

Evaluation of Octo Mobile User Experience using the System Usability Scale Method

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Abstract

In order to improve the quality of the Octo Mobile by Bank Cimb Niaga application, it is necessary to carry out usability testing of the application using the System Usability Scale (SUS) with a Likert scale for the answer. The purpose of this study is to evaluate usability and analyze user experience on the Octo Mobile application, so that it is expected to be used as a reference for application development by Bank CIMB Niaga. Respondents consisted of 39 Octo Mobile application users. Testing was carried out by directly interviewing respondents and filling out a questionnaire containing 10 statements. The results of testing with the SUS method obtained a result of 58.5%. Based on these results, the acceptability of the Octo Mobile application is in the marginal low range, the adjective rating is in the OK level, and the grade scale is in class F. Based on these results it can be concluded that the Octo Mobile application has usability that is acceptable to users, but still needs to be improved and further upgrades.

Keywords: mobile banking application; octo mobile; sus; system usability scale; user experience

INTRODUCTION

In this modern era, where the development of technology has become rapid, the need for information has become an important requirement that must be conveyed in real time. Mobile banking is a type of banking service that allows people to carry out financial transactions and access banking information using mobile devices such as smartphones or tablets without having to go to a bank or ATM (Investopedia, 2020). Users can log into their bank accounts, move funds between accounts, pay bills, buy products or services, and view transaction history (Forbes, 2023).

In this age of digitalization and increasing mobility, mobile banking offers a convenient and effective way to interact with banking services. Users can save time and effort by carrying out financial transactions on their mobile phones instead of visiting a bank branch or using an ATM. Mobile banking also expands access to banking services for people who live in remote places or in areas that are difficult to reach physically by bank branch offices (Asfour & Haddad, 2014).

Octo Mobile is a mobile banking application provided by CIMB Niaga Bank. This application is designed to provide convenience and comfort to users when carrying out various banking transactions via their smartphone. Through Octo Mobile, users can access banking services such as fund transfers, bill payments, credit purchases, and others (CIMB Niaga, 2021). This allows customers to manage and fulfill various financial needs on one integrated platform (Zhu & Wang, 2022). One of Octo Mobile's features is the ability to schedule automatic payments. This allows users to save time and effort by automating recurring payments such as utility bills or loan repayments (Bank for International Settlements, 2020).



Octo Mobile also provides transaction notifications, ensuring that consumers are always aware of their financial actions in real time. Users can receive notifications about successful transactions, balance updates, and other important account information.

Based on interviews with CIMB Niaga Bank IT, UI/UX research was used in the development of Octo Mobile. However, no review of the user experience was performed once this application was developed and implemented. Therefore, this research aims to evaluate the user experience of using the Octo Mobile application. Furthermore, this study took into account the application's review on the Playstore. Many people who use Octo Mobile think that this app needs to be improved (Google Playstore, 2023). Figure 1 shows the review and rating of the Octo Mobile application on the Playstore. It can be seen that Octo Mobile's rating is 3.4 stars out of 289K reviews.

