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Assessing User Experience and Usability in the OVO Application: Utilizing the User Experience Questionnaire and System Usability Scale for Evaluation

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Our decision is: Revisions Required

Dr. Ir. Yuhefizar, S.Kom., M.Kom., IPM  
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**Abstract**

Advances in technology in the payment system have changed the role of cash used by the public to become more effective and efficient in non-cash payments. OVO has one of the largest user bases in Indonesia. However, the OVO application has the lowest rating compared to other digital wallet applications on Google Play Store and App Store. OVO receives numerous negative reviews on both Google Play Store and App Store. One of the common complaints expressed by users pertains to the user experience of the OVO application, which significantly affects their overall experience with the app. This study aims to evaluate the user experience of the OVO application using the User Experience Questionnaire and measuring usability using the System Usability Scale. The results of the benchmark six aspects of UEQ show that one aspect is included in the excellent category: efficiency (1.35). Then four aspects fall into the above-average category, namely the attractiveness aspect (1.56), the perspicuity aspect (1.67), the dependability aspect (1.33), and the stimulation aspect (1.16). However, one aspect is included in the below-average category, namely the novelty aspect (0.64), which needs improvement. Then the result of the SUS value obtained is 77.53, meaning that the Acceptability Range category was "Acceptable", the Grade Scale category was "C", and the Adjective Rating category was "Good". Overall, the evaluation results show that OVO applications are acceptable for digital wallet applications.

**Keywords:** digital wallet, user experience, usability, user experience questionnaire, system usability scale

**1. Introduction**

Today's modern transactions continue to shift from cash-based transactions to electronic-based transactions. Equal connectivity through Information and Communication Technology (ICT) has contributed significantly to the market transformation of their financial and operational businesses. The trend towards digitization and internet use has brought about significant changes in how the global economy operates. The emergence of various financial technology (FinTech) applications is enabling consumers to go beyond conventional cash-based payment systems. Digital payments are becoming the norm in people's daily lives. This rapid development in the financial sector led to the invention of many digital payment technologies, where payers and payees use digital applications to send and receive money. As such, payment systems are rapidly changing from coin and globally. In 2022, the growth of non-cash transactions was estimated to reach 1,045 billion USD, with the highest growth in developing countries in Asia and the Middle East [2]. Digital wallets are now necessary for people to carry out their activities and meet their needs [3][4]. This positive trend must be followed by good user experience and application usability [5]. E-Wallet is an electronic service that functions to store data and as a payment instrument. In principle, E-Wallet is similar to mobile banking or Internet banking services, but the depositor does not use a bank but a digital wallet. E-wallet applications in Indonesia include OVO, Dana, GoPay, ShopeePay, Jenius, LinkAja, and others [6]. OVO is an electronic wallet application in Indonesia that users have used since 2016. OVO offers easy payments for phone credit, data packages and insurance. Nevertheless, OVO got some negative reviews on Google Play and App Store. One of the

Author: clear identification of the research gaps your study intends to fill, a brief but comprehensive overview of your research design, and a more in-depth discussion of the practical implications. Reply

Author: The introduction to your article presents a detailed overview of the shift from cash-based transactions to electronic transactions and the significance of digital wallets in modern. Reply

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**Competitive Programming Learning using User Experience Questionnaire and System Usability Scale**. In this study, the measurement results were obtained on 6 UEQ scales, namely the attractiveness scale (1.27), perspicuity (0.85), efficiency (1.12), dependability (1.13), stimulation (1.35) and novelty (0.81). All scales get positive impressions, the SUS score is 75 [8].

Furthermore, research was conducted by Nina Setiyawati and Dwi Hosanna Bangkalang entitled "The Comparison of Evaluation on User Experience and Usability of Mobile Banking Applications Using User Experience Questionnaire and System Usability Scale". In this study, the 6 UEQ scale measurements on four mobile banking applications received a positive impression on each scale except for BNI Mobile (Efficiency and Novelty) and Livi (Novelty), which received a neutral impression. SUS scores were obtained for the four mobile banking applications, namely BCA Mobile (72.76), Octo Mobile (71.47), BNI Mobile (71.49), and Livi (72.4) [5].

This study aims to evaluate the user experience and measure the usability of the OVO application. The user experience in the OVO application is evaluated using a user experience questionnaire by analyzing six scales or aspects, namely attractiveness, perspicuity, dependability, efficiency, stimulation, and novelty [9][10]. Meanwhile, to measure usability in the OVO application, the system usability scale is used by analyzing three categories: acceptability ranges, grade scales, and adjective ratings [11][12].

**2. Research Methods**

This study aims to assess and quantify the user experience and usability of the OVO application by employing the User Experience Questionnaire (UEQ) and System Usability Scale (SUS). The research methodology and process are illustrated in Figure 1.

**A. Research Design**

The research design is evaluative and descriptive, which aims to measure and explain the success of a particular product, program or activity so that conclusions can be drawn about its feasibility, relevance, effectiveness and efficiency.

