

## The Impact of Mobile Banking Service Quality Towards Customer Satisfaction Among UTHM Students

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**Abstract:** Studies on customer satisfaction with the quality of mobile banking services have received attention from researchers. Many studies are conducted to find out the satisfaction of customers from various populations. This study examines the effect of mobile banking service quality on customer satisfaction among Year 4 students at UTHM. This study has two objectives that need to be achieved, the first objective is to investigate the relationship between service quality and customer satisfaction in mobile banking service and second is to determine the level of mobile banking service towards customer satisfaction. This study used a quantitative approach to obtain data by distributing questionnaires to respondents through online. The data obtained was analyzed using SPSS version 26 and the findings of the study were discussed. The findings of this study show that all items in each dimension are reliable. Then, for descriptive analysis, the all items in tangibility and empathy obtain high mean score while one item in each three dimensions which are reliability, responsiveness, and assurance achieve moderate score. This shows that tangibility and empathy have high level towards customer satisfaction then reliability, responsiveness and assurance have moderate level towards customer satisfaction. In addition, dimensions in service quality mobile banking have a positive relationship with customer satisfaction because each dimension has a p- value of less than 0.000 with customer satisfaction. The researcher also suggested some suggestions to overcome the problems faced by the mobile banking service and suggestions for the future in improving future studies. Limitations in this study are also discussed, which are the difficulties faced by the researcher while conducting this study.

**Keywords:** Mobile Banking, Service Quality, Customer Satisfaction, SERVQUAL Model

## 1. Introduction

Customer satisfaction with mobile banking services has attracted the attention of researchers because many studies have been conducted. Nowadays, all groups regardless of young including university students or old use mobile banking services to manage their finances. Banks are the financial sector's backbone, serving as the engine that connects depositors and creditors. In response to rising competition in the financial sector firms, banks are offering other services such as m-banking (Choudrie *et al.*, 2018). Mobile banking is a medium via which a consumer can manage transactions whenever and from any location by using mobile devices, which are less physically and financially demanding (Sindhu Singh, 2018). M-banking offers services including paying bills, accessing financial accounts, bank transactions, and receive alerts on mobile devices in addition to certificate redemption and issuance, which boosts the competition (Gupta & Arora, 2017).

The fast advancement of information technology and growing competition have altered the banking sector's environment during the past few decades. The system created in mobile banking has boosted client competitiveness when it comes to picking banking products and services. These developments not only affected the traditional banking method but also compelled the sector to restructure its face-to-face interactions with clients, as well as change the degree of customer expectation. Most of the time, modern funding technology has provided customers with greater flexibility and accessibility than previously (Kumar *et al.*, 2017). Customers are increasingly turning to self-service methods such as ATMs, Online banking, and mobile banking services as they want convenience, security, and complete control over the financial services they require (Thakur, 2014). In addition to satisfying customers, new technological offerings assist the financial institution to become more durable and cost-effective (Kumar *et al.*, 2017). M-banking, often known as mobile banking, is a cutting-edge technology that offers customers services that are practical, rapid, pleasant, and effective (Shankar & Datta, 2018) and has recently ranked first among clients (Arcand *et al.*, 2017).

In an era of competitive pressures, excellent service quality is a significant, critical aspect that can distinguish and enhance a company's efficiency. Size and levelling concerns have been intensively investigated in recent years due to the subjective nature of service quality, driving academics to investigate the effect of service quality on boosting customer happiness. As a result, a project has been started to use the SERVQUAL paradigm to address these problems. The SERVQUAL model is hence the tool used to evaluate service quality. The results of several research that applied this paradigm in variety of service settings, cultural contexts, and geographical regions were noteworthy. The only other approach to guarantee steady and continuous expansion in the m-banking industry is to offer clients excellent service quality to increase customer satisfaction. To better comprehend how the service quality of m-banking given access via mobile device can contribute to enhancing the overall service quality of the m-banking industry, this study will examine the impact of service quality, which is tangibility, dependability, responsiveness, assurance, and empathy towards customer satisfaction in m-banking.