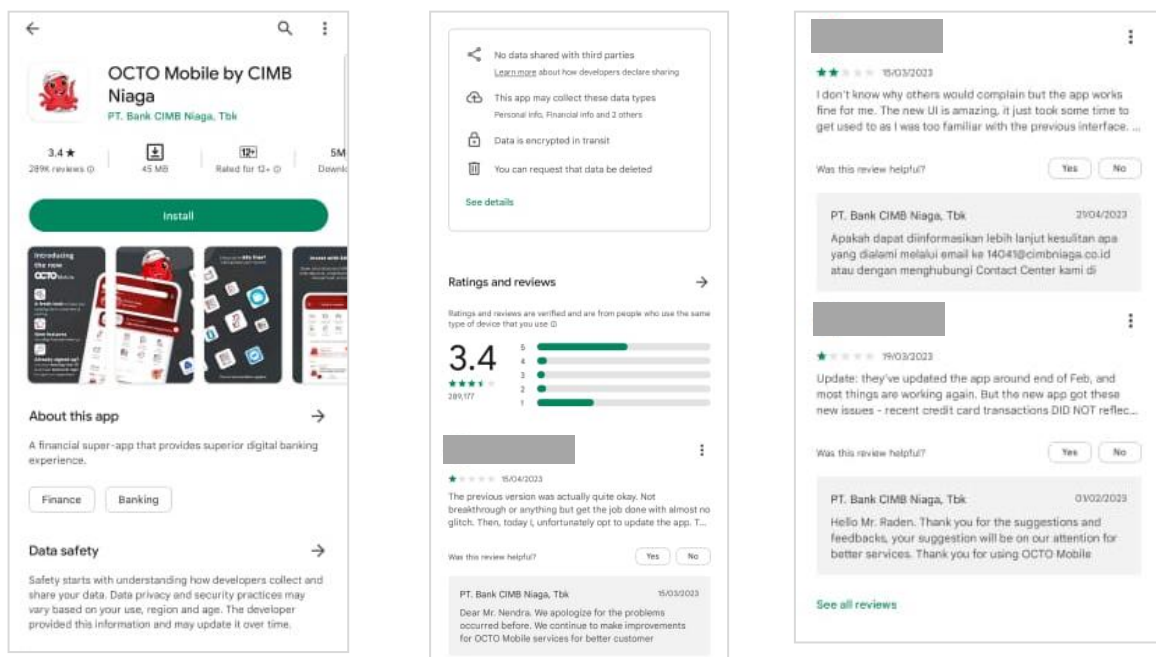


Figure 1. Octo mobile application on playstore

According to a poll performed by the Katadata Insight Center (KIC) titled "Consumer Attitude Towards Banking Super App", the Octo Mobile application is among the top 5 most popular banking applications in 2023. As shown in Figure 2, it is known that the Octo mobile application has been installed on user devices by 74.3% in the last 3 months (Katadata Insight Center, 2023). However, the popularity of the Octo Mobile application does not totally guarantee its quality; as many as 109,467 users as of May 7, 2023, rate the Octo Mobile application as 1 and 2 in the Google Play Store (Google Playstore, 2023). As a result, evaluation and improvement are required to raise the degree of user satisfaction. Satisfaction is the level of feeling that describes the comparison between the performance of the product or service received and the expectations that are owned, and is a feeling of satisfaction and pleasure (Rahmadani et al., 2022).

One of the crucial factors in application development is usability. Usability here refers to the extent to which an application is able to fulfill the tasks assigned by the user (Kaban et al., 2020). The higher the usability value of an application, the more it encourages users to continue using it. Conversely, if the level of usability is low, users will tend to be reluctant to use the application. In this study, the method chosen to measure the usability level of the Octo Mobile application is the System Usability Scale (SUS). This method was chosen because the research was conducted involving end users (Martoyo & Falahah, 2015). Research with the SUS method

places more emphasis on the user's point of view, so that the research results are more in line with what is being faced. SUS is a useful tool for evaluating user-centric designs and driving iterative changes (Roosdhani, 2022).

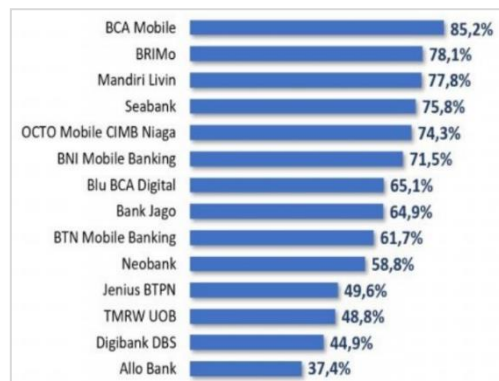


Figure 2. KIC survey results

The System Usability Scale (SUS) is a mechanism to determine the level of usability of a system or application. The SUS is a measurement tool that has proven effective in evaluating system usability. This technique consists of a series of statements that are intended to be judged by the user of the system. This statement addresses issues such as system complexity, simplicity of use, and interface clarity. Typically, SUS questionnaires cover many areas of usefulness, such as clarity of instructions, ease of learning and navigation, and overall satisfaction with the program (Dako & Ridwan, 2022). Researchers can obtain important information about app usability by gathering feedback from a representative sample of Octo Mobile users.

The findings in previous research indicate that the System Usability Scale (SUS) has good accuracy, so it is able to analyze the constraints that exist in mobile banking (Wibowo, 2020). Other studies that also used the SUS method were those conducted by Dako & Ridwan (2022), analyzed the Tesadaftif.Net application and obtained a final score of 75.97%. Then the SUS score in the Tesadaptif.Net application research is applied to acceptability with the results "Acceptable", grade "B" on the grade scale and rating "Good" on adjective ratings (Dako & Ridwan, 2022). In tesadaptif.net research, the only conclusion is in the form of data analysis of SUS results. whereas in the research that is currently being carried out, the researcher does not only analyze the results of the data, but the researcher also explores the reasons why Octo Mobile users fill in certain scores so that the problems experienced by Octo Mobile users can be immediately identified.

