



The Effect of Security and Ease of Use of Electronic Money of the *Barokah* Catalyst Application on the Satisfaction of Guardians

Widya Anggita Putri¹*, Izzah Dienillah¹

¹Abu Zairi Bondowoso College of Sharia Sciences

*Correspondence: widya23maret@gmail.com

Email: izzahdienillah@stisaza.ac.id

ARTICLE INFO

Keywords

Security, Ease of use,
Satisfaction, Electronic
Money

Article history

Received: July 2026

Revised: Agustus 2026

Accepted: September 2026

ABSTRACT

The development of digital technology has driven a shift in payment systems from cash to non-cash methods that are more efficient and practical. In the pesantren environment, the use of electronic money through the Katalis Barokah application represents an innovation to facilitate transactions between students (santri) and their parents (wali santri). However, in its implementation, there are still issues related to security and ease of use that may affect user satisfaction. This study aims to analyze and determine the effect of security and ease of use on the satisfaction of wali santri at Pondok Pesantren Salafiyah Abu Zairi Bondowoso. This research employs a quantitative approach with an associative (correlational) method. The sample was selected using purposive sampling, involving 177 respondents. Data were collected through questionnaires, observation, and documentation. Hypothesis testing was conducted using multiple linear regression analysis. The results show that (1) security has a significant effect on wali santri satisfaction, (2) ease of use has a significant effect on wali santri satisfaction, and (3) security and ease of use simultaneously have a significant effect on wali santri satisfaction.

To cite in APA style

Putri, W. A., & Dienillah, I. (2026). The Effect of Security and Ease of Use of Electronic Money of the *Barokah* Catalyst Application on the Satisfaction of Guardians of Students. *Journal of Sharia Science*, 1(1), 106–115.

*Corresponding author

DOI: <https://dx.doi.org/10.33650/great.v1i2.16382>

Copyright © 2026 Authors

This is an open access article under CC-BY-NC-SA 4.0 license

INTRODUCTION

The advancement of information and technology is currently accelerating so that it has a big impact on changes in various lives, including in the pesantren environment. Along with the development of digital technology, regarding the use of electronic money (*E-money*) which is currently no longer limited, digital financial innovations can help manage student funds to be safer and more efficient. User satisfaction of a service system can be influenced by two factors, namely the level of security and convenience, in the use of electronic money these two factors are important aspects that can determine the extent to which users feel

confident and comfortable with the service system used. In the use of digital systems, user satisfaction is one of the main aspects that need to be considered. The level of user satisfaction with digital services is assessed through several indicators, including the level of system security. System security refers to the ability of a platform to protect and manage users' personal information and business data from various cyber threats, such as cybercrime, online data theft, and acts of sabotage against electronic devices (Shafira, Sunindyo, and Kusuma 2023). Based on the results of research conducted by (Marhaendra and Mahyuzar 2023), (Andyani and Turay 2025), (Djaja, Tongli, and Tahendrika 2022), (Habibi and Za 2025) and (Maharani and Mandira 2022) states that security can affect the level of user satisfaction. Meanwhile, research conducted by (September 2024) and (Setiawan et al. 2022) states that security has no effect on user satisfaction.

Another factor that can be used to determine the level of user satisfaction is the ease of using the system. Convenience is a person's belief where in using technology will be free from effort (Shafira, Sunindyo, and Kusuma 2023). According to research conducted by (Setiawan et al. 2022), (Nizar and Yusuf 2022) and (Lubis 2023) stated that ease of use can affect user satisfaction, while according to research conducted by (Muwa, Indah, and Indrihastuti 2024) stating that ease of use has no effect on user satisfaction. The level of ease of use of service systems is able to increase user satisfaction, where systems that are easier to operate tend to produce higher satisfaction. Therefore, systems that are easy to access, understand and operate tend to be more able to increase user satisfaction in using electronic money service systems.

