse the online banking acceptance due to differences of its technological context and implement conditions (Venkatesh *et al.*, 2003) (Fig. 1).

Delone and Mclean success Information System Success Model (D&M IS success Model): D&MIS Success Model was originally developed by Delone and McLean (1992) and reviewed in year 2003 and 2004. Both of them have identified 6 elements of IS success, namely:

- System quality
- Information quality
- User satisfaction
- Individual impact
- Organizational impact

These 6 variables are not independent but are interdependent variables. The D&M Model was reviewed in 2003 to add the new element, namely service quality. This need has become more apparent with the advent of e-commerce and demand of users for support from their web providers. Service quality measures overall support which has been delivered by service providers. The dimensions of service quality are tangibility, reliability, responsiveness; assurance and empathy (SERVQUAL) were proposed. The influencing factors of service quality to online banking are the users expectation, reputation and banking image, service environment, service experience and users participation (Fig. 2).

Technology Acceptance Model (TAM): TAM is an adaptation from the theory of reasoned action which

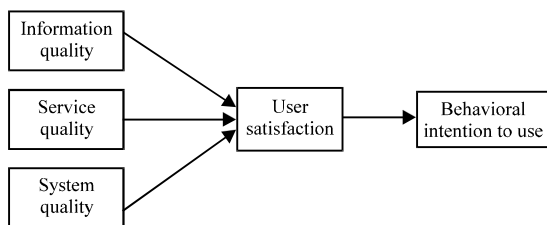


Fig. 2: D&M IS Success Model: DeLone and McLean (1992, 2003a, b) updated information systems success Model

developed by Fishbein and Ajzen (1975). Davis (1989) developed TAM which is the most popular theory due to its parsimonious structure and acceptable explanatory power which described by Venkatesh and Bala. Among many theory developed, TAM is a common agreement in predicting the individual's acceptance of various technologies (Adams *et al.*, 1992; Segars and Grover, 1993; Chin and Todd, 1995; Doll *et al.*, 1998). However, other researchers such as Lee *et al.* (2003) claimed that TAM had attracted to more easy and more quick research; less attention to the real problem of technology acceptance. Users attitudes and acceptance toward a new information system have greater and critical impact on the successful information system adoption (Davis, 1989; Davis *et al.*, 1989; Succi and Walter, 1999). It does not bring advantages for company, if users are not willing to accept the new information system. The more users are accepting the new information system, the higher willingness to make changes in the practices and utilise their time and efforts to learn using the new information system (Succi and Walter, 1999) and in turn would increase the satisfaction among users. The system is considered, as effective or non-effective depending on users perceptions and on how they feel about the system after usage. It could results in negative impact on company if users do not rely on; new system, information and security issues. Success does not dependent on the technical quality of system (Ives *et al.*, 1983).

Perceived usefulness and ease of use, risk in online banking and personal innovativeness in Information Technology (IT) have positive effect to online banking usage in the study of online banking in Hong Kong (Yiu *et al.*, 2007). Lee *et al.* (2003), also integrates TAM and TPB in order to identify factors that affecting the usage of online banking in Taiwan. As a result, an intention of using online banking is adversely affected by security and privacy risk, as well as financial risk but is positively affected by perceived benefits, attitude and perceived usefulness.

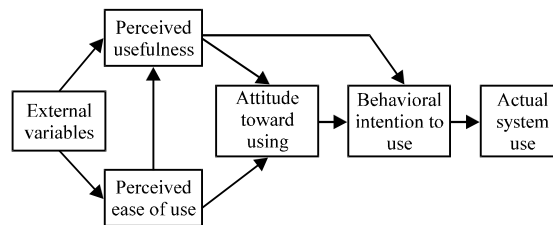


Fig. 3: Technology Acceptance Model extensions (TAM) (Davis *et al.*, 1989)

Figure 3 shows technological acceptance model, also mentioned that external variables may affect the main beliefs, perceived usefulness and ease of use. It refers to extension of TAM. Some external variables include:

- System features
- Training
- Documentations
- User supports

Besides that variables such as age, gender, level of education may have significant effect on the users acceptance of online banking. However, the most important individual differences which received more attention in TAM Model, such as computer self-efficacy (Agarwal and Prasad, 1999; Venkatesh, 2000). This individual difference has significant effect on the intention of potential users using online banking. It plays an important role in implementation of any technological innovation in wide variety of disciplines including information system, production and marketing.