The purpose is to evaluate usability and analyze the user experience of the Octo Mobile application. So that we can determine the application's level of usability. Furthermore, based on user interviews, it can be observed which sections of this application need to be repaired and enhanced so that it may be an input for Bank CIMB Niaga's IT to take the next steps.

METHOD

This research uses the SUS method and interviews. Respondents were users of CIMB Niaga Bank. The SUS questionnaire uses a Likert scale with five possible answers. These options range from "strongly agree" (scale 5) to "strongly disagree" (scale 1), allowing respondents to express how strongly they agree or disagree with each statement. The Likert scale provides a standard format for data collection and allows researchers to measure user perceptions. Respondents must answer all questions of the SUS questionnaire to provide comprehensive feedback. If the respondent is not sure about his or her response to a particular statement, they can choose "Undecided" (Scale 3) as their doubt indicator. Participants are

encouraged to submit meaningful and accurate replies based on their true opinion of the usefulness of the system using this approach (Joshi et al., 2015). SUS provides insight into system intuition, learnability, and general user experience by observing user activity in this way (Nielsen Norman Group, 2023). Standardized questionnaires promote uniformity across evaluations, enabling valid comparisons between different systems or iterations of the same system (Lima, 2021).

A series of carefully crafted questions designed for respondents to assess the usability and user satisfaction of the OCTO Mobile application. This questionnaire seeks to gather useful information about user experiences and perceptions of the program. Table 1 contains a list of questions used to get feedback from the participants. Each topic relates to a different area of usability, interface, functionality and user assistance. The feedback provided by the respondents will help in analyzing the strengths and areas of developing the OCTO Mobile application.

Table 1. Statements on the SUS questionnaire

No.	Questions	1	2	3	4	5
1	I find it easy to use the Octo Mobile.					
2	I often encounter difficulties in using the Octo Mobile.					
3	I find the interface of the Octo Mobile to be user friendly.					
4	How often do you experience difficulties when using the Octo Mobile.					
5	I feel that the features in the Octo Mobile are adequate.					
6	I feel that there are still banging related needs that are not met in the Octo Mobile.					
7	I feel that the features in the Octo Mobile work properly.					
8	I feel less familiar with the interface and flow of the Octo Mobile.					
9	I found this application to be very beneficial for me.					
10	I need assistance when using the Octo Mobile.					

Table 1 contains 5 positive statements and 5 negative statements. Statements with odd numbers (1, 3, 5, 7, and 9) are positive statements and even-numbered statements (2, 4, 6, 8, and 10) are negative statements. Then the 10 statements were given to respondents who were randomly selected and must have an active account on the Octo Mobile application. Furthermore, the researcher, accompanied by one of the bank employees to conduct research. The researcher asked the participants to fill out the SUS questionnaire, which contained statements about the utility and usability of the application. Respondents will assess these questionnaire statements using a predetermined rating scale (Zhou et al., 2019). Interviews were performed to delve deeper into the constraints that respondents felt when using Octo Mobile.

After the data is collected, it must be checked and calculated. Based on the participant's perception, the SUS score will indicate the utility or usability of Octo Mobile. The SUS score is determined using Formula 1. Statements with odd numbers are positive statements, calculated by [the scale selected by the respondent] minus 1. Meanwhile, even-numbered statements are negative statements, calculated by 5 minus [the scale selected by the respondent]. Furthermore, the sum of all the scores in the ten numbers is then multiplied by 2.5 to obtain the final value of SUS (Nuriman & Mayesti, 2020).

