

Factors Affecting Students' Use of Mobile Banking: An Extension of Technology Acceptance Model

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Abstract

Current developments in technology and communications have created various types and new business opportunities, so it is very important for companies to carefully understand customer needs, discover people's desires, and be able to provide products or services to customers that meet people's demands or exceed people's expectations. This study aims to test and prove the factors that influence the use of mobile banking, which consists of the quality of information systems, trust, capability of individual operations, user attitudes, and intention to use. This study assesses the technology acceptance model (TAM) theory to develop variable relationships. The study population was active students of a university in East Java, and the sample was taken by purposive sampling with a total sample of 91 students. This research uses a quantitative approach and questionnaire data collection methods. Data analysis techniques using multiple linear analysis with SPSS 23 software. The results of this study indicate that trust, individual capability to operate, and intention to use affect mobile banking use. In contrast, the quality of information systems and user attitudes do not affect the use of mobile banking. This study suggests that mobile banking providers must maintain consumers' trust, capability to operate, and attitude so that the use of mobile banking is increased.

Keywords: *individual capability to operate, information systems quality, intention to use, mobile banking, trust, user attitude.*

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INTRODUCTION

Banking in Indonesia is following technological and communication developments (Setiawan, 2016). Banking institutions began internet-based banking activities in mid-1998 (Pertiwi & Ariyanto, 2017). E-banking is a banking service that uses electronic media as an intermediary. The existence of E-banking services makes it easy for customers to carry out banking transactions via

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electronic media such as computers, laptops, cell phones, landlines, and so on. E-banking includes several services: ATM, internet banking, mobile banking, SMS banking, and telephone banking (Oktabriantono et al., 2017)

Mobile banking services have attractive features and are comfortable to use and make it easy for customers to carry out financial transactions such as inter-bank transfers, credit card payments, electricity payments, telephone payments, cell phone bill payments, insurance payments, internet payments, flight ticket payments, and so on virtual accounts. Apart from that, the increasing popularity of online businesses (online shops) and the increasing number of smartphones have contributed to the growth of transactions via mobile banking (OJK, 2015). This popularity attracts customers not only from the business world but also from educational institutions such as students. In a survey conducted by the Association of Indonesian Internet Service Providers (APJII) in 2018 (Figure 1), internet user penetration based on the latest education level shows that undergraduate students have a high percentage, namely 85.1%.



Figure 1. Internet User Penetration Based on Education Level
Source: APJII (2018)

A survey conducted by the Association of Indonesian Internet Service Providers (APJII) in 2017 (Figure 2) shows that the service with the lowest access via the Internet is the banking sector, with a percentage of 7.39%. This shows that many users have not maximized their gadgets or smartphones for banking transactions. Several factors that may influence the lack of mobile banking users include the learning curve associated with new technology, fear of possible security compromise, lack of knowledge to use technology, or not having access to the required device (Peker, 2021).

However, although several factors may influence the lack of mobile banking users, statistics show that mobile banking usage continues to increase. A study shows that 97% of millennials and

89% of consumers rely on mobile banking applications. According to an article in International Finance (2021), Indonesia's population is predominantly young and increasingly urbanized. Therefore, there is an improving economy and high smartphone penetration, but many people do not yet have access to banking services. This makes Indonesia very suitable for digital banking penetration.

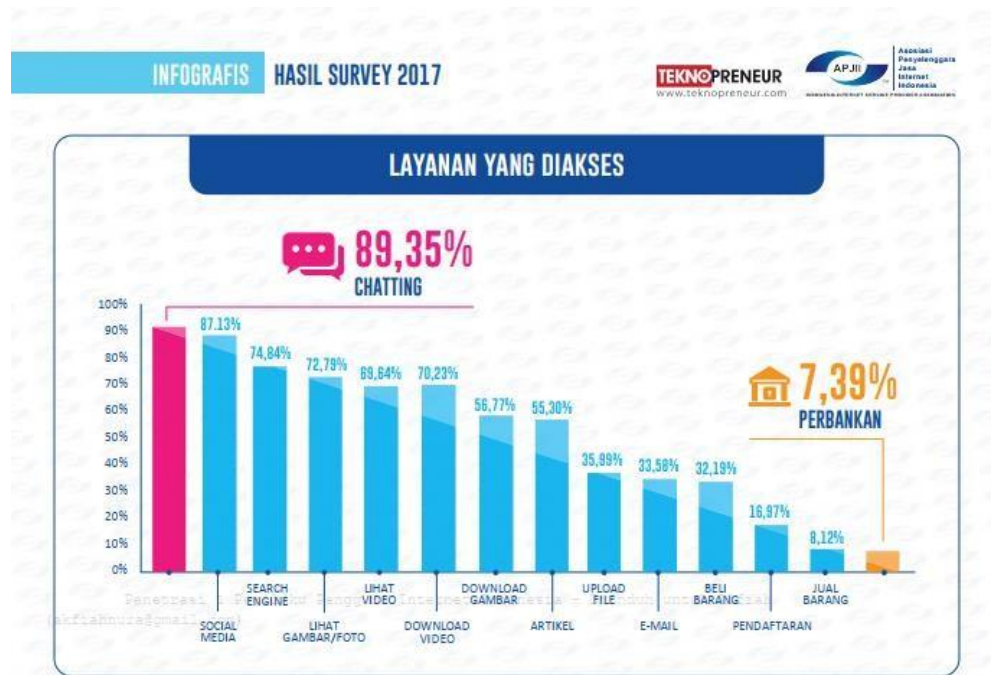


Figure 2. Services Accessed via the Internet

Source: APJII (2017)

Students at Universitas Pembangunan Nasional Veteran Jawa Timur (UPNVJT) are also among the students who use banking services because they have a KTM (Student' Identity Card), which can be used as an ATM card. One of the banking services that students can use is mobile banking (Govender & Sihlali, 2014). Even though mobile banking users obtain many benefits, this banking facility has not been utilized optimally. This can be seen from a survey conducted by APJII, which shows that banking has the lowest service access. Students should utilize banking services to make paying tuition fees, receiving scholarships, and saving money, business, investment, or personal consumption easier. Students come from outside the region and will routinely carry out financial transactions through the bank.

Mobile banking is a banking service that can be accessed via a mobile device such as a cell phone or tablet. Technology Acceptance Model (TAM) is a theoretical model that explains the

factors influencing consumers' acceptance and use of technology. TAM was developed by Davis et al. (1989) based on the Theory of Reasoned Action (TRA) proposed by Fishbein and Ajzen in 1975 (Ajzen, 1985; Fishbein & Ajzen, 2010).