Nowadays, mobile banking is one of the most essential aspects of global electronic commerce (Zavareh *et al.*, 2012). Mobile banking is a channel that allows customers to communicate with a bank to conduct banking-related activities at a lower physical and monetary cost, anytime and anywhere, using mobile devices such as mobile phones (Sandhu & Shamsuzzoha, 2018).

Malaysia's banking industry is being shaped by the speedy advancement of the telecommunications industry. The adoption of technology in the financial services industry has altered the nature of selling and purchasing financial services (Suoranta & Mattila, 2004). Innovative mobile applications are being developed in tandem with the evolution of mobile banking. Maybank was the first financial institution in Malaysia to launch a free banking application, M2UMap, on the newly released iPhone in May 2009. Later, CIMB Bank Berhad introduced CIMB Clicks, which went on to become Malaysia's most popular and widely used banking app. Al Rajhi Banking & Investment Corporation (Malaysia) Berhad,

AmBank (M) Berhad, Bank Islam Malaysia Berhad, Bank Simpanan Nasional, CIMB Bank Berhad, Citibank Berhad, Hong Leong Bank Berhad, Malayan Banking Berhad, OCBC Bank (Malaysia) Berhad, Public Bank Berhad, RHB Bank Berhad, and Standard Chartered Bank Malaysia Berhad, to name a few (Krishanan *et al.*, 2015).

Banks have alternative options for offering customers finance services, including mobile banking, even if sector retail banking remains a highly popular option. Despite all its advantages, mobile banking is still not widely used among university students who make up the youth market. Students do not think that mobile banking is risky. Students and teenagers in general are more likely to be acquainted with the application of mobile technology, which may minimize perceptions of risk connected with mobile banking (Rammile, 2012). Customers that use mobile banking have some type of education, are part of the millennial market, and believe mobile applications are simple to use when compared to other sectors of the population. As university students are more accustomed to using technology, especially mobile phones, this claim highlights the need for additional research into the impact of mobile banking service quality on customer satisfaction among university students (Luo *et al.*, 2017).

The study of mobile banking has been improved and is now more focused on the viewpoint of university students due to the significant attention given to it by numerous scholars (Govender & Sihlali, 2014). Undergraduates or anyone between the ages of 20 and 30 who also used a mobile phone, either via a leased line or prepaid service, and who also had previously opened an account with one or more Malaysian banks are university students. Due to a perceived need, every university student has the propensity to get a mobile phone, opening new opportunities for using them as a banking channel. The typical uses and functions of mobile phones, such as voice conversations and SMS, are noteworthy (Short Message Services). These days, mobile phones can even use 3G to enable real-time teleconferences.

An indicator of how effectively a service provider fulfills or surpasses consumer expectations is customer satisfaction in mobile banking. It's feasible that a user won't use mobile banking services if their needs aren't addressed. This study explores and examines the key factors that affect how likely it is that a client will be to use mobile banking. The reason for this is that bankers must understand client needs to improve their underwhelming services. The telecoms sector's explosive rise influenced the banking sector in Malaysia. The way financial services are sold and bought has changed because of the industry's adoption of technology. To keep up with technological advancement, banks have developed techniques that improve both customer satisfaction and product and service quality (Sohail & Shanmugham, 2015). Since there are more business expenses in mobile banking, there are also more incidents involving the service, which can lead to decreased information supplied in banks or providers of digital banking.

This study focuses on problems in the use of mobile banking among university students. Convincing students of the advantages of mobile banking technology and educating them about its benefits are the key issues facing mobile banking among students. Skills, usage safety, and secrecy are relevant concerns regarding mobile banking technology. There is a chance that technological breakthroughs would fail, which could make users uneasy. Because they worry about privacy violations on telecommunications networks, students are hesitant to use mobile banking. Even if the number is tiny relative to the population, the problem has a significant impact on each person's intention to use mobile banking. One of the concerns of the students is the worry of a delayed or broken internet connection during transactions and the potential loss of their money. An internet connection is necessary for successful transactions when using mobile banking. Those who reside in remote locations will encounter challenges when trying to utilize mobile banking (Govender & Sihlali, 2014).