**B. Research Process**

The research framework used as a reference in the research to be carried out is shown in Figure 1.

```

graph TD
    Start((Start)) --> Sampling[Sampling techniques]
    Sampling --> DataCollection[Data Collection]
    DataCollection --> DataAnalysis[Data Analysis]
    DataAnalysis --> Conclusion[Conclusion]
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**User Experience Questionnaire** is a questionnaire that provides an overview of the level of user satisfaction based on user experience. The User Experience Questionnaire has six scales with 26 statements. This scale includes attractiveness, perspicuity, dependability, efficiency, stimulation, and novelty. The user experience questionnaire has been tested in several cases to provide an overview of user satisfaction. It usually takes 3-5 minutes to read and complete the user experience questionnaire. One of the other advantages of the user experience questionnaire is the free availability of this questionnaire which is available in the Indonesian language version. User experience questionnaire data analysis was carried out using the

**Figure 1 Research Process**

Figure 1 menjelaskan bahwa alur penelitian dimulai dengan teknik pengambilan sampel dan berakhir dengan penentuan kesimpulan. Informasi rinci tentang setiap kegiatan penelitian akan disajikan dalam sub bab pembahasan selanjutnya.

**C. Sampling Technique**

This stage aims to determine the sample and sampling technique used during the study. The population that is the focus of this research are those who use the OVO application. This study uses the Lemeshow formula to determine the number of samples with an unknown

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Author: Please expand a bit more on why you chose the Purposive Sampling method specifically and how it benefits the study. An explanation on how you ensure a wide and representative demographic range within your sample, especially given the non-probability nature of the sampling, would be beneficial. This could be crucial in increasing the generalizability and relevance of your findings, especially when considering the diverse user base of the OVO application. Reply

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population [16]. Through the Lemeshow formula, the number of samples to be taken is at least 100 respondents. The sampling technique used in this study is Non-Probability Sampling, namely Purposive Sampling, a sampling technique selected based on specific criteria that the researcher wants. The criteria used in this study are as follows:

The product should be innovative, inventive, and creatively designed.  
The components of the UEQ questions based on the aspects assessed are shown in Table 1.

**Table 1. UEQ Testing Instruments**

a. OVO application users.	Scale	Indicator	Item
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Scale Indicator Item

	Inconvenient	Enjoyable	ATT1
	Good	Bad	ATT2
	Dislike	Gratifying	ATT3
	Uncomfortable	Comfortable	ATT4
Attractiveness	Unattractive	Unattractive	ATT5
	User-friendly	User-unfriendly	ATT6
	Not understood	Understandable	PER1
Perspicuity	Complicated	Simple	PER2
	Clear	Confusing	PER3
	Fat	Slow	EFF1
Efficiency	Inefficient	Efficient	EFF2
	Impractical	Rational	EFF3
	Organized	Disorganized	EFF4
	Unpredictable	Predictable	DEP1
Dependability	Obstruct	Supportive	DEP2
	Safe	Unsafe	DEP3
	Meet expectations	Not meeting expectations	DEP4
	Beneficial	Less beneficial	STI1
Stimulation	Tedious	Engaging	STI2
	Unappealing	Interesting	STI3
	Motivational	Unmotivating	STI4
	Creative	Monotonous	NOV1
Novelty	Innovative	Conventional	NOV2
	Commonplace	Leading-edge	NOV3
	Conservative	Innovative	NOV4

**D. Data Collection**

At this stage, data collection was carried out from predetermined respondents. In this study, the instrument used was a questionnaire. The questionnaire will include questions about the respondent's identity, the general use of the OVO application, 26 user experience questionnaire statements, and ten system usability scale statements. At this stage, the questionnaire will be distributed indirectly or online. To OVO application users, questionnaires will be distributed via social media such as WhatsApp, Telegram, Twitter and Instagram. Questionnaires will be created and filled out using Google Forms. The dissemination was done from 9 February 2023 to 16 March 2023. The samples obtained during the deployment were 166 respondents, but 11 were not users of the OVO application, so the remaining 155 respondents.

The user experience questionnaire consists of 6 scales divided into 26 indicator questions, as shown in Table 1. The user experience questionnaire uses a 7-point semantic differential scale. Respondents were asked to assess from 1 to 7 on 26 UEQ indicator items according to their subjective assessment. The User Experience Questionnaire (UEQ) is used to measure user experience consisting of 26 question components covering aspects [17].

a. Attractiveness  
The product should look attractive, enjoyable, friendly, and pleasant.

b. Efficiency  
I should perform my tasks with the product fast.

The system usability scale questionnaire consists of 10 statements, as shown in Table 2. The system usability scale questionnaire uses a 5-point Likert scale. Respondents were asked to provide an assessment of "Strongly Disagree", "Disagree", "Neutral", "Agree", and "Strongly Agree" on the 10 SUS statements according to their subjective assessment. The System Usability Scale (SUS) measures the usability attributes of the OVO application, namely aspects of effectiveness, efficiency, satisfaction, satisfaction, easy to learn, ease to remember and few errors. SUS gives an overall score between 0 and 100. The SUS half section (odd statements, i.e. 1, 3, 5, 7, and 9) describes a positive evaluation (items with positive polarity). The other half of the sections (even statements, i.e. 2, 4, 6,