Various researchers have widely applied and modified TAM to explain variations in consumer behavior in the context of information technology, including mobile banking. Some studies add other variables, such as trust, risk, service quality, and social factors, to expand the TAM and increase its explanatory power. However, little research still examines TAM in the context of mobile banking use by students in Indonesia. Students are a consumer group with special characteristics that can influence their behavior in using mobile banking. Therefore, this study aims to fill this gap by assessing the influence of TAM factors on students' use of mobile banking in Indonesia. It is hoped that the results of this research can provide theoretical and practical contributions to the development of science and the banking industry in Indonesia.

The relationship between mobile banking and TAM is that many researchers use TAM as a framework for analyzing consumer behavior in adopting or using mobile banking (Souiden et al., 2020). According to TAM, two main factors influence consumers' intentions to use technology: perceived usefulness and ease of use. Perceived usefulness is the extent to which consumers believe using a particular technology will improve their performance. Perceived ease of use is the extent to which consumers believe using a particular technology will not cause great difficulty or effort. Some studies also add other variables, such as trust, risk, service quality, and social factors, to expand the TAM and explain variations in consumer behavior in the context of mobile banking (Setyono, 2022; Suhartanto et al., 2019).

Mobile banking is an innovation made in three technologies: SMS (Short Messaging System), Browser, and applications for software on customers' mobile phones (smartphones). Mobile banking will make it easier to carry out payment transactions, view balance information, and transfer between accounts and banks. Mobile banking is a good offer and opportunity for banks, whether it reduces costs, provides easy transaction services, or increases customers' savings (Fernos & Gietricen, 2020).

The use of mobile banking services on cell phones makes it easier for customers to carry out their banking activities without time and space limitations. Mobile banking services are expected to provide convenience and benefits for customers to access the bank without coming directly to the bank (Kurniawati et al., 2017). According to BNI (2019), mobile banking is a banking service facility that makes it easy to make transactions safely, easily, and quickly via smartphone. BNI Mobile Banking provides transaction services for balance information, transfers, telephone bill payments, credit card payments, airplane ticket payments, credit purchases, opening Taplus accounts, opening deposits, and others. BNI mobile banking can also be activated and used for transactions abroad.

Akob & Sukarno's research was carried out by distributing questionnaires to 120 mobile banking customers from Bank BRI, Bank BNI, Bank BTN, and Bank Mandiri. This research shows that the quality of mobile banking services positively affects customer satisfaction and loyalty. In contrast, customer satisfaction has a significant effect on their loyalty. Apart from that, the quality

of mobile banking services also significantly affects loyalty, which is mediated by customer satisfaction (Akob & Sukarno, 2022).

The quality of information systems is one of the factors that can influence consumer acceptance and use of technology, including mobile banking. According to the Technology Acceptance Model (TAM), two main factors influence consumers' intentions to use technology: perceived usefulness and ease of use. Systems' quality can influence these two factors because if the service provided by a mobile banking provider is quality, then consumers will feel that mobile banking is useful and easy to use. On the other hand, if the systems' quality is low, consumers will feel that mobile banking does not provide added value and makes things difficult for them (Abu-Taieh et al., 2022; Amelia et al., 2022; Purnomo & Ramadhani, 2022; Subowo, 2020). Good systems' quality can increase perceived ease of use and usability, which in turn increases technology acceptance. Conversely, poor system quality can hinder the acceptance and use of technology. Therefore, the first hypothesis:

H1: Information systems quality affects the students' use of mobile banking.

Trust is one of the factors that can influence consumer acceptance and use of technology, including mobile banking. According to the TAM, there are two main factors that influence consumers' intentions to use technology, namely perceived usefulness and perceived ease of use. Trust can influence these two factors because if consumers have high trust in mobile banking providers, then they will feel that mobile banking is useful and easy to use. On the other hand, if consumer trust is low, they will feel that mobile banking does not provide added value and makes things difficult for them (Ajzen, 1985; Ardiyanto & Kusumadewi, 2020). Trust is an important factor influencing how individuals form their perceptions of technology, including whether they believe the technology is useful and easy to use. These trust and beliefs can then influence whether they will accept and use the technology. The second hypothesis:

H2: Trust affects the students' use of mobile banking.

Yudha & Isgiyarta (2015) stated that an individual's ability to operate is the user's level of proficiency in operating a technology. The more skilled the user is in operating even complex technological devices, the easier the intensity of using mobile banking services will be. Likewise, the higher an individual's ability to operate a computer for banking customers, the higher the acceptance of Internet banking adaptation tends to be. In another study, Sugiantoro & Isharijadi (2015) discussed the influence of computer self-efficacy on perceived usefulness in Internet banking users. The research was conducted on BRI Bank Madiun branch customers. This research shows that computer self-efficacy influences the perceived usefulness of Internet banking users. According to TAM, an individual's ability to operate technology can influence perceived usefulness and ease of use because if individuals have high ability, they will feel that the technology is useful and easy to use. On the other hand, individuals with low abilities will feel that the technology does not provide added value and makes things difficult for them. Therefore, in the

development and introduction of technology, it is important to consider the ability and experience level of the target users, as well as strive to make the technology as intuitive and simple to use as possible. The third hypothesis:

H3: Individual capability to operate affects the students' use of mobile banking.

User attitude is one factor that influences consumer acceptance and use of technology, including mobile banking (Kemp et al., 2019). According to TAM, users' attitudes towards technology are determined by two main factors, namely perceived usefulness and perceived ease of use. Perceived usefulness is the extent to which consumers believe that using a particular technology will improve their performance. Perceived ease of use is the extent to which consumers believe that using a particular technology will not cause great difficulty or effort. Users' attitudes toward technology will influence their intentions to use it, influencing actual usage behavior (Tao et al., 2022). User attitudes can be influenced by various factors, including previous experience with similar technologies, personal beliefs, social views, and the information they receive about the technology. For example, suppose an individual has had positive experiences with similar products developed by a particular company. In that case, they may have a positive attitude toward new technologies introduced by the same company. The fourth hypothesis:

H4: User attitude affects the students' use of mobile banking.