The objectives of this study are to investigate the relationship between service quality and customer satisfaction in mobile banking service and to determine the level of mobile banking service quality towards customer satisfaction.

## 2. Literature Review

### 2.1 SERVQUAL Model

The SERVQUAL model is one of the most used tools for assessing service quality. SERVQUAL is a set of ten service quality indicators which are reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding the customer, and tangibility (Parasuraman *et al.*, 1985). The variables were tested and reduced to five factors: tangibles, dependability, responsiveness, assurance (which combines communication, credibility, security, competence, and courtesy), and empathy (which combines understanding and knowing the customer with accessibility).

1. The term "tangibility" refers to physical facilities, equipment, representatives, and specialized instruments.
2. Reliability refers to the ability to keep promises effectively and without question.
3. Responsiveness refers to the specialist co-goal ops and eagerness to help clients and plan prompt administrations.
4. Assurance refers to the workers' learning and humility, as well as their ability to pass on trust and earnestness.
5. Empathy refers to accommodating individual care and consideration for the client.

Since measuring service quality from the perspective of customers is a top priority construct, service quality is one of the most crucial features of service providers. Service quality is crucial for several reasons, including profitability, cost-cutting, client retention, and customer loyalty (Aghdaie & Faghani, 2012). In accordance with the so-called "disconfirmation hypothesis," quality is assessed by contrasting actual performance with what was anticipated. In fact, the SERVQUAL model, which defines service quality as the discrepancy between the level of service expected and the level experienced by customers, was built on the foundation of this idea. This test is designed to gauge how satisfied customers are with the caliber of the services.

Previous studies did not support all factors structure proposed by Parasuraman *et al.* (1985). The scale's universality and dimensions have also been criticized, and it is believed that they require customization to the specific service sector in which they are used. The SERVQUAL model has five main dimensions: tangibility, dependability, responsiveness, assurance, and empathy. Lim *et al.* (1999), define these five.

#### (a) Tangibility

Aspects of tangible include the appearance of the enterprises, their actual surroundings, furnishings, and employees (Zaim *et al.*, 2013). As a result, service providers rely on tangibles to deliver the finest services and to communicate with clients through their tools, workers, and other resources. The intangibles of m-banking services, however, are more challenging to measure. It can also measure consumer satisfaction levels (Parasuraman *et al.*, 1985).

#### (b) Reliability

The ability of a service provider to provide committed service consistently and accurately is referred to as reliability (Khan, 2014). In general, reliability means that an organization keeps its promises, such as those regarding service provision, pricing, delivery, and problem resolution. The quality of service affects customer satisfaction (Parasuraman *et al.*, 1985).

*(c) Responsiveness*

Response time is the term used to describe how quickly service providers are prepared to help customers (Tan *et al.*, 2016). Response time is the term used to describe how quickly service providers are prepared to help customers. This statistic places a focus on being alert and responsive when responding to inquiries, requests, problems, and objections from clients. The amount of time customers must wait for assistance, responses to questions, or consideration for their problems demonstrates responsiveness to them. In other words, being responsive may result in higher-quality services (Vargo & Lusch, 2010).

*(d) Assurance*

Employee assurance is the ability to communicate certainty and trust, as well as knowledge and friendliness. When contributors have concerns about the administrative support provided by a certain restaurant, this measurement becomes crucial. Customers can develop trust and faith in m-banking services with assurance, knowing they won't face sarcasm or retaliation. This level of certainty can also satisfy customers (Parasuraman *et al.*, 1985).