Research Hypothesis

- H1: Security has a positive effect on the satisfaction of guardians of students in using electronic money for the barokah catalyst application
- H2: Convenience has a positive effect on the satisfaction of guardians of students in using electronic money for barokah catalyst applications
- H3: Security and Convenience have a positive effect on the satisfaction of guardians of students in using electronic money for barokah catalyst applications

RESEARCH METHOD

This approach applies a quantitative approach, with the type of associative (correlational) research. The population amounted to 350 guardians of students with a sample of 177 respondents determined based on the issac mechael table at an error rate of 5%, the data collection technique used *purposive sampling*. Primary data collection was carried out through a closed questionnaire which was compiled based on a likert scale while secondary data was obtained from various supporting sources, such as journals, thesis, the internet and other relevant sources. The research data was then analyzed using multiple linear regression with the help of SPSS Version 25.

RESULTS OF STATISTICS

Analysis

Validity Test

The results of the validity test state that all statement items are declared valid because the calculated r-value is greater than the r-value of the table as shown in the following table:

Table 1. Validity Test Results

No.	Statement	r count	r Table	Remarks
Security (X1)				
1.	Statement 1	0,508	0,147	Valid
2.	Statement 2	0,612	0,147	Valid
3.	Statement 3	0,648	0,147	Valid
4.	Statement 4	0,659	0,147	Valid
5.	Statement 5	0,749	0,147	Valid
6.	Statement 6	0,732	0,147	Valid
7.	Statement 7	0,704	0,147	Valid
8.	Statement 8	0,585	0,147	Valid
Facilities (X2)				
1.	Statement 1	0,314	0,147	Valid
2.	Statement 2	0,471	0,147	Valid
3.	Statement 3	0,390	0,147	Valid
4.	Statement 4	0,349	0,147	Valid
5.	Statement 5	0,431	0,147	Valid
6.	Statement 6	0,445	0,147	Valid
7.	Statement 7	0,474	0,147	Valid
8.	Statement 8	0,408	0,147	Valid
9.	Statement 9	0,631	0,147	Valid
10.	Statement 10	0,515	0,147	Valid
Satisfaction (Y)				
1.	Statement 1	0,216	0,147	Valid
2.	Statement 2	0,248	0,147	Valid
3.	Statement 3	0,213	0,147	Valid
4.	Statement 4	0,153	0,147	Valid
5.	Statement 5	0,253	0,147	Valid
6.	Statement 6	0,269	0,147	Valid
7.	Statement 7	0,348	0,147	Valid
8.	Statement 8	0,314	0,147	Valid

Source : SPSS Data Processing, 2026

Reality Test

An instrument is said to be reliable if it gives consistent results when used repeatedly to measure the same object. An instrument or questionnaire is said to be reliable if it has a *Cronbach Alpha value* greater than or equal to 0.60.

Table 2. Results of the Feasibility Test

No.	Variable	Cronbach Alpha	Standar Cronbach Alpha	Remarks
1.	Security (X1)	0,803	0,60	Reliabel
2.	Facilities(X2)	0,888	0,60	Reliabel
3.	Satisfaction(Y)	0,900	0,60	Reliabel

Source : SPSS Data Processing, 2026

Based on table 2, it shows that the *Cronbach Alpha* value in the safety variable (X1) shows the highest value (0.803>0.60) and the convenience variable (X2) has the highest value (0.888>0.60). The results of the realism test show that the research instrument is declared reliable because it meets the *Cronbach Alpha* value standard.

Multiple Linear Regression Test

Multiple linear regression analysis is used to determine whether there is an influence or relationship between independent variables on dependent variables. The multiple linear regression model in this study is formulated as follows: $Y = a + b_1X_1 + b_2X_2$. In addition, to determine the influence of each independent variable on the dependent variable partially in the context of hypothesis testing, a t-test is used. The criteria for testing the t-test is that if the value of t-is calculated to be greater than the t-table, then the hypothesis is accepted. Furthermore, to determine the amount of contribution of independent variables to the dependent variables, a determination coefficient (R^2) test is used, and to determine the feasibility of the regression model simultaneously, a model accuracy test (F test) is used.