Prabawalingga & Yadnyana (2016) stated that there is a direct and significant relationship between interest in using information technology and the use of information technology. Apart from that, it also states that intention in using the Electronic Data Capture (EDC) system positively influences the behavior of using the EDC system. The emergence of individual behavior to use the EDC system is influenced by the emergence of initial intention in the EDC system. A positive initial intention will encourage greater behavior in using the EDC system. However, if the initial intention formed is negative, it will reduce a person's behavior using the EDC system. Therefore, individual EDC users will make transactions using EDC if they are interested in using EDC. This research also proves that the greater a person's intention to engage in a behavior, the greater the user's tendency actually to carry out that behavior. Intention to use is the first step that encourages someone to take real action in adopting technology (Ayaz & Yanartaş, 2020; Tao et al., 2022). When intention is high, individuals are more likely to take concrete steps to use the technology, such as downloading an app or initiating use. The fourth hypothesis:

H4: Intention to use affects the students' use of mobile banking.

Figure 3 depicts the relationship between independent variables (information systems quality, trust, capability to operate, user attitude, and intention to use) and the dependent variable (students' use of mobile banking).

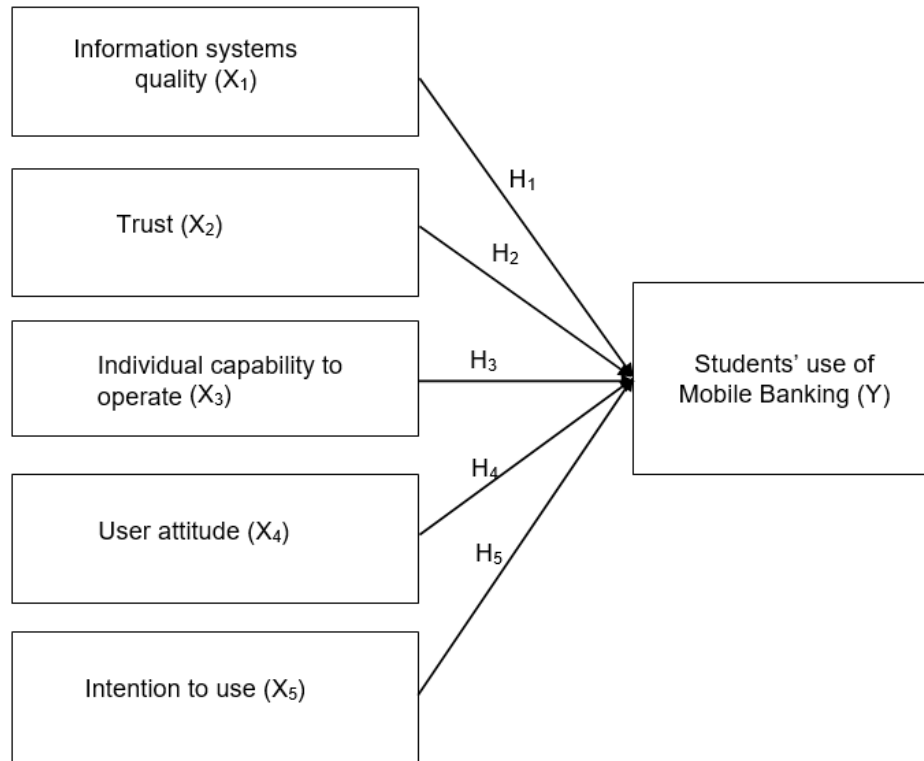


Figure 3. Research Model

RESEARCH METHOD

Population and Sample

The research object is the problem being studied. The objects of this research are the quality of the information system, trust, individual ability to operate, user attitudes, intention to use, and their influence on the use of mobile banking. The subjects of this research were active students at UPN Veteran East Java, totaling 11,631 students, consisting of 24 undergraduate and postgraduate study programs (BAKPK, 2021). The researcher chose UPN Veteran East Java students because UPN students had not yet utilized them optimally with minimal use of smartphones for banking purposes via mobile banking. The sampling technique used convenience sampling, and due to time constraints, the number of respondents who were successfully asked to fill out the questionnaire was 125 students. This follows the number of sample calculations according to Ferdinand (2014), namely, 25 times the number of variables ($25 \times 5 = 125$). Of this number, only 91 questionnaires met the requirements for processing.

Operationalization of Variables

The variables in this study include the independent variables (information systems quality, trust, capability to operate, user attitude, and intention to use) and the dependent variable (students' use of mobile banking). Table 1 shows the operationalization of variables and the measurements. The Likert Scale indicates 1 for strongly disagreed and 5 for strongly agreed.

Table 1. Variables Operationalization and Measurements

No.	Variables	Definition	Indicators	Likert Scale
Independent Variable				
1	Information Systems Quality	Information system quality measures information system processes that focus on the results of interactions between users and the system.	1. easy to use 2. reliability 3. response time 4. flexibility (Delone & McLean, 2003)	1 – 5
2	Trust	Trust in the context of technology refers to an individual or entity's belief or confidence in the reliability, security, and quality of technology or systems	1. information confidentiality 2. transferred online security 3. Privacy protection 4. Multilevel and tested security system (Sohrabi et al., 2013)	1 – 5
3	Capability to operate	The capability to operate is related to software packages and hardware programs that are supported by talent or by learning	1. Able to use without instructions on how to use it 2. Able to use even though you have never used it 3. Able to use only have instructions for use 4. Able to use after seeing other people use it (Tan & Teo, 2000)	1 – 5
4	User attitude	Users' views, beliefs, feelings, and evaluations of a particular technology or technological innovation.	1. Mobile banking is fun to use 2. Mobile banking is good to use 3. Mobile banking is important to use (Ajzen, 1985)	1 – 5
5	Intention to use	An individual's drive or desire to use a particular technology or technological innovation	1. Continue using 2. According to needs 3. Get support from family and friends 4. Recommend to others (Arumi & Yanto, 2019)	1 – 5
Dependent Variable				
6	Use of mobile banking	The actions or practices of individuals in utilizing technology or technological innovation to meet various needs, goals, or activities.	1. Ease of use for online transactions 2. Easy to understand 3. Time efficiency 4. System Accuracy 5. System Security (Yusnaini, 2010)	1 – 5

Source: As stated in the table.

Analysis and Hypothesis Testing

The analytical tool used in this research is multiple linear regression analysis with the help of the SPSS for Windows Version 25 program (Ghozali, 2018: 1). The reason for using linear regression analysis tools is that multiple regression is used to predict how high the value of the dependent variable will be if the value of the independent variable is manipulated (changed). Before testing the hypothesis, a data quality test consists of a validity and reliability test, a normality test, and a classical assumption test.