*(e) Empathy*

Empathy provides its clients with personalized care. Customer satisfaction is increased when they receive personalized service, which shows empathy. Companies that offer services to customers need to make them feel valued and appreciated. Employees in the m-banking sector can show empathy to consumers by acting morally upright, compassionate, and polite (Parasuraman *et al.*, 1985).

## 2.2 Mobile Banking

Banks and their customers now communicate with one another via a multitude of methods. Banking consumers can purchase goods and services through offices, automated payment machines (ATMs), telephone banking, online banking, and mobile banking (Hart & Gregor, 2007). Time was saved and client lines were shortened when the focus shifted from being local-centric (branch and ATM) to place-centric (online banking) and finally to equipment-centric (available anywhere, 24 hours a day, 7 days a week). An equipment-centric view brings the consumer closer to the bank because a financial service activity simply needs a mobile device. Customers of local-centric banking must go to a physical place, which may be far away (a branch or an ATM). Customers who have an internet connection and a computer can conveniently complete most banking tasks remotely with location banking. Customers like banking platforms for product categories. Branch locations are therefore employed for complicated product categories (like mortgages and loans), while self-service technology is used for smaller tasks like bill paying and other domestic activities. Many banks impose a fee for domestic transactions done in branches to entice consumers to use self-service technology (Hoehle *et al.*, 2012).

## 2.3 Service Quality

Since the 1980s, the concept of service has been defined by Pack (1982) together with, who popularized the customer satisfaction theory by measuring the firm's actual service delivery by customers' expectations, as defined by the attainment of perceived quality, that is meeting the customers' wants and needs beyond their aspirations. With this premise, Parasuraman *et al.*, 1985 later the concept of service expanded into five dimensions of service quality, which included tangibles, reliability, responsiveness, assurance, and empathy. The corporate image, the functional quality of the service interaction, and the technical quality of the result can all be used to gauge the idea of service quality. This had already been noted and assessed by Parasuraman *et al.* (1985) who developed the SERVQUAL service quality model, which was first used in the service industry, specifically for restaurants.

## 2.4 Customer Satisfaction

Customer satisfaction and its significance were defined by Zeithaml *et al.* (1996) as, a key consideration in achieving long-term company success, emphasizing customer satisfaction is essential. In other words, satisfaction can only be met when company performance exceeds customer expectations. The significance of customer satisfaction and unhappiness with the company's success and the occurrence of failures in the issue of satisfying the expectations of both the consumers and the firm in this context has been stressed by various authors and academics (Ramachandran & Vijayabanu, 2012). According to Lau *et al.* (2013), it was made clear that exceeding customer expectations will result in both customer pleasure and loyalty, which will lower the likelihood of customer attrition or increase the retention rate. A key factor in determining customer happiness and the nature of the relationship that will develop between the business and its consumers is the service quality delivery (Amin & Isa, 2008).

## 2.5 Hypothesis Development and Conceptual Framework.

The following hypotheses were developed based on the SERVQUAL model and will subsequently be examined using different statistical techniques.

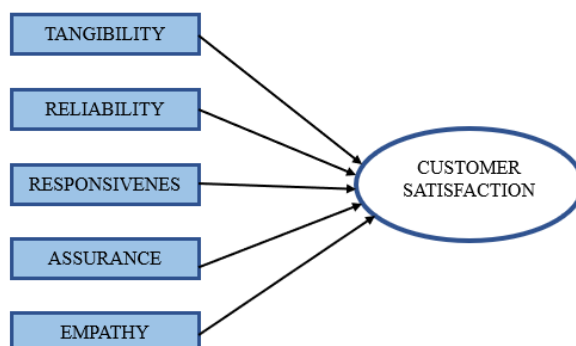
*H1: Tangibility has a significant relationship with the customer's satisfaction with MB services.*

*H2: Reliability has a significant relationship with the customer's satisfaction with MB services.*

*H3: Responsiveness has a significant relationship with the customer's satisfaction with MB services*