Table 3. Multiple Linear Regression Test Results

Models	B	T Count	Say.	Remarks
(Constant)	8,316	1,669	0,097	
Security (X1)	0,369	3,355	0,001	Significant effect
Facilities(X2)	0,301	3,335	0,001	Significant effect

Source : SPSS Data Processing, 2026

Based on the Table 3 of the multiple linear regression test, it was shown that the safety variable had a positive and significant influence on satisfaction. This is indicated by a significance value of 0.001, which is smaller than 0.05. Meanwhile, the convenience variable also had a positive and significant influence on satisfaction, which was shown by a significance value of 0.001 < 0.05. Thus, it can be concluded that safety and convenience have a significant effect on satisfaction.

T test

The t-test is carried out to determine the influence of each partially free variable on the bound variable. The test criteria used are that the calculated t-value is greater than the t-value of the table with a significance value less than 0.05.

Table 4. Test Results t

Models	t Count	t Table	Say.	Remarks
(Constant)	1,669	1,973	0,097	
Security(X1)	3,355	1,973	0,001	Accepted Hypothesis
Facilities(X2)	3,355	1,973	0,001	Accepted Hypothesis

Source : SPSS Data Processing, 2026

Based on the Table 4 of the t-test in the table above, it shows that Hypothesis one (H_1), namely the hypothesis safety variable, is accepted, with a calculated t-value of 3.355 greater than the t-value of table 1.973 with a significance value of 0.001<0.005. For the

convenience variable, it has a calculated t-value of 3.355 greater than the t-value of table 1.973 with a significance value of $0.001 < 0.005$, this shows that the convenience variable has a positive and significant effect on satisfaction, therefore (H_2) is accepted.

Coefficient of Determination Test (R^2)

The determination coefficient test is used to measure the extent to which independent variables are able to explain the variation of dependent variables. To find out the results of the determination coefficient test, you can see the following table.

Table 5. Determination Coefficient Test Results

Models	R	R Square	Adjust R square
1	0,370	0,137	0,127

Source : SPSS Data Processing, 2026

Based on the Model Summary table, it is known that the value of R Square is 13.7%, so it can be concluded that the magnitude of the influence of safety and convenience variables on satisfaction is 13.7%, while the remaining 86.3% is influenced by other factors that are not studied in this study.

Test F

The F test is carried out to determine the influence of independent variables together on dependent variables. For the criteria in the f test, if the calculated value of f is greater than the value of f of the table and the significance value is less than 0.05, then the regression model is declared significant and the hypothesis is accepted. The results of the f test can be seen in the following table.

Table 6. Test Results F

Variable	F count	Say.	Remarks
Security and Convenience	13,765	0,000	Significant Impact

Source : SPSS Data Processing, 2026

Based on the table 6, it can be seen that the significance value is $0.000 < 0.05$. Therefore, it can be stated that the regression equation model used in this study is included in the keriteria suitable.

Classic Assumption Test

Normality Test

The normality test is a test used to find out whether the data in the study is normally distributed or not. In this study, the data normality test was carried out using the Kolmogorov Smirnov method. The basis for decision-making in this test is that if the significance value produced is greater than the value of 0.05, the data is declared to be normally distributed. The following are the results of the normality test using the Kolmogorv Smirnov method.

Table 7. Results of the One-Sample Normality Test Kolmogorov-Sminov Test		
Kolmogorov-Smirnov Test		Unstandardized Residual
N		177
Normal Parameters	Red	0,0000000
	Std. Deviation	2,27118792
Asymp Sig. (2-tailed)		0,200

Source : SPSS Data Processing, 2026

Based on the Table 7 of the normality test using the One-Sample Kolmogorov Smirnov Test, an Asymp Sig. (2-tailed) value of 0.200>0.05 was obtained so that it can be concluded that the residual data in this study is normally distributed.

Heteroschidasticity Test

The heteroscedasticity test is used to find residual variations in the regression model. Heteroscedasticity means that the residual variance is not constant, homoscedasticity means that the residual variance is constant. A good regression model is when there are no symptoms of heteroscedasticity in the regression model. The criterion used in the heteroscedasticity test in this study is that if the significance value is equal to or greater than 0.05, it is stated that there are no symptoms of heteroscedasticity in the regression model. To see the results of the heteroscedasticity test with the Glejser method, you can see the following table.