Multiple linear regression analysis is used to predict the condition (up and down) of the dependent variable (criterion) if two or more independent variables as predictor factors are manipulated (increasing and decreasing their values) (Sugiyono, 2018, p. 305). The regression equation used in this research is as follows:

$$Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + e$$

Legend:

Y = Student' use of mobile banking

α = Constant

β = Regression coefficient

X1 = information systems quality

X2 = trust

X3 = individual capability to operate

X4 = user Attitude

X5 = intention to Use

e = error

The F statistical test determines whether the independent variables jointly or simultaneously influence the dependent variable. This research uses a significance level of 0.05 or 5% to test whether the hypothesis proposed in this research is accepted or rejected. If the probability (significance) is ≥ 0.05 , the independent variable simultaneously does not affect the dependent variable. Probability (significance) < 0.05 means the independent variable simultaneously influences the dependent variable (Ghozali, 2018, p. 97).

The determinant coefficient (R²) is used to test the goodness fit of the regression model. The coefficient of determination measures how far the model can explain variations in the dependent variable. The values of the coefficient of determination are zero and one. A small R² value means that the independent variables are very limited in explaining the variance of the dependent variable. A value close to one means that the independent variables provide almost all the information needed to predict variations in the dependent variable (Ghozali, 2018, p. 96).

The t-statistical test shows how much influence an explanatory/independent variable has in explaining the dependent variable. The criteria used for the t-test are based on probability; if the probability (significance) is ≥ 0.05 , then the independent variables do not affect the dependent variable. Probability (significance) < 0.05 means the independent variable individually affects the dependent variable (Ghozali, 2018, p. 98). The formula used is as follows:

H0: The independent variable does not influence the dependent variable.

H1: There is an influence of the independent variable on the dependent

RESULTS AND DISCUSSION

Results

Respondents Description

Based on research data from distributing questionnaires to 91 students, data was obtained about majors, as seen in Table 2. Based on the data in Table 3, it can be seen that accounting majors dominate with 42 respondents or 46%, and second respondents majoring in management were 15 students or 16%. The descriptive statistics for each variables are shown in the appendix.

Table 2. Respondent Distribution Based on the Department

Department	Total	Percentage
1. Accounting	42	46,2%
2. Management	15	16,5%
3. Information Systems	6	6,6%
4. Communication	5	5,5%
5. Business Administration	5	5,5%
6. Government Administration	4	4,4%
7. Information Engineering	3	3,3%
8. Architecture	3	3,3%
9. Chemical Engineering	2	2,2%
10. Civil Engineering	1	1,1%
11. Law	1	1,1%
12. Agribusiness	1	1,1%
13. Agrotechnology	1	1,1%
14. International Relation	1	1,1%
15. Economics Development	1	1,1%
Total	91	100,0%

Source: Data collected

A data quality test consists of a validity and reliability test, a normality test, and a classical assumption test have been done. The results indicate that the questionnaires are valid and reliable. The data has passed the test of normality and classical assumption (multicollinearity and heteroskedasticity).

Hypothesis Testing

Table 3 describes the hypothesis test, which consists of the t-statistical test, F-statistical test, determinant coefficient (R²), and regression testing.

Table 3. Hypothesis Testing Results

Variable	β	t count	Sig.	Conclusion
Constant	4,272	2,476	0,015	
Information systems quality	0,124	0,938	0,351	H1 rejected
Trust	0,205	2,149	0,034	H2 accepted
Individual capability to operate	0,204	2,416	0,018	H3 accepted
User attitude	0,277	1,563	0,122	H4 rejected
Intention to use	0,319	2,589	0,011	H5 accepted
F value	22,726			
F Significance	0,000			
R Square	0,572			

Source: Data processed SPSS

Multiple linear regression testing explains the relationship between more than one dependent and independent variable. Based on Table 3, the results of the regression analysis can be seen through the beta (β) value, so that the multiple regression equation is as follows:

$$Y = 4.272 + 0.124X_1 + 0.205X_2 + 0.204X_3 + 0.277X_4 + 0.319X_5$$

The interpretation of the regression equation model:

1. The constant of 4.272 states that if the information system quality, trust, individual capability to operate, user attitude, and intention to use are ignored or equal to zero, then the student's use of mobile banking is positive.
2. The regression coefficient of the information system quality variable (X_1) 0.124 is positive, so it can be said that the better the information system quality in mobile banking service products, the more it will influence the use of mobile banking.
3. The regression coefficient value on the trust variable (X_2) of 0.205 is positive, so it can be said that the better the trust in mobile banking service products, the more it will influence the use of mobile banking.
4. The regression coefficient on the individual capability to operate variable (X_3) of 0.204 is positive, so it can be said that the better the individual's ability to operate the mobile banking service product, the more it will influence the use of mobile banking.

5. The regression coefficient of user attitude (X4) of 0.277 is positive, so it can be said that the better the user's attitude towards mobile banking service products, the more it will influence the use of mobile banking.
6. The regression coefficient value on the intention to use a variable (X5) of 0.319 is positive, so it can be said that the better the intention in using mobile banking service products, the more it will influence the use of mobile banking.
7. The analysis results show that the most influential independent variable is the intention to use, with a coefficient value of 0.319. In contrast, the variable with the lowest influence is the information system quality, with a coefficient value of 0.124.

Table 3 of the F statistical test shows a probability level value (Sig) of $0.000 < \alpha = 0.05$, meaning that statistical hypothesis H1 was accepted. This shows that the variation in the student' use of mobile banking is influenced by the variation of information system quality, trust, individual capability to operate, user attitudes, and intention to use.

Based on Table 3, the determinant coefficient (R2) value is 0.572 or 57.2%. The large value of the determinant coefficient shows that the independent variable consisting of the information system quality, trust, individual capability to operate, user attitude, and intention to use can explain the dependent variable, the use of mobile banking by 57.2%. In comparison, the remaining 42.8% is explained by other variables not included in this study.

Discussion

The effect of information systems quality (X1) on the student's use of mobile banking (Y)

Research results show that information system quality does not affect the use of mobile banking since the significance value obtained is $0.351 > 0.05$ and the regression coefficient value is positive 0.124, so it does not have a significant effect. This means that this research shows an insignificant condition, which means that the higher the quality of the information system does not mean it is unrelated but does not always increase the use of mobile banking. This could be because the quality of the information system in mobile banking services requires a long time to find the information needed. After all, it is relatively difficult to understand, and risks and errors sometimes occur.

The results of this research support previous research conducted by Suhendro (2017), which showed that information system quality does not significantly influence user satisfaction with the implementation of information technology of cooperation in Pematangsiantar. Likewise, this study did not support the research of Akob & Sukarno (2022). Concerning the TAM theory, the quality of information systems can influence perceived usefulness and ease of use, which will influence intentions and behavior of technology use. If the quality of the information system is high, consumers will feel that the technology is useful and easy to use. On the other hand, if the quality of the information system is low, consumers will feel that the technology does not provide added value and makes things difficult for them. However, the results of this research cannot support the TAM theory.