*H4: Assurance has a significant relationship with the customer's satisfaction with MB services.*

*H5: Empathy has a significant relationship with the customer's satisfaction with MB services.*



**Figure 1: Conceptual framework**

## 3. Research Methodology

### 3.1 Research Design

The design of this study focuses on the strategies and procedures utilized to gather data and address study-related issues. To achieve the goals of this study, which include examining the effects of mobile banking service quality on customer satisfaction among UTHM students and determining the degree of satisfaction among UTHM students with the use of mobile banking in their daily lives, appropriate techniques and methods must be used to address the research questions. In this study, the delivery of questionnaires to the intended respondents served as the quantitative method for gathering the necessary data. The 26th version of the Statistical Package for Social Science (SPSS) will be used to evaluate the

survey's data. A quantitative approach is an appropriate method used to study the impact of mobile banking service quality on customer satisfaction since it may utilize statistical or numerical data to analyze the information.

### 3.2 Data Collection

A methodical methodology called a data collecting instrument can be used to gather different kinds of pertinent data from numerous trustworthy sources. The information gathered can be transformed into precise decision-making data. A survey questionnaire is used to gather the data; it is given to the intended respondents and is divided into sections. The questionnaire is divided into three sections: demographic, independent, and dependent factors. An independent variable has five questions that respondents must respond to.

### 3.3 Population and Sampling

The target respondents in this study are UTHM students, namely undergraduate students. These undergraduate students are drawn from the UTHM Main Campus's faculties, which include FPTP, FKAAB, FKEE, FPTV, FSKTM, and FKMP. The population in this study is 4<sup>th</sup>-year students from all faculties which is a total of 2568 students. Therefore, based on the Krejcie & Morgan table the sample size for this study is 331. But the researcher only obtained 70% of the sample size which is 230 respondents.

### 3.4 Data Analysis

Statistical Package for Social Science (SPSS) version 26 used in this study to examine the questionnaire distribution data. Descriptive statistics, such as frequency and percentage, will be used in the data analysis to describe the characteristics of the respondents. A correlation between customer satisfaction among UTHM students and the quality of mobile banking services is also made using inferential statistics.

## 4. Results and Discussion

### 4.1 Demographic Analysis

A total of 230 respondents participated in this questionnaire. Table 1 shows that the number of male and female respondents is the same which is 114 males equal to 49.6% and 116 females equal to 50.4%. A total of 190 respondents equal to 82.6% are respondents in the age range of 22 to 23 years and respondents aged between 22 and 23 years old are the most. While respondents aged between 24 and 25 years old are the fewest, with a total of 40 respondents equal to 17.4%.

This study involved respondents from six faculties at the Kampus Induk, Universiti Tun Hussein Onn Malaysia namely FPTP, FPTV, FKMP, FKAAB, FKEE, and FSKTM. A total of 123 respondents are from FPTP, a total of respondents is from FPTV, a total of 18 respondents are from FKMP, a total of 19 respondents are from FKAAB, a total of 20 respondents are from FKEE, and a total of 12 respondents from FSKTM. This table shows that the respondents from FPTP are the most which are 123 respondents equal to 53.5% and the respondents from FSKTM are the fewest which are 12 respondents equal to 5.2%.

Meanwhile, most respondents have mobile banking which is 230 respondents equal to 100%. Whereas, Public banks are the most with a total of 145 respondents equal to 63.0% while private banks with a total of 85 respondents equal to 37.0%. Most of the respondents use mobile banking monthly which is 91 respondents equal to 39.6% followed by weekly which is 82 respondents equal to 24.8% and daily least 57 respondents equal to 24.8%.