Zmud (1979) mentioned there are numerous individual differences in variables, such as demographic and situational, cognitive variables and personality related. Agarwal and Prasad (1999), Karahanna *et al.* (1999) and Plouffe *et al.* (2001) also introduced some additional belief factors from the diffusion of innovation theory, such as trial ability, visibility or result demonstrability. Subjective norms, perceived behavioural control and self-efficacy also added to TAM (Mathieson, 1991). On the other hand, Chen mentioned that the effects of individual differences variables on using the new IT are yet to be explored.

Theoretical framework: Theoretical framework allows research and identifies the variables to be measured. Trochim (2006) stated that there are 2 areas involved in research, such as theory and observation. Theory is defined as what goes inside the heads of scientists while observation is what goes to the real world. This study

was based on 2 models; UTAUT (Unified Theory of Acceptance and Use of Technology) which develop by Venkatesh and D&M IS Model (DeLone and McLean, 2003b). In this research, independent variables are VQ, IQ, SE, SI, EE and PE. VQ refers to quality of the support received by the system users from IS Department and IT support personnel. It includes the SERVQUAL. IQ aspect of the system is related on the measurement of information system outputs. According to Huizingh (2000), IQ can express the content issues vital to e-commerce. SE refers to abilities and skills that people believe can help accomplish specific task successfully. SI is also defined, as the extension of people to perceive opinions of others in believing that he or she should consider the use of systems or innovations. EE can be defined, as the ease of use of the new innovation and its complexity. PE is also defined as, the ability of the systems or new innovations to help achieved desire the desired goals or performance. The dependent variable is the users Satisfaction (S). The dependent variable is depending on the above variables, such as VQ, IQ, SE, SI, EE and PE.

Research hypotheses: When users are faced and interacted with new innovation technology, there are several factors which able influencing their satisfaction to use the said technology. Individuals usually satisfy with new technology because he or she has high self-efficacy are influenced by other people, trust the systems and are attracted by quality information. In the statement, self-efficacy refers to an individual's belief that they have skills and abilities to accomplish specific tasks successfully (Bandura, 1986). Compeau *et al.* (1999) stated that self-efficacy have a direct influence and impact on the system usage. Self-efficacy is believed to have direct impact on performance and effort expectancies. Therefore, several hypotheses are constructed as follows:

- H₁: Higher self-efficacy will lead to higher users satisfaction
- H₂: Higher performance expectancy will lead to higher users satisfaction towards online banking services
- H₃: Higher effort expectancy will lead to higher users satisfaction towards online banking services
- H₄: Higher social influence leads to higher users satisfaction towards online banking services

According to D&M IS Success Model in 2003, system quality, information quality and service quality affect on users satisfaction. System quality is related to functionality of a website whereas information quality is

expressed through the content issues that are vital to e-commerce (Huizingh, 2000). Thus, hypotheses are proposed as:

- H₅: Higher service quality of website leads to users satisfaction towards online banking services
- H₆: Higher information quality of website leads to users satisfaction towards online banking services

Data collection: In this research, respondents were randomly selected from 3 states, namely; Perlis, Kedah and Penang, Malaysia. The questionnaires were distributed among banks, post offices, restaurants, hypermarkets, schools, friends those come from these 3 states and so on. Questionnaires, also distributed through survey builder website. In order to obtain reliable results, there are 130 questionnaires were distributed randomly. Besides that questionnaires distributed to those bank clients who are using online banking services. The questionnaires were also distributed to students of University Malaysia Perlis. Questionnaires were also mailed to the respondents and these respondents completed the form at their own phase.

Pilot test: Pilot test was performed after the questionnaires are collected. While running this test, 15 respondents were selected to fill up and answer the questionnaires. The purpose of this test is to explore the understanding of respondents towards each item in the questionnaire. Through, the pilot test the weakness in designing and instrumentation of questionnaires can be detected and modified or deleted before distributed to the large sample of respondents. These questionnaires were distributed randomly to users located at Perlis, Kedah and Penang. Cronbach's alpha method also used to test the reliability of data.

Overview of data gathered: Table 4 shows the sample profile of the questionnaire survey. A total of 180 questionnaires were distributed among the randomly selected respondents. However, only 125 questionnaires were collected back which made up 69.4% of total questionnaires distributed were satisfactorily completed and tested using the Statistical Package for Social Sciences (SPSS) software.