The effect of trust (X2) on the student's use of mobile banking (Y)

This research result shows that trust affects the use of mobile banking because a significant value of $0.034 < 0.05$ is obtained, and the regression coefficient value is positive, namely 0.205, so the effect is positive. This means that if trust increases, the use of mobile banking will increase, and vice versa. If trust decreases, the use of mobile banking will also decrease. Some forms of trust given by banks to increase the use of mobile banking are by increasing privacy protection with a multi-level and tested security system for mobile banking services.

This research supports previous research conducted by Yudha & Isgiyarta (2015) and Setiawan (2016). The research results show a positive and significant influence on the use of mobile banking services. In the context of TAM, individuals' beliefs about a technology's usefulness and ease of use play an important role in determining whether they will accept or reject the technology (Ajzen, 1985). The higher this trust, the more likely a person will accept the technology. TAM has become an important framework for understanding technology acceptance in various contexts, such as software adoption, website use, and acceptance of technological innovation (Ardiyanto & Kusumadewi, 2020).

The effect of individual capability to operate (X3) on the student's use of mobile banking (Y)

This research result shows that an individual's ability to operate influences the use of mobile banking. A significance value of $0.018 < 0.05$ and a regression coefficient value of 0.204 are obtained, so the effect is positive. This means that if the individual's ability to operate increases, the use of mobile banking will increase, and vice versa. If the individual's ability to operate decreases, the use of mobile banking will also decrease. Because students' individual operating abilities show that if there is no one around to show them how to use mobile banking, students can operate mobile banking services.

This research supports previous research conducted by Yudha & Isgiyarta (2015) and Sugiantoro & Isharijadi (2015). The research results show that an individual's ability to operate a computer positively and significantly affects the acceptance of Internet banking. According to TAM, an individual's ability to operate technology can influence factors in TAM because if individuals have high ability, then they will feel that the technology is useful and easy to use. On the other hand, if individuals have low abilities, they will feel that the technology does not provide added value and makes things difficult for them. An individual's ability to operate technology can also be influenced by other factors such as digital literacy, ethics, and skills.

An individual's technological capabilities may influence the extent to which a person believes using the technology will be easy (perceived ease of use). Individuals with high technological abilities tend to feel more comfortable and confident in dealing with new or complex technology (Fareri et al., 2020). Therefore, they may have a more positive perception of the ease of use of technology and be more likely to accept the technology. An individual's technological capabilities can also influence the extent to which a person understands and appreciates the benefits that can be derived from that technology (perceived usefulness). Individuals with higher technological

abilities may be better able to understand the potential of technology in assisting them in their tasks. This may increase the perceived usefulness of the technology and, consequently, influence its acceptance.

The effect of user attitude (X4) on the student's use of mobile banking (Y)

This research result shows that user attitude has no effect on the use of mobile banking, with a significance value of $0.122 > 0.05$, and the regression coefficient value is positive, namely 0.277, so it does not have a significant effect. This means that this research shows that the condition is not significant, which means that the higher the user's attitude does not mean it is unrelated but does not always increase the use of mobile banking. This could be because, according to students, the user's attitude towards mobile banking services when using this type of service is not based on whether they are happy or not, whether they need it or not, and is related to considering whether they need to use it.

This research result aligns with Sugiantoro & Isharijadi (2015), which shows that usage attitudes do not affect Internet banking usage behavior. From a TAM perspective, users' attitudes toward technology can influence the extent to which they find it easy to use (Kemp et al., 2019; Tao et al., 2022). If someone has a positive attitude towards technology, they will likely believe using it will be easy. Conversely, if they have a negative attitude towards technology, they may have a lower perception of its ease of use. Attitude does not affect intention to use and, finally, the use of mobile banking because attitude is an indirect or mediating variable between perceived usefulness, perceived ease of use, and intention to use. In other words, attitude does not significantly influence intention to use if controlled by perceived usefulness and perceived ease of use. This is based on the assumption that attitudes are a function of beliefs, so beliefs that are more specific and relevant to behavior will influence intentions more strongly than attitudes that are more general and abstract (Ardiyanto & Kusumadewi, 2020; Davis et al., 1989).

The effect of intention to use (X5) on the student's use of mobile banking (Y)

This research shows that intention to use influences the use of mobile banking because a significance value of $0.011 < 0.05$ is obtained, as well as a regression coefficient value of 0.319, so the effect is positive. This means that if the intention to use increases, students' use of mobile banking will increase, and vice versa. If intention to use decreases, students' use of mobile banking will also decrease. The form of student interest that exists among students is being able to access mobile banking anywhere and anytime and making banking transactions easier.

This research result aligns with (Prabawalingga & Yadnyana, 2016), who show that intention to use positively influences usage behavior. From the TAM point of view, usage intention influences usage behavior because usage intention is a measure of the consumer's motivation or desire to use technology. Intention to use will determine how often and for how long consumers use the technology. Usage behavior is the real action taken by consumers in using technology. Usage behavior can be measured using frequency, duration, volume, and depth of use indicators (Arumi & Yanto, 2019). According to TAM, there is a positive and significant relationship between usage intention and usage behavior, meaning that the higher the usage intention, the

higher the usage behavior. Therefore, it is important to understand the factors influencing usage intentions to improve consumer technology usage behavior (Ayaz & Yanartaş, 2020; Tao et al., 2022).

CONCLUSIONS

Based on the research results and the previously stated discussion, it can be concluded that trust, the individual's ability to operate, and intention to use influence the use of mobile banking. This indicates that trust, individual ability to operate, and intention to use UPN Veteran East Java students can increase the use of mobile banking. On the other hand, the quality of the information system and attitude towards its use do not influence students' use of mobile banking. This indicates that the quality of the information system and the attitude of use for UPN Veteran East Java students do not increase the use of mobile banking.

The results of this research cannot prove the influence of information system quality and user attitudes on mobile banking use. According to the Technology Acceptance Model (TAM), attitude does not influence intention to use because attitude is an indirect or mediating variable between perceived usefulness, perceived ease of use, and intention to use. In other words, attitude does not significantly influence intention to use if controlled by perceived usefulness and perceived ease of use. Future research can add moderating or mediating variables to ensure the relationship between variables.