**Table 1: Summary of respondents' demographic information**

Question	Option	Frequency	Percentage (%)
Gender	Male	114	49.6
	Female	116	50.4
Age	22-23 years old	190	82.6
	24-25 years old	40	17.4
Faculty	FPTP	123	53.5
	FPTV	38	16.5
	FKMP	18	7.8
	FKAAB	19	8.3
	FKEE	20	8.7
	FSTKM	12	5.2
Do you have mobile banking?	Yes	230	100.0
	No	0	0
Type of bank?	Public	145	63.0
	Private	85	37.0
Usage frequency	Daily	57	24.8
	Weekly	82	35.7
	Monthly	91	39.6

#### 4.2 Reliability Test

Table 2 shows the reliability test of service quality.

**Table 2: Reliability test of service quality**

Dimensions	Cronbach's Alpha	Result
Tangibility	0.774	Good and Acceptable
Reliability	0.844	Good and Acceptable
Responsiveness	0.749	Good and Acceptable
Assurance	0.876	Good and Acceptable
Empathy	0.939	Very Good

#### 4.3 Descriptive Analysis

##### (a) Tangibility

Table 3 shows the mean and standard deviation for items in the tangibility variable. Based on the analysis, all five items obtained a high mean score which is between 3.67- 5.00. Since this score is greater than the theoretical mean ( $>3$ ), it means that the frequency of respondents choosing "Agree" and "Strongly Agree" more than "Disagree" and "Strongly Disagree".

**Table 3: Descriptive analysis of tangibility**

	N	Mean	Std. Deviation	Interpretation
Does m-banking have modern looking and high-tech equipment?	230	4.48	1.01	High
Does m-banking have visually appealing facilities?	230	4.53	0.97	High
Do you easily make payment (service bill, current bill, gas bill) through your mobile banking?	230	4.46	1.09	High
Do you easily understand your mobile banking service used language?	230	4.84	0.38	High
Does have enough mobile banking service outlets in your area?	230	4.59	0.91	High



*(b) Reliability*

Table 4 displays the mean and standard deviation for items in the reliability variable. The reliability variable also has 5 items. Based on the analysis, four items obtain a high mean score between 3.67 - 5.00. Because these three items have scores greater than the theoretical mean ( $>3$ ), it means that the frequency of respondents choosing "Agree" and "Strongly Agree" is more than "Disagree" and "Strongly Disagree". While one item in the reliability variable gets a moderate mean score which is between 2.33 – 3.66 and this shows that some respondents answered "Agree" or "Strongly Agree" and some respondents answered "Disagree" or "Strongly Disagree".

**Table 4: Descriptive analysis of reliability**

	N	Mean	Std. Deviation	Interpretation
Do m-banking agents show a sincere interest in solving problems when you face it?	230	4.75	0.62	High
Does m-banking assure you an error free transaction?	230	3.78	1.50	High
Do m-banking services always available?	230	3.31	1.61	Moderate
Do the m-banking suggest the right service according to customers specific needs?	230	4.58	0.95	High
Do m-banking has features that can solve the technical problem when using m-banking service?	230	4.49	1.06	High

*(c) Responsiveness*

The mean and standard deviation values for items in the responsiveness variable have been stated in Table 5. There are 5 items in the responsiveness variable and based on the analysis 4 items obtained the highest mean score which is between 3.67 – 5.00. This shows that most respondents answered "Agree" and "Strongly Agree" for these 4 items. Some respondents answered "Agree" or "Strongly Agree" and some answered "Disagree" and "Strongly Disagree" to one item in this variable which is 'Do m-banking agents take more time (more than your expectation) to respond to your request?' because it got the moderate mean score, and the score was 3.50.