The final SUS score was calculated as the average of the overall SUS scores obtained from each respondent. The final SUS score is divided into some categories: Acceptability Range, Adjective Ratings, and Grade Scale, as shown in Figure 3 (Sasmito et al., 2019).

$$\begin{aligned}
 SUS\ score = & ((R1 - 1) + (5 - R2) + (R3 - 1) + (5 - R4) \\
 & + (R5 - 1) + (5 - R6) + (R7 - 1) + (5 - R8) + (R9 - 1) \\
 & + (5 - R10)) * 2.5
 \end{aligned}
 \tag{1}$$

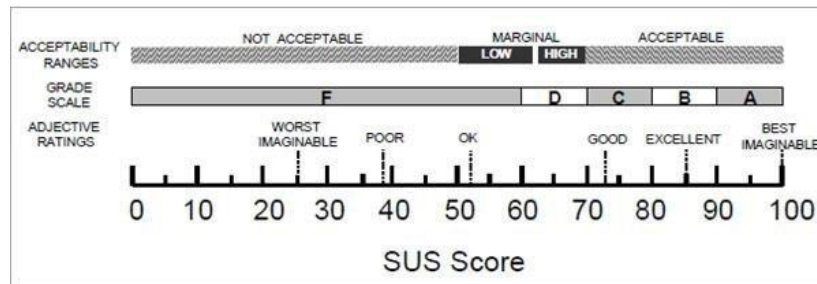


Figure 3. SUS score category (Ependi et al., 2019).

RESULTS AND DISCUSSION

Results

Table 2. SUS score of octo mobile

<i>Respondents</i>	<i>Age</i>	<i>Gender</i>	<i>SUS Score</i>	<i>Respondents</i>	<i>Age</i>	<i>Gender</i>	<i>SUS Score</i>
1	21	Male	50	21	29	Male	50
2	22	F	52.5	22	32	F	60
3	23	F	57.5	23	43	Male	62.5
4	35	Male	67.5	24	37	F	55
5	26	F	57.5	25	40	F	50
6	27	F	57.5	26	34	Male	52.5
7	31	Male	55	27	52	Male	50
8	34	Male	52.5	28	30	F	57.5
9	25	Male	72.5	29	54	Male	55
10	37	Male	62.5	30	35	F	55
11	25	F	67.5	31	28	F	50
12	42	F	70	32	26	F	47.5
13	29	F	72.5	33	33	Male	55
14	40	Male	67.5	34	23	Male	50
15	28	Male	60	35	24	F	57.5
16	28	Male	67.5	36	53	F	52.5
17	43	F	65	37	42	Male	70
18	34	F	47.5	38	25	Male	55
19	26	Male	50	39	42	Male	57.5
20	28	Male	67.5				
Average Score (SUS Octo Mobile Final Score)							58.5

The survey was conducted randomly among Octo Mobile users and obtained 39 respondents with various characteristics, including age, gender, and answers to the ten SUS statements. The purpose of this survey is to see Octo Mobile from the user's point of view, including their experiences and pain points. The results of the SUS calculation are shown in table 2.

SUS questionnaire data was examined quantitatively to provide a usability score. This score measures the overall usability of the system and serves as a basis for comparison with other systems or industry benchmarks. Individual responses to each sentence can also be evaluated to find specific areas of strength or weakness. This important feedback allows designers and developers to prioritize improvements and address usability issues efficiently addressing usability issues (Amrehn et al., 2019).

Based on table 2, it can be seen that the final SUS score of the Octo Mobile application is 58.5. As shown in Figure 4, this score is included in the LOW MARGINAL category according to the Acceptability Range; the grade scale is in class F; and the adjective rating is in the OK level.

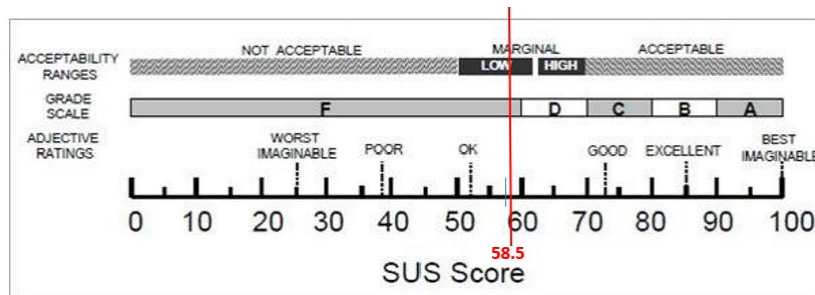


Figure 4. SUS score of octo mobile (acceptability, adjective, grade scale)

In addition to asking the SUS questionnaire, the researcher also explored the reasons for Octo Mobile users filling in a certain score so that the problems experienced by Octo Mobile users could be directly identified. Complaints from Octo Mobile users are listed in table 3. In table 3 there are 12 problems points from several Octo Mobile users, 12 problem were submitted directly by the user when filling out the SUS questionnaire. The results of SUS, conclusions of SUS (discussed in the Discussion section), and recapitulation of customer complaints were conveyed by researchers to the bank for follow-up.