Table 8. Heteroscedasticity Test Results			
Yes	Variable	Sig.	Remarks
1.	Security (X1)	0,757	Heteroscedasticity does not occur
2.	Facilities (X2)	0,164	Heteroscedasticity does not occur

Source : SPSS Data Processing, 2026

Based on table 8, the results of the heteroscedasticity test show with a significance value of the safety variable of 0.757 and the convenience variable of 0.164. Therefore, it can be concluded that in the study there are no symptoms of heteroscedasticity.

Multicollinearity Test

The multicollinearity test is carried out to find out whether or not there is a correlation between independent variables in the regression model. To find out the existence of multicollinearity, it can be seen from the values of *Tolerance* and *Variance Inflation Factor (VIF)*. The regression model is declared not to experience multicollinearity if the value of $VIF < 10$ and the *tolerance value* > 0.10 . To see the results of the multicollinearity test, you can see the following table.

Table 9. Multicollinearity Test Results

No	Variable	Tolerance	LIVE	Remarks
1.	Security	0,965	1,036	Multicollinearity does not occur
2.	Facilities	0,965	1,036	Multicollinearity does not occur

Source : SPSS Data Processing, 2026

Based on the data, it is known that the safety and convenience variables have a *tolerance value* of more than 0.10, which is 0.965 and the VIF value is less than 0.10, so it can be stated that there is no multicollinearity between independent variables in the regression model of this study.

DISCUSSION

Based on the results of the multiple linear regression test, it was shown that safety (X1) had a positive and significant effect on satisfaction (Y), this was shown by a significance value of 0.001 which was smaller than 0.05. In this study, to test the effect using the cheteria hypothesis test of the t-test, the hypothesis was accepted if the calculated t-value was greater than the table t-value (1.973) and the Sig.< value was 0.05.

Based on these results, it is shown that safety has a positive and significant influence on satisfaction, because the value of Sig. 0.001 < 0.05 and obtained a calculated t value (3.355)> t table (1.973), so that the hypothesis in this study H_0 is rejected and H_1 is accepted. Therefore, it can be concluded that H_1 which states that security has a positive and significant effect on the satisfaction of guardians of students in using electronic money of the barokah catalyst application is accepted. When viewed from the beta coefficient (B) value of 0.369 (36.9%), it is interpreted that security has a positive influence on the satisfaction of guardians of students, each increase in one unit of security will increase the satisfaction of guardians of students by 3.69% assuming that other variables are constant.

The results of the research obtained are in line with previous research conducted by (Djaja, Tongli, and Tahendrika 2022), (Nizar and Yusuf 2022), (Marhaendra and Mahyuzar 2023), (Andyani and Turay 2025) and (Habibi and Za 2025) which states that security has a positive and significant effect on the satisfaction of using electronic money. In contrast to research conducted by (Nurhidayat et al. 2024) and (September 2024), (Setiawan et al. 2022) which states that security has no effect on the satisfaction of using electronic money.

Based on the results of the multiple linear regression test, it was shown that convenience (X2) had a positive and significant effect on satisfaction, this was shown by a significance value of 0.001 smaller than 0.05. In the study to test the effect using the t-test hypothesis test keriteria, the hypothesis was accepted if the calculated t-value was greater than the t-value of the table (1.973) and the value of Sig.<0.05.

From these results, it is shown that security has a positive and significant effect on satisfaction because the value of Sig. 0.001<0.05 and obtained a calculated t value of (3.355)> t table (1.973), so that the hypothesis in this study H_0 is rejected and H_2 is accepted. Therefore, it can be concluded that H_2 which states that security has a positive and significant effect on the satisfaction of guardians of students in using electronic money of the barokah catalyst application is accepted. When viewed from the beta coefficient (B) value of 0.301 (30.1%), it is interpreted that convenience has a positive influence on the satisfaction of guardians of

students, each increase of one unit of convenience will increase the satisfaction of guardians of students by 3.01% assuming a constant variable.