**Table 5: Descriptive analysis of responsiveness**

	N	Mean	Std. Deviation	Interpretation
Do m-banking agents provide prompt and accurate service?	230	4.78	0.52	High
Are m-banking agents always willing to help you?	230	4.79	0.55	High
Do m-banking agents take more time (more than your expectation) to respond to your request?	230	3.50	1.69	Moderate
Does m-banking agent behave with you well?	230	4.76	0.60	High
Does m-banking agent have enough knowledge about your technical problem in using mobile banking?	230	4.77	0.59	High

*(d) Assurance*

The mean and standard deviation values for items in the assurance variable have been stated in Table 6. There are 5 items in the assurance variable and based on the analysis 4 items obtained the highest mean score which is between 3.67 – 5.00. This shows that most respondents answered "Agree" and "Strongly Agree" for these 4 items. Some respondents also answered "Agree" or "Strongly Agree" and some answered "Disagree" or "Strongly Disagree" to one item in this variable which is 'Do you feel secure when performing financial transactions by using your mobile banking service?' getting the moderate mean score and the score is 3.05 which is between 2.33 – 3.66.

**Table 6: Descriptive analysis of assurance**

	N	Mean	Std. Deviation	Interpretation
Does the behavior of the m-banking agents give confidence to you?	230	4.80	0.50	High
Are m-banking agents friendly and courteous with you?	230	4.81	0.53	High
Do the m-banking agents have that much knowledge to answer your questions?	230	4.81	0.50	High
Do you feel secure when performing financial transaction by using your mobile banking service?	230	3.05	1.71	Moderate
Do you believe that the agents or mobile banking company will not misuse your given personal information on transaction information?	230	4.36	1.04	High

*(e) Empathy*

Table 7 shows the value of the mean and standard deviation for the empathy variable. The empathy variable has 5 items, and these five items have a high mean score which is between 3.67 - 5.00. This shows that most respondents answered "Agree" and Strongly Agree" for all these items. In addition, the score of this item is greater than the theoretical mean ( $>3$ ).

**Table 7: Descriptive analysis of empathy**

	N	Mean	Std. Deviation	Interpretation
Does the m-banking agent give you individual attention?	230	4.83	0.44	High
Does the m-banking have convenient operation hours (call centre, query, or other services)?	230	4.86	0.43	High
Do the m-banking agents understand your specific needs?	230	4.83	0.45	High
Do you believe that you get enough attention from company agents or mobile banking company?	230	4.83	0.45	High
Do you think that they feel your problem as their own?	230	4.80	0.50	High

*(f) Overall Service Quality of Mobile Banking*

Table 8 displays the value of the mean and standard deviation for the overall service quality of mobile banking. From this table, these five dimensions have a high mean score which is between 3.67 – 5.00. In addition, the score of these dimensions is greater than the theoretical mean ( $>3$ ). This shows overall that customers are satisfied with the quality of mobile banking services. This finding was also proven in a previous study conducted by Tan *et al.* (2016) which was customers pay close attention to how well a bank can meet their needs for high-quality goods and services.

**Table 8: Descriptive analysis of overall service quality of mobile banking**

	N	Mean	Std. Deviation
Tangibility	230	4.58	0.69
Reliability	230	4.18	0.84
Responsiveness	230	4.52	0.56
Assurance	230	4.37	0.61
Empathy	230	4.83	0.41

#### 4.4 Correlation Relationship

Table 9 shows the summary of correlation relationship.

**Table 9: Summary of correlation results**

Hypothesis	Spearman's rho correlation	Results
H1: There is a significant relationship between tangibility and customer satisfaction in mobile banking services.	<b>0.524</b> (p = 0.000)	<b>Accepted</b>
H2: There is a significant relationship between reliability and customer satisfaction in mobile banking services.	<b>0.496</b> (p = 0.000)	<b>Accepted</b>
H3: There is a significant relationship between responsiveness and customer satisfaction in mobile banking services.	<b>0.522</b> (p = 0.000)	<b>Accepted</b>
H4: There is a significant relationship between assurance and customer satisfaction in mobile banking services.	<b>0.561</b> (p = 0.000)	<b>Accepted</b>
H5: There is a significant relationship between empathy and customer satisfaction in mobile banking services.	<b>0.656</b> (p = 0.000)	<b>Accepted</b>