Table 4: Sample profile

Samples	Values
No. of questionnaires distributed	180.0
No. of questionnaires collected back	125.0
Response rate (%)	69.4
No. of questionnaires used for analysis	125.0

Data presentation: Descriptive analysis was used to analyse all the demographic data of the respondents including gender, age, state, qualifications, occupation and income level. It is observed that out of 125 respondents, there were more female than male respondents. The results show that 51.2% of the respondents are female and the remaining 48.8% are male. For occupation, 30 respondents (24%) were from government sector, 33 (26.4%) works in the private sector, 62 respondents (49.6%) were from the others. For the state level, there were 43 respondents coming from Perlis (34.4%), 44 respondents (35.2%) from Kedah and 38 respondents (30.4%) from Penang. The majority of 50 respondents were aged <30 years old (40%), 33.6% were aged between 30-40 years old consisting 42 respondents, 12% (15 were aged between 41-50 years old and 14.4% (18 respondents) were >51 years old. As for the qualification levels, most of respondents, 58 (46.4%) came from degree qualification, followed by SPM respondents, 25 (20%), diploma respondents, 24 (19.2%), Master qualification consists of 15 (12%) and PhD, 3 respondents (2.4%). As for the income level, the greater number of the respondents draws >RM 2000-3000 (34.4%). There were 38 (30.4%) <RM 2000, 31 (24.8%) from RM 3100-4999 and 13 (10.4%) >RM 5000.

Use usage: In this research, use usage of online banking can be divided into actual monthly use and frequency of use. Table 5 showed the number of user and their average monthly frequency in using online banking.

There were 54 users (43.2%) spending <1 h on online banking transactions, such as transfer money to profit organization, third parties, checking account balance, bill payment, make e-fixed deposit placement and other. There were about 32 (25.6%) spending from 1-2 h to use online banking. Total 22 of respondents (17.6%) almost never spend the time to use online banking even if they have online banking accounts. There were 17 respondents (13.6%) spending 3 h and above for the said purpose. Table 6 shows the frequency of using online banking on an average.

From Table 6, there were 41 respondents (32.8%) using online banking a few times a month. The 30 respondents (24%) used it once a month, 28 respondents (22.4%) also used it a few times a week. Then, 14 respondents (11.2%) never used it a month. The 9 respondents (7.2%) use it once a day and there 3 (2.4%) used it several times a day.

Reliability analysis: Table 7 shows the Cronbach's alpha and items of each dependent variable, namely; self-efficacy, performance expectancy, effort expectancy,

Table 5: Actual monthly use

Actual monthly use	Frequency	Percentage
Almost never	22	17.6
<1 h	54	43.2
From 1-2 h	32	25.6
>3 h	17	13.6

Table 6: Frequency of use

Frequency of use	Frequency	Percentage
Never	14	11.2
Once a month	30	24.0
A few times a month	41	32.8
A few times a week	28	22.4
About once a day	9	7.2
Several times a day	3	2.4
Several times a day	3	2.4

Table 7: Results of reliability test

Variables	No. of items	Items dropped	Items recoded	Cronbach's alpha
Self-efficacy	4	-	-	0.752
Performance expectancy	5	-	-	0.867
Effort expectancy	5	-	-	0.708
Social influence	5	-	-	0.800
Service quality	6	-	-	0.881
Information quality	3	-	-	0.753
User satisfaction	4	-	-	0.824

social influence, service quality (trust) and information quality (relevance). The Cronbach's coefficients alpha values for all factors that ranged from 0.708-0.881 indicated good inter-item consistency for each factor. Sekaran (1992) explained that reliability of a measure is established by testing for consistency and stability of data collected. Consistency of data shows the degree an item is independently measured of a concept. Reliability analysis was used to measure the goodness of data. This is to ensure that all items used in each variable are free from error and thus, providing consistent results. Cronbach's alpha was the measurement. According to Sekaran (2000), alpha over 0.80 is considered good whereas range of 0.70 is considered as acceptable.

Factors influencing users satisfaction towards online banking service:

The mean for all variables are ranges from 3.1603-4.1058. The mean and standard deviation for independent variables measures which are self-efficacy, performance expectancy, effort expectancy, social influence, service quality and information quality were 3.9153, 4.1058, 3.4099, 3.1603, 3.5537 and 3.7631. Finally, users satisfaction has the mean of 3.9360 and standard deviation of 0.58142.