Table 3. Issues and challenges faced by respondents

<i>Number</i>	<i>Problems</i>	<i>Total</i>
1	Login Error	7 Users
2	Long Loading Process	10 Users
3	OTP Not Received	6 Users
4	No BI-Fast Feature	4 Users
5	Automatic Logout	2 Users
6	Delayed Notification Delivery	2 Users
7	Language Change Feature	1 User
8	Signal Issues	1 User
9	Incomplete Transaction History	1 User
10	No Shopee Top-up Feature	2 Users
11	No KAI payment feature	2 Users
12	Overcrowded Interface	2 Users
13	No ProblemsYet	7 Users

Discussion

The survey results were addressed to 39 respondents with varying characteristics such as age, gender, and scores on 10 items. According to the data, the ages of the respondents varied from 21 to 54 years. Most of the respondents were between 25 and 35 years old. In terms of

gender, there was a balanced trend in this poll between male and female, with 19 male respondents and 20 female respondents with a final total SUS of 58.5.

Based on the SUS research data, the majority of respondents are aged between 21 and 40 years. The mean responses to each question showed no statistically significant variation across age groups. However, because the older age group (41-60 years) has a small number of respondents, these data may not reflect the general experience of that age group. Overall, the mean score findings indicate that various age groups of users rate the OCTO Mobile application positively.

There is some variation in the responses given in this survey. Some questions received high scores from the majority of respondents, while others scored more evenly. The majority of respondents gave a relatively high rating on questions 1 to 6, indicating that they might be satisfied or agree with the topics mentioned in the questions. However, there is greater variation in the scores given for questions seven through ten, indicating a difference in opinion or perception among respondents.

The final SUS score of the Octo Mobile application is 58.5%, this score was obtained from direct interviews with Octo Mobile application users and filling out the SUS questionnaire. This score is included in the MARGINAL LOW category according to the Acceptability Range; the score appears to be within the acceptable range. However, based on the SUS score, additional investigations will be needed to find out the specific strengths and limitations of the Octo Mobile application. According to the Grade Scale, the Octo Mobile application is in rank F, with the rating scale starting from F (lowest) to A (highest). The impact of this SUS score is that users face difficulties or inconveniences when using the Octo Mobile application.

Based on this research, it was also found that there are obstacles faced by Octo Mobile users. Details regarding these obstacles can be found in Table 3. The most common obstacle experienced was the long loading process, this problem reached 10 users. There are 7 users with login error problems, 6 users with unsent OTP codes, 4 users with no BI-Fast feature, 2 users with no auto logout feature, 2 users with late entry notifications, no topup feature problem shopee has 2 users, there is no KAI payment feature there are 2 users, the display problem is too crowded there are 2 users, the problem is there is no language change feature 1 user and the last obstacle is that a user has an incomplete transaction history problem.

The results of this study have different data with the findings of previous studies conducted by (Wibowo, 2020; Dako & Ridwan, 2022). Findings from research of Wibowo (2020) is the result of the System Usability Scale (SUS) method on a mobile banking called Mandiri Online with the final score using the SUS method of 79.6%, while the current research is the result of the SUS method from a different mobile banking application. The mobile banking application that was studied at this time was Octo mobile with a final SUS score of 58.5%, which is lower than the final SUS score on the Mandiri Online application. This has an impact on the satisfaction of Octo Mobile users who feel that there are still shortcomings compared to the Mandiri Online application. Table 3 contains 12 problems from Octo Mobile users which can be used as material for evaluation by Bank Cimb Niaga so that improvements can be made. The fixes for these 12 problems had a positive impact on Octo Mobile users as well as on the part of Bank Cimb Niaga. The positive impact of fixing this problem can increase user satisfaction so that these users can recommend other people to use the Octo Mobile application and Bank Cimb Niaga can get bigger profits because the number of customers continues to increase.

CONCLUSION

Based on the measurement results using the SUS questionnaire with 39 respondents, the final score was 58.5. According to the interpretation of the SUS score, this figure is included

in the moderate “MARGINAL” acceptable category. When viewed from the grade scale, Octo mobile is in the grade “F” category with an “OK” adjective rating. This research also finds the constraints faced by Octo Mobile users. With the results of this Octo Mobile user experience research, it is hoped that related parties can consider it as a reference for making improvements to the application.

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