The results of this study are in line with previous research conducted by (DATE 2024), (Nizar and Yusuf 2022), (Lubis 2023), (Samara and Susanti 2023) and (Sadiah and Suaib 2025) stated that convenience has a positive and significant effect on the satisfaction of using electronic money. Inversely proportional to the research conducted by (Alfani and Ariani 2024), (Muwa, Indah, and Indrihastuti 2024) and (September 2024) which states that convenience has no effect on the satisfaction of electronic money users.

Based on the results of the multiple linear regression test, the safety variable (X_1) and the convenience variable (X_2) on satisfaction (Y) had an influence that was obtained with a significance value of 0.000 less than 0.05. In this study, to test the effect using the F test criteria, if the significance value of F is less than 0.05, the hypothesis is accepted.

These results show that safety and convenience have a positive and significant effect on satisfaction, because the value of Sig. $0.000 < 0.05$ so that hypothesis 3 (H_3) was accepted. If viewed from the results of the R^2 determination coefficient test, an R square value of 0.137 was obtained, which means that (13.7%) the variation in the satisfaction of guardians of students can be explained by the variables of safety and the variables of ease of use. The results of this study are in line with previous research conducted by (Andyani and Turay 2025) and (Djaja, Tongli, and Tahendrika 2022) which states that the security and ease of use of electronic money have a positive and significant effect on satisfaction.

CONCLUSION

The security of the use of electronic money in the Katalis Barokah application has a significant effect on the satisfaction of guardians of students. This shows that the higher the level of security in the use of electronic money in the Katalis Barokah application, the higher the level of satisfaction of guardians of students.

The ease of use of electronic money in the Katalis Barokah application has a significant effect on the satisfaction of guardians of students. Ease of operation of the application, understanding of features and a simple transaction process can increase the satisfaction of guardians of students.

The security and ease of use of the Katalis Barokah application electronic money have the same effect on the satisfaction of guardian students. Based on the results of the test coefficient, determination of security and ease of use, it was able to explain 13.7% of the variation in guardian satisfaction of students, while the remaining 86.3% was influenced by other factors that were not included in this study.

ACKNOWLEDGMENT

The authors express their sincere gratitude to Sekolah Tinggi Ilmu Syariah Abu Zairi Bondowoso, Pondok Pesantren Salafiyah Abu Zairi Bondowoso, all wali santri respondents, the Katalis Barokah application management, and the editorial board and anonymous reviewers of GREAT: Journal of Global Economic Trends for their institutional support, participation, information, and constructive comments that made this research and publication possible.