#### 4.5 Discussion

There is a significant relationship between tangibility and customer satisfaction in mobile banking services (H1). Customers satisfaction with mobile banking services and tangibility were shown to be positively correlated, with a correlation coefficient of 0.524,  $p = 0.000$ , being significant. This indicated that the theory had been confirmed. This outcome was consistent with the earlier research by Khan (2014), in which the study's hypotheses testing confirms that tangibility and customer satisfaction are positively correlated. This finding's reasonable explanation is that bank customers typically look for measurable proof of the calibre of the services they receive. Customers may assess a bank's location or staff members' appearance, for instance. Then, Zaim *et al.* (2013), revealed that a crucial factor in assessing consumer pleasure is tangibility.

Furthermore, there is a significant relationship between reliability and customer satisfaction in mobile banking services (H2). The dependability and customer satisfaction scores for mobile banking services were shown to be significantly correlated and to have a positive association, with a correlation coefficient of 0.496,  $p = 0.000$ . This indicated that the theory had been confirmed. Considering a previous study that was done by Tan *et al.* (2016), Customer satisfaction and dependability are closely related in mobile banking services. According to the findings, customers are happy with the bank's services and how speed problems are handled. Customers have faith that banks will adhere to the terms and conditions they have promised and that are beneficial for them. According to the Sangeetha (2018), highlighted the fact that one of the key elements of customer satisfaction is reliability.

Next, there is a significant relationship between responsiveness and customer satisfaction in mobile banking services (H3). In mobile banking services, responsiveness and customer satisfaction were found to have a significant correlation coefficient of 0.522,  $p = 0.000$ , and a positive relationship with one another. This indicated that the theory had been confirmed. According to a prior study by Khan *et al.* (2019), responsiveness in mobile banking services has a favorable link with customer satisfaction. Then Tan *et al.* (2016), additionally mentioned in their report, banks must inform clients of how they would handle or manage their difficulties as well as how long it will take them to react to their enquiries.

There is a significant relationship between assurance and customer satisfaction in mobile banking services (H4). The correlation coefficient of 0.561,  $p = 0.000$ , between assurance and customer satisfaction in mobile banking services was found to be significant which have positive a relationship with each other. This meant that the hypothesis had been accepted. This finding was proven by Tan *et al.* (2016) assurance has a positive correlation with customer happiness for mobile banking services, as in his study. To boost customer happiness and professionalism in their services, particularly the confidence they give to clients that they are competent in their roles and responsibilities, banks should increase public trust, according to the explanation for this study. As a result, banks should continually reevaluate their assurance that they satisfy client expectations. This is a technique for keeping consumers and would act as public promotion for that bank. Then, according to Krishnamurthy *et al.* (2010), emphasized that one of the crucial factors for customer satisfaction is assurance.

As for H5, there is a significant relationship between empathy and customer satisfaction in mobile banking services. The correlation coefficient of 0.656,  $p = 0.000$ , between assurance and customer satisfaction in mobile banking services was found to be significant which is have positive relationship with each other. This meant that the hypothesis had been accepted. Customers consistently demand a high level of connection with bank workers as well as specialized services, according to the data gathered. They always demand that front-line staff members be able to help them and comprehend their requirements. Based on a previous study conducted by Tan *et al.* (2016), The results showed that empathy has a favorable and significant impact on customer satisfaction for mobile banking, which is crucial because it can determine whether a particular service organization that focuses on developing relationships with customers rather than "transaction marketing" will survive. Then, according to Ladhari (2009), finds that the best indicator of customer satisfaction is empathy.

## 5. Conclusion

In conclusion, most mobile banking users among Year 4 students from all faculties at the UTHM Main Campus are satisfied with the services provided by mobile banking. Furthermore, the relationship between service quality and customer satisfaction in mobile banking services reaches a positive significant correlation. This study has shown that the service provided by mobile banking has met customer requirements. In other words, service quality that is tangibility, reliability, responsiveness, assurance and empathy have the potential to affect the level of customer satisfaction among UTHM students.

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