Author  
A mention of how you addressed any potential bias, particularly response and non-response bias common in online surveys, would make the methodology more robust. An explanation of how you handled incomplete or inappropriate responses would add depth to your data collection process and increase the validity of your study.

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Table 3. UEQ Mean Rating Scale

Mean Value Range	Explanation
> 0.8	Positive Evaluation
-0.8 - 0.8	Neutral Evaluation
< -0.8	Negative Evaluation

If the mean value of an item is more significant than 0.8, then the item will enter into the positive evaluation category and, in the diagram, is in the green area. If the mean value of an item is between -0.8 to 0.8, then the item will fall into the normal or neutral evaluation category and, in the diagram, is in the yellow area. Meanwhile, if the mean value of an item is less than -0.8, then the item will enter into the negative evaluation category and, in the diagram, it is in the red area.

Then several rules must be considered when calculating scores on questionnaire data using SUS:

a. For every odd-numbered question (1, 3, 5, 7, 9), the score obtained from user responses will be reduced by 1.

$$\text{odd weight} = xi - 1 \quad (1)$$

b. Each even-numbered question (2, 4, 6, 8, 10) will have its final score calculated by subtracting the user's score from 5.

$$\text{even weight} = 5 - xi \quad (2)$$

c. The SUS score is obtained by summing up the scores of each question and then multiplying it by 2.5.

$$\text{SUS Score} = (\text{odd weight} + \text{even weight}) \times 2.5 \quad (3)$$

d. The scoring rules mentioned above apply to one respondent. For multiple respondents, the SUS

**E. Data Analysis**

At this stage, data inconsistencies analysis, quantitative data analysis, demographic analysis, and descriptive statistical analysis of the data that has been obtained are carried out. The data obtained will be processed using IBM SPSS Statistics 25, UEQ Data Analysis Tool, and Microsoft Excel.

In analyzing data inconsistencies using the UEQ Data Analysis Tool Version 12. At this stage, the seriousness of the respondents was tested in answering the questionnaire and detecting suspicious data. If the critical value is  $\geq 2$  and the critical length value is  $> 15$ , this indicates an error in filling out the questionnaire, and it is better to delete the data.

In the analysis of quantitative data, a validity test and a reliability test will be carried out on the data that has been obtained. The validity test was carried out by looking at the Pearson correlation value of each indicator for each variable. In contrast, the reliability test was carried out by looking at Cronbach's alpha ( $\alpha$ ) value of each research variable.

In the analysis of demographic data, respondent data will be grouped based on gender, age, duration of use, and frequency of use. The data will then be represented as a chart or graph.

In the descriptive statistical analysis using UEQ Data Analysis Tool Version 12 and Microsoft Excel. The data presented in this descriptive statistical test shows data that can be seen from the mean, which is the average value of each measured scale; the maximum

Author  
A brief discussion on how you mitigated any potential errors or bias in your data analysis, and how you handled any outliers or missing data, would make this section more robust.

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the average SUS score.

$$\bar{x} = \frac{\sum x}{n} \quad (4)$$

$\bar{x}$  represents the average SUS score,  $\sum x$  denotes the sum of the SUS scores, and  $n$  indicates the number of respondents.

**3. Results and Discussions**

**A. Analysis of Data Inconsistencies**

The analysis of inconsistencies in the data is conducted using UEQ Data Analysis Tools Version 12.

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specifically on the Inconsistencies tab. Inconsistencies are utilized to assess respondents' seriousness in answering the questionnaire, determining whether they responded haphazardly or without seriousness, and detecting suspicious data. If the critical value is more significant than two and the critical length exceeds 15, it indicates errors in completing the questionnaire, and it is recommended to remove such data.

Table 4. Inconsistencies Data

Item	Value	Description
EFF1	0.645	Valid
EFF2	0.713	Valid
EFF3	0.578	Valid
EFF4	0.660	Valid

Table 6 shows that all items in the perspicuity scale are considered valid as the calculated  $r$  values are more significant than the tabulated  $r$  value.

Table 7. Validity test of the efficiency scale

Item	The calculated $r$ value	The tabulated $r$ value	Description
EFF1	0.645	0.361	Valid
EFF2	0.713	0.361	Valid
EFF3	0.578	0.361	Valid
EFF4	0.660	0.361	Valid

Author  
The approach of analyzing data inconsistencies using the UEQ Data Analysis Tools Version 12 is a valuable step that ensures the reliability of the responses. By setting critical value parameters, you enhance the credibility of your results, filtering out potentially careless or inattentive responses. This rigorous step adds to the methodological strength of your study, emphasizing the importance of accurate, thoughtful input from respondents for reliable, insightful conclusions.

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Figure 5. SUS Score Value [20]

Table 25 and Figure 5 summarize SUS score calculations from the questionnaires distributed to 148 respondents, resulting in an average or