REFERENCES

- Alfani, Rizal Syahri, and Kurnia Rina Ariani. 2024. "The Effect of Benefit Perception, Convenience Perception, Risk and Trust on Decisions to Use Electronic Money (QRIS)." *Scientific Journal of Edunomics* 8 (1).
- Andyani, Syaffa Aulia, and Tiara Turay. 2025. "The Influence of Security Features, Ease of Use, and Service Quality on User Satisfaction of Dana Applications." *Journal of Business Economics and Management* | E-ISSN: 3063-8968 1 (3): 884–92.
- DANANG, A J I ASTAMA. 2024. "THE EFFECT OF SECURITY PERCEPTION, PERCEPTION OF EASE OF USE, AND SERVICE QUALITY ON CONSUMER SATISFACTION OF DANA E-WALLET USERS IN AN ISLAMIC BUSINESS PERSPECTIVE (A STUDY ON DANA E-WALLET USERS IN BANDAR LAMPUNG CITY)." UIN RADEN INTAN LAMPUNG.
- Djaja, Jessica, Bernadeth Tongli, and Abner Tahendrika. 2022. "The Effect of Ease and Security of Transactions Using QR Codes on ShopeePay User Satisfaction in Students of Atma Jaya University Makassar." *Journal of Economics, Business and Applied (JESIT)* 3 (1): 35–50.
- Fahmi, Moh Dhofir Jenny Al. 2025. "Implementation of Payment with PSP in Lieu of Banknotes Case Study at Madrasah Sains Quran Ar Ridwan Bojonegoro." *Journal of Islamic Finance and Syariah Banking* 2 (2): 123–34.
- Habibi, Ahmad, and Saida Zainurrosalamia Za. 2025. "THE EFFECT OF SERVICE FEATURES, CONVENIENCE AND SECURITY ON THE SATISFACTION OF DANA APPLICATION E-WALLET USERS IN EAST KUTAI REGENCY." *Journal of Economics, Management and Accounting* 2 (1): 22–30.
- Lubis, Darmayanti. 2023. "The Effect of Usability, Convenience and Security Perception on Customer Satisfaction Using Mobile Banking." *Journal of Sharia Economics and Finance* 2 (2): 443–56.
- Maharani, Kadek Ferinda Devia, and I Made Chandra Mandira. 2022. "The Effect of Service Quality, Perception of Convenience and Security on Participant Satisfaction in Using Social Security Mobile." *Scientific Journal of Unit Management* 10 (3): 519–28.
- Marhaendra, Aditya Nur, and Heri Mahyuzar. 2023. "Analysis of the Influence of Perception of Convenience and Security Perception on Satisfaction in Dana E-Wallet Users in Kebumen." *Journal of Digital Business and Management* 2 (2): 84–90.
- Muwa, E P T, S Indah, and P Indrihastuti. 2024. "Perception of Usability, Convenience, and Trust in User Satisfaction on Digital Payment Instruments." *Journal of Accounting and Financial Studies* 2 (1): 9–15.
- Nizar, Arif Maulana, and Abdul Yusuf. 2022. "The Effect of Ease of Use and Trust Perception on Interest in Using the LinkAja Digital Wallet Application." *J-MAS (Journal of Management and Science)* 7 (2): 928–33.
- Nurhidayat, Maulana Furqon, Edi Komara, Whony Rofianto, and Santi Rimadias. 2024. "The Influence of Product Quality, Trust, Security, Price, Convenience, Promotion, on Consumer Satisfaction in Making Purchases on Shopee E-Commerce." *Journal of Accounting, Management and Islamic Economics* 2 (2): 595–608.
- Sadiah, Mahmudah, and Ahmad Suaib. 2025. "THE EFFECT OF SERVICE FEATURES, CONVENIENCE, AND SECURITY ON THE SATISFACTION OF DANA E-WALLET USERS IN THE PERSPECTIVE OF ISLAMIC ECONOMICS." *I'THISOM: Journal of Sharia Economics* 4 (1): 585–602.

- Samara, Aldi, and Metta Susanti. 2023. "The Effect of Ease of Use, User Experience, and Customer Satisfaction on Customer Loyalty on the Use of Digital Wallet Applications (E-Wallets) among Buddhi Dharma University Students." *Journal of Accounting Research* 1 (2): 249–60.
- Septiandini, Riska. 2024. "The Effect of Security Service Quality, Convenience, and Speed on Masalahah Mobile System on Customer Satisfaction of Bank BJB Syariah (Case Study of Bank BJB Syariah Branch Customers)." *S1 Sharia Banking IAIN Syekh Nurjati*.
- Setiawan, Angga, Bernadetta Maria, Farida Etik Endriyati, Muhammad Fuad Wijanarko, and Siti Marliya. 2022. "A Model of User Satisfaction of the Dana E-Wallet Application." *Journal of Citizenship* 6 (4): 6865–74.
- Shafira, Aulia Septiana, Aris Sunindyo, and Septian Yudha Kusuma. 2023. "The Influence of Convenience, Security, Benefits, and Trust on Customer Satisfaction in Using Brimo in Semarang City." *Scientific Journal of Research and Development Student* 1 (2): 62–74.
- Sujarweni, V Wiratna. 2015. "Business and Economic Research Methodology, 33. Yogyakarta: Pustaka Baru Press." *Service Management Triangle: Journal of Service Management* 3 (1).