Table 8 presents results of multiple regression analysis. Based on the regression analysis results, self-efficacy was found to have no significant effect (Sig. t = 0.727) on the users satisfaction. This finding shows that the satisfaction of using online banking does not depend on the ability or disability of users using the

Table 8: Results of regression analysis on acceptance

Variables	β	t-ratio	Sig. t
Self-efficacy	0.026	0.350	0.727
Performance expectancy	0.417	5.399	0.000
Effort expectancy	-0.007	-0.079	0.937
Social influences	0.133	1.799	0.045
Service quality	0.290	3.489	0.001
Information quality	0.112	1.271	0.206

R² = 0.525; Durbin-Watson = 2.402; F = 21.034; Sig. F = 0.000; Condition index = 25.268

online banking transaction. This is because the user will not be satisfied on the system, even though she or he is an internet savvy. Now-a-days, most of the users, especially teenagers can complete online banking transactions without any help from expert. The hypothesis H₁, stating that there is relationship between users satisfaction and self-efficacy is not substantiated.

Performance expectancy was found to have significant effect with (Sig. t = 0.000). This means that users were satisfied because online banking helps them achieve their desired performance and goal. They were satisfied, since the online banking could be useful in their daily life. Thus, H₂ which stated that higher performance expectancy will lead to higher users satisfaction on online banking is fully supported at the significance level of p<0.01.

The regression analysis also indicates effort expectancy does not show significant effect (Sig. t = 0.937) on the users satisfaction. This showed that users interact with online banking not because of the effort expectancy. The ease of use and complexity of online banking does not influence users satisfaction towards online banking. This is because now-a-days, the online banking systems become less complicated to use. Thus, H₃ which stated higher effort expectancy will lead to higher users satisfaction on using online banking is not supported.

Social influence was found to have significant effect on the users satisfaction at 5% acceptance level (Sig. t = 0.045). Other people's opinions and suggestions will helps increase or decrease the satisfaction of users on online banking. Therefore H₄, higher social influence leads to higher users satisfaction on online banking is supported.

Service quality also was found to have a significant effect on the satisfaction of users, t = 0.001. Service quality on this research referred to the trust worthiness of online banking website. The result is similar with the study done by McKnight and Chervany where trust is an important element in relationship to affect users satisfaction toward online banking. Therefore, H₅ which stated higher service quality of website leads to higher users satisfaction on online banking is supported at the

significant level of p<0.01. Users of online banking were satisfied, if there are adequate legal framework and security concerns.

Information quality does not significantly affect (Sig. t = 0.206) satisfaction towards online banking. Website information relevance to the users is not important to determine the satisfaction. The H₆ which stated higher information quality of website leads to higher users satisfaction on online banking is also not supported. This is because there were many scam e-mails or fraudulent banking website designed to trap users. Thus, most users will not be satisfied even with attractive designs of the website.

Performance expectancy, self-efficacy, service quality, effort expectancy and social influence can explain 52.5% (R² = 0.525) variation of users satisfaction. Durbin-Watson fell within the accepted range (2.402); therefore there was no auto correlation problem with data. Multi-collinearity problem does not exist in this regression model, since condition index, VIF and tolerance fell within the accepted range (Condition index = 25.795, VIF = 1-10, tolerance = 0.1-10). F-value is found to be significant at 1% significance level (Sig. F = 0.000). This concludes that the regression model used in this study is adequate or in other words, the model is fit.

RESULTS AND DISCUSSION

Hypothesis 1 examined the relationship between self-efficacy and users satisfaction in using online banking and this hypothesis were rejected. Hence based on the results, now-a-days internet users who have high ability and skills to use the internet may have strong self-efficacy but they have little satisfaction in using online banking. The result was not consistent with the findings of previous studies of Burkhardt and Brass (1990) and Hill *et al.* (1986) which revealed that self-efficacy have a significant influence. In this new era, self-efficacy behaviour is not influenced by the satisfaction of users in using online banking, especially teenagers. Users of online banking believe that they are able to complete the transaction without any guidance which will not decrease or increase their satisfaction on using this innovation.

Hypothesis 2 examined the relationship between performance expectancy and users satisfaction. The performance expectancy was found to have significant positive effect on user satisfaction in internet banking. It is consistent with the previous studies of UTAUT Model which identified performance expectancy significantly determine the users satisfaction. Most of the users will increase satisfaction on using online banking because the system will increase their performance and productivity.