Apart from that, the limitations of this research lie in the survey method of distributing questionnaires, which has inherent weaknesses. The weaknesses of the questionnaire method include that respondents often do not read the questions carefully or answer them carelessly. Therefore, further research can apply other methods, such as interviews, to ascertain respondents' opinions about mobile banking.

The implication is that mobile banking service providers must carry out strategies to increase trust, individual ability to operate, and intention to use mobile banking so that students or other customers use mobile banking more. The strategies implemented include providing recommendations or testimonials from other customers who have used mobile banking successfully and safely, increasing digital financial literacy, as well as developing digital ethics and digital skills. The government's role in increasing digital financial literacy is to issue regulations that support the development of innovative, inclusive, and safe digital financial products and services. The government must also ensure these regulations comply with international standards and protect consumer rights. Carrying out educational campaigns to increase public awareness, knowledge, and skills in using digital financial services. The government must also work with the banking sector and other financial institutions to provide consumer training and guidance. From an educational perspective, it is necessary to integrate digital financial literacy into the academic curriculum, from high school to university.

Author's Contribution

ES conceptualized and drafted the manuscript and final paper. ANA is the data curation and analysis.

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Conflicts of Interest

The authors declare no competing interest.

Availability of Data and Materials

Research data are collected as explained in the research method. Questionnaires and data can be requested by email to the corresponding author.

REFERENCES

- Abu-Taieh, E. M., AlHadid, I., Abu-Tayeh, S., Masa'deh, R., Alkhaldeh, R. S., Khwaldeh, S., & Alrowwad, A. (2022). Continued Intention to use M-Banking in Jordan by Integrating UTAUT, TPB, TAM and Service Quality with ML. *Journal of Open Innovation: Technology, Market, and Complexity*, 8(3), 120 (1-28). <https://doi.org/10.3390/joitmc8030120>
- Ajzen, I. (1985). From Intentions to Actions: A Theory of Planned Behavior. In *Action Control* (pp. 11–39). Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-642-69746-3_2
- Akob, R. A., & Sukarno, Z. (2022). Pengaruh Kualitas Layanan Mobile Banking terhadap Kepuasan dan Loyalitas Nasabah Bank BUMN di Makassar. *Jurnal Maksipreneur: Manajemen, Koperasi, Dan Entrepreneurship*, 11(2), 269–279. <https://doi.org/10.30588/jmp.v11i2.889>
- Amelia, W. R., . A., & Putera Hasman, H. C. (2022). The Influence of Perceptions of Ease, Trust,

- Risk on Interest in Using Fintech in Pasir Putih Village on DANA Application Users. *International Journal of Research and Review*, 9(8), 141–147. <https://doi.org/10.52403/ijrr.20220811>
- APJII. (2017). *Penetrasi dan Perilaku Pengguna Internet Indonesia*. APJII. www.apjii.or.id
- APJII. (2018). *Penetrasi dan Profil Perilaku Pengguna Internet Indonesia*. APJII. www.apjii.or.id
- Ardiyanto, F., & Kusumadewi, H. (2020). Pengintegrasian Technology Acceptance Model (TAM) dan Kepercayaan Konsumen pada Marketplace Online Indonesia. *Jurnal Inspirasi Bisnis Dan Manajemen*, 3(2), 177–187. <https://doi.org/10.33603/jibm.v3i2.2659>
- Arumi, A., & Yanto, H. (2019). Antecedent Pengguna Layanan Electronic Banking di Kalangan Mahasiswa (Sebuah Kajian Technology Acceptance Model). *Economic Education Analysis Journal*, 8(1), 130–147. <https://journal.unnes.ac.id/sju/index.php/eeaj/article/view/29765>
- Ayaz, A., & Yanartaş, M. (2020). An analysis of the unified theory of acceptance and use of technology theory (UTAUT): Acceptance of electronic document management system (EDMS). *Computers in Human Behavior Reports*, 2, 100032. <https://doi.org/10.1016/j.chbr.2020.100032>
- BAKPK. (2021). *Jumlah Data Mahasiswa Aktif UPN Veteran Jawa Timur*.
- Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User Acceptance of Computer Technology: A Comparison of Two Theoretical Models. *Management Science*, 35(8), 982–1003. <https://doi.org/10.1287/mnsc.35.8.982>
- Delone, W. H., & McLean, E. R. (2003). The DeLone and McLean Model of Information Systems Success: A Ten-Year Update. *Journal of Management Information Systems*, 19(4), 9–30. <https://doi.org/10.1080/07421222.2003.11045748>
- Fareri, S., Fantoni, G., Chiarello, F., Coli, E., & Binda, A. (2020). Estimating Industry 4.0 impact on job profiles and skills using text mining. *Computers in Industry*, 118, 103222. <https://doi.org/10.1016/j.compind.2020.103222>
- Ferdinand, A. (2014). *Metode Penelitian Manajemen*. UNDIP Press: Semarang.
- Fernos, J., & Gietricen, G. (2020). Pengaruh Kualitas Layanan terhadap Kepuasan Nasabah Mobile Banking pada Bank Pembangunan Daerah Provinsi Sumatera Barat. *Jurnal Pundi*, 3(2), 137–150. <https://doi.org/10.31575/jp.v3i2.157>
- Fishbein, M., & Ajzen, I. (2010). *Predicting and Changing Behavior: The Reasoned Action Approach*. Psychology Press, New York, NY.
- Ghozali, I. (2018). *Aplikasi Analisis Multivariate Dengan Program IBM SPSS 25* (9th ed.). Badan Penerbit Universitas Diponegoro.
- Govender, I., & Sihlali, W. (2014). A Study of Mobile Banking Adoption among University Students Using an Extended TAM. *Mediterranean Journal of Social Sciences*, 5(7), 451–459. <https://doi.org/10.5901/mjss.2014.v5n7p451>
- International-Finance. (2021). *The digital banking landscape in Indonesia*. InternationalFinance.Com. <https://internationalfinance.com/banking/the-digital-banking-landscape-indonesia/>

- Kemp, A., Palmer, E., & Strelan, P. (2019). A taxonomy of factors affecting attitudes towards educational technologies for use with technology acceptance models. *British Journal of Educational Technology*, 50(5), 2394–2413. <https://doi.org/10.1111/bjet.12833>
- Kurniawati, H. A., Arif, A., & Winarno, W. A. (2017). Analisis Minat Penggunaan Mobile Banking Dengan Pendekatan Technology Acceptance Model (TAM) Yang Telah Dimodifikasi. *E-Journal Ekonomi Bisnis Dan Akuntansi*, 4(1), 24. <https://doi.org/10.19184/ejeba.v4i1.4563>
- OJK. (2015). *Bijak Ber-Electronic Banking* (Mei 2015). OJK. [https://sikapiuangmu.ojk.go.id/FrontEnd/images/FileDownload/2_Bijak Ber e Banking.pdf](https://sikapiuangmu.ojk.go.id/FrontEnd/images/FileDownload/2_Bijak%20Ber%20e%20Banking.pdf)
- Oktabriantono, A. P., Sulindawati, N. L. G. E., & Dewi, P. E. D. M. (2017). Pengaruh Persepsi Kebermanfaatan, Kemudahan Penggunaan, Dan Keamanan Terhadap Minat Menggunakan E-Banking Pada Mahasiswa Jurusan Akuntansi Program S1 Fakultas Ekonomi Universitas Pendidikan Ganesha. *Jimat (Jurnal Ilmiah Mahasiswa Akuntansi) Undiksha*, 8(2), 1–10. <https://ejournal.undiksha.ac.id/index.php/S1ak/article/view/13300>
- Peker, B. (2021). *10 Statistics on Banking & Finance App's User Engagement*. Storyly.Io. <https://www.storyly.io/post/10-statistics-mobile-banking-finance-app>
- Pertiwi, N. W. D. M. Y., & Ariyanto, D. (2017). Penerapan Model UTAUT2 untuk Menjelaskan Minat dan Perilaku Penggunaan Mobile Banking di Kota Denpasar. *E-Jurnal Akuntansi*, 18(2), 1369–1397. <https://ojs.unud.ac.id/index.php/Akuntansi/article/view/25548>
- Prabawalingga, I. G. N. M., & Yadnyana, I. K. (2016). Persepsi Kemanfaatan dan Persepsi Kemudahan dengan Minat Penggunaan sebagai Variabel Intervening terhadap Perilaku Penggunaan Sistem. *E-Journal Ekonomi Dan Bisnis Universitas Udayana*, 5(10), 3359–3390. <https://ojs.unud.ac.id/index.php/EEB/article/view/22517>
- Purnomo, A. S. D., & Ramadhani, D. D. (2022). Pengaruh Manfaat, Kemudahan terhadap Minat Pemakaian Financial Technology Pada Penggunaan Pembayaran Digital UMKM di Sumenep. *AKUNTABILITAS: Jurnal Ilmiah Ilmu-Ilmu Ekonomi*, 14(2), 17–30. <https://doi.org/10.35457/akuntabilitas.v14i2.2505>
- Setiawan, H. (2016). Pengaruh Kualitas Layanan, Persepsi Nilai, dan Kepercayaan terhadap Kepuasan dan Loyalitas Pengguna Layanan Mobile Banking. *Jurnal Keuangan Dan Perbankan*, 20(3), 518–528. <https://doi.org/10.26905/jkdp.v20i3.269>
- Setyono, J. (2022). Intention to Use Islamic Mobile Banking: Integration of Technology Acceptance Model and Theory of Planned Behavior with Trust. *Muqtasid*, 13(2), 127–142. <https://muqtasid.iainsalatiga.ac.id/index.php/muqtasid/article/view/8153>
- Sohrabi, M., Yee, J., & Nathan, R. (2013). Critical Success Factors for the Adoption of e-Banking in Malaysia. *International Arab Journal of E-Technology*, 10(2), 1–7. <https://www.iajit.org/issue/146/Volume-10-Number-02-March-2013>
- Souiden, N., Ladhari, R., & Chaouali, W. (2020). Mobile banking adoption: a systematic review. *International Journal of Bank Marketing*, 39(2), 214–241. <https://doi.org/10.1108/IJBM-04-2020-0182>
- Subowo, M. H. (2020). Pengaruh Prinsip Technology Acceptance Model (TAM) Terhadap Kepuasan Pelanggan Aplikasi Ojek Online Xyz. *Walisongo Journal of Information*

- Technology*, 2(2), 79–89. <https://doi.org/10.21580/wjit.2020.2.2.6939>
- Sugiantoro, Y., & Isharijadi, I. (2015). Pengaruh Personalization, Computer Self Efficacy, dan Trust terhadap Perceived Usefulness pada Pengguna Internet Banking di PT. Bank BRI (Persero), Tbk. Cabang Madiun. *Assets: Jurnal Akuntansi Dan Pendidikan*, 4(1), 82–92. <https://doi.org/10.25273/jap.v4i1.677>
- Sugiyono. (2018). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D (3rd ed.)*. Bandung: Alfabeta.
- Suhartanto, D., Dean, D., Ismail, T. A. T., & Sundari, R. (2019). Mobile banking adoption in Islamic banks. *Journal of Islamic Marketing*, 11(6), 1405–1418. <https://doi.org/10.1108/JIMA-05-2019-0096>
- Suhendro, D. (2017). Pengaruh Kualitas Sistem, Kualitas Informasi, Kualitas Pelayanan dan Ekspektasi Kinerja terhadap Kepuasan Pengguna dalam Penerapan Sistem Teknologi Informasi pada Koperasi di Kota Pematangsiantar. *Jurasik (Jurnal Riset Sistem Informasi Dan Teknik Informatika)*, 1(1), 33. <https://doi.org/10.30645/jurasik.v1i1.6>
- Tan, M., & Teo, T. (2000). Factors Influencing the Adoption of Internet Banking. *Journal of the Association for Information Systems*, 1(1), 1–44. <https://doi.org/10.17705/1jais.00005>
- Tao, D., Fu, P., Wang, Y., Zhang, T., & Qu, X. (2022). Key characteristics in designing massive open online courses (MOOCs) for user acceptance: an application of the extended technology acceptance model. *Interactive Learning Environments*, 30(5), 882–895. <https://doi.org/10.1080/10494820.2019.1695214>
- Yudha, H. N., & Isgiyarta, J. (2015). Analisis Pengaruh Persepsi Nasabah Bank Terhadap Internet Banking Adoption (Studi pada Nasabah Perbankan yang Menggunakan Internet Banking di Kota Surakarta). *Diponegoro Journal of Accounting*, 4(4), 1–15. <https://ejournal3.undip.ac.id/index.php/accounting/article/view/9568>
- Yusnaini, Y. (2010). Pengaruh Kualitas Pelayanan Internet Banking Terhadap Kepuasan dan Loyalitas Konsumen pada Bank Swasta. *Jurnal Dinamika Akuntansi*, 2(1), 1–9. <https://journal.unnes.ac.id/nju/index.php/jda/article/view/1922>