They are able to conduct the transaction immediately without going to retail branches. This is because through online banking, transaction activities will be performed and executed at a faster speed than ATM's (Automatic Teller Machine) or bankers.

Hypothesis 3 examined the relationship between higher effort expectancy leading to higher users satisfaction on using online banking. Results revealed that it is not significant. Effort expectancy is referred to the ease of using online banking among users. Now-a-days, the online banking system is becoming easy to use and it is introduced widely around the world. Thus, the satisfaction of users will not increase even if it is flexible to interact.

Hypothesis 4 tested the relationship between social influences and user satisfaction. Users' perception can be changed when they receive some ideas from parents, employers, lecturers, leaders and so on. This hypothesis is consistent with a previous research conducted by Lewis *et al.* (2003) where social influence from people such as organizational peers, professional peers, supervisors and senior leaders had a significant effect on users' satisfaction.

D&M IS Success Model in 2003 mentioned that service quality would affect the users' satisfaction. Hypothesis 5 is significant, since the relationship between service qualities of website (trust) lead to higher users' satisfaction. Previous study made by DeLone and McLean (2003a) is consistent with the results. Trusting the website is the most important part when using online banking system which will involve the use of computer. Parasuraman *et al.* (1988, 2005), also mentioned that it is very important for banking sectors to be aware of the links between service quality and users' satisfaction.

Lastly, hypothesis 6 also examined the relationship between information qualities of website (relevance) and users' satisfaction. However, the results were not consistent with D&M IS Success Model in 2003 where information quality can affect the users' satisfaction. Information quality of website, such as relevance information does not help to increase users' satisfaction.

CONCLUSION

In this new era and rapid growth of internet, online banking services play vital roles in the daily banking transactions. This study was conducted to better understand the factors influencing users' satisfaction towards online banking services among various background users. Results of this research can be used, as reference by banks that are offering online banking services, such as Public Banks, UOB, Maybank and so

on. From the research, banks can formulate effective techniques to increase users' satisfaction besides the ease of use system in order to attract more users from various backgrounds. Bank clients should switch into online banking services by offering them with free training, encourage them to make the payments via online. The bank management must have a clear understanding of those users of online banking will not easily be satisfied because of the design of website. The website design is not the only tool to attract more users, instead the reliability and security of website are the major factors to attract and retain users. Users of online banking also need the banking sectors to provide them a detailed, adequate and accurate information on the website.

Most Malaysians, especially the elder generation are lacking of knowledge about online banking, since it is still new and is hardly to be accepted. Furthermore, households have limited access to internet connection. This makes it difficult to access websites and most of bank clients are concerned about the security and privacy issues. Banking sectors have the responsibility to take actions to minimize online fraud in order to attract more users regardless of age, education level or income level. Banks also organized awareness campaigns to educate clients to handle and protect themselves from security and privacy related concerns. On the other hand, users should always be alert in any situation by not revealing their password, username or account number to any third party in order to reduce uncertainty and increase satisfaction.

LIMITATIONS

For future research, this study suggests that limitations, as stated in this study should be further explored. For example, future research will have to develop a better model and expand their population in order to represent the Malaysian context. Future researches are highly recommended to select respondents from various qualification backgrounds except as stated mentioned earlier. Further research, also suggests involving the Malaysia government's role in online banking implementation support. Besides that should include more factor variables in determining users' satisfaction on using online banking. Furthermore, this research is excluding the voice of non-users. So, non-users' views should take into account in the future study.

Last but not least, banking sectors could also provide some extra features on their website, such as having the promotion items that must be purchased via online banking system to attract more users especially teenagers. Banks also have to design the system to make it easier for users

to interact with their employees in order to tackle the problem which is considered important for users with the low efficacy.

IMPLICATIONS

The result of the present study showed that it is important for the bank management to be aware on the changes which has taken place in an organization. It might be important for banks to develop effective marketing strategy for online banking. The website security is ultimately important in attracting clients on using online banking and increasing users satisfaction. Thus, the banking sector need to visibly demonstrate concern for security and reliability with concrete solutions to improve trust worthy secure online banking system in order to protect the users personal information and be secured for any transactions especially payment. Furthermore, the banks have to consider that millions of dollars have been invested in online banking systems. So, it is important to ensure that bank clients to use it and achieve satisfaction. Attention must be given in designing the easy to use system.

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