Appendix

Descriptive Statistics

The descriptive statistics of variables with the frequency of its questionnaires are as follows:

Table 1. Respondents' Questionnaire Result for Accounting Systems Quality

Item	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree		N
	F	%	F	%	F	%	F	%	F	%	
X1											
1	65	71.4%	21	23.1%	5	5.5%	0	0%	0	0%	91
2	59	64.8%	28	30.8%	4	4.4%	0	0%	0	0%	91
3	15	16.5%	28	30.8%	36	39.6%	10	11%	2	2.2%	91
4	38	41.8%	35	38.5%	15	16.5%	3	3.3%	0	0%	91

Source: Questionnaire data processed

Table 2. Respondents' Questionnaire Result for Trust

Item	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree		N
	F	%	F	%	F	%	F	%	F	%	
X2											
1	35	38.5%	38	41.8%	16	17.6%	2	2.2%	0	0%	91
2	37	40.7%	35	38.5%	16	17.6%	3	3.3%	0	0%	91
3	40	44%	38	41.8%	11	12.1%	2	2.2%	0	0%	91
4	32	35.2%	39	42.9%	17	18.7%	2	2.2%	1	1.1%	91

Source: Questionnaire data processed

Table 3. Respondents' Questionnaire Result for Individual Capability to Operate

Item	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree		N
	F	%	F	%	F	%	F	%	F	%	
X1											
1	37	40.7%	28	30.8%	19	20.9%	4	4.4%	3	3.3%	91
2	26	28.6%	34	37.4%	19	20.9%	11	12%	1	1.1%	91
3	30	33%	41	45.1%	15	16.5%	5	5.5%	0	0%	91
4	26	28.6%	42	46.2%	17	18.7%	6	6.6%	0	0%	91

Source: Questionnaire data processed

Table 4. Respondents' Questionnaire Result for User Attitude

Item	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree		N
	F	%	F	%	F	%	F	%	F	%	
X1											
1	38	41.8%	41	45.1%	12	13.2%	0	0%	0	0%	91
2	32	35.2%	46	50.5%	13	14.3%	0	0%	0	0%	91
3	37	40.7%	30	33%	19	20.9%	5	5.5%	0	0%	91

Source: Questionnaire data processed

Table 5. Respondents' Questionnaire Result for Intention to Use

Item	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree		N
	F	%	F	%	F	%	F	%	F	%	
X1											
1	50	54.9%	29	31.9%	9	9.9%	3	3.3%	0	0%	91
2	55	60.4%	29	31.9%	5	5.5%	2	2.2%	0	0%	91
3	15	16.5%	31	34.1%	27	29.7%	14	15.4%	4	4.4%	91
4	31	34.1%	32	35.2%	22	24.2%	5	5.5%	1	1.1%	91

Source: Questionnaire data processed

Table 6. Respondents' Questionnaire Result for Students' Use of Mobile Banking

Item	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree		N
	F	%	F	%	F	%	F	%	F	%	
X1											
1	56	61.5%	32	35.2%	3	3.3%	0	0%	0	0%	91
2	42	46.2%	34	37.4%	14	15.4%	1	1.1%	0	0%	91
3	48	52.7%	33	36.3%	9	9.9%	1	1.1%	0	0%	91
4	50	54.9%	33	36.3%	7	7.7%	1	1.1%	0	0%	91
5	31	34.1%	38	41.8%	15	16.5%	4	4.4%	3	3.3%	91

Source: Questionnaire data processed

Data Analysis

Before testing the hypothesis, a data quality test was done, consisting of the validity and reliability test, the normality test, and the classical assumption test (multicollinearity and heteroskedasticity).

Table 7. Validity Test Results

Variables	Correlations	2-tailed	Validity	
Information Systems Quality	X1.1	0.767**	0.000	Valid
	X1.2	0.679**	0.000	Valid
	X1.3	0.798**	0.000	Valid
	X1.4	0.788**	0.000	Valid
Trust	X2.1	0.933**	0.000	Valid
	X2.2	0.910**	0.000	Valid
	X2.3	0.817**	0.000	Valid
	X2.4	0.926**	0.000	Valid
Individual Capability to Operate	X3.1	0.803**	0.000	Valid
	X3.2	0.840**	0.000	Valid
	X3.3	0.736**	0.000	Valid
	X3.4	0.642**	0.000	Valid
User Attitude	X4.1	0.817**	0.000	Valid
	X4.2	0.850**	0.000	Valid
	X4.3	0.852**	0.000	Valid
Intention to Use	X5.1	0.765**	0.000	Valid
	X5.2	0.613**	0.000	Valid
	X5.3	0.630**	0.000	Valid
	X5.4	0.791**	0.000	Valid

Variables		Correlations	2-tailed	Validity
Students' Use of Mobile Banking	Y1	0.739**	0.000	Valid
	Y2	0.792**	0.000	Valid
	Y3	0.854**	0.000	Valid
	Y4	0.810**	0.000	Valid
	Y5	0.725**	0.000	Valid

Source: Data processed

Table 7. Reliability Test Results

Variables	Cronbach's Alpha	Reliability Standard	Reliability
Information Systems Quality	0.844	0.70	Reliable
Trust	0.851	0.70	Reliable
Individual Capability to Operate	0.871	0.70	Reliable
User Attitude	0.842	0.70	Reliable
Intention to Use	0.847	0.70	Reliable
Students' Use of Mobile Banking	0.833	0.70	Reliable

Source: Data processed

Table 8. Normality Test Results

Kolmogorov-Smirnov <i>Unstandardized Residual</i>	
Kolmogorov-Smirnov Score	0.200
Significance Standard	0.50

Source: Data processed

Table 9. Multicollinearity Test Results

Variables	Collinearity Statistics		Conclusion
	Tolerance	VIF	
Information Systems Quality	0.471	2.121	No-Multicollinearity
Trust	0.553	1.808	No-Multicollinearity
Individual Capability to Operate	0.718	1.393	No-Multicollinearity
User Attitude	0.368	2.714	No-Multicollinearity
Intention to Use	0.457	2.190	No-Multicollinearity

Source: Data processed

Table 10. Glesjer Test for Heteroskedasticity Results

Variables	Cronbach's Alpha	Conclusion
Information Systems Quality	0.413	No-Heteroskedasticity
Trust	0.676	No-Heteroskedasticity
Individual Capability to Operate	0.924	No-Heteroskedasticity
User Attitude	0.354	No-Heteroskedasticity
Intention to Use	0.571	No-Heteroskedasticity

Source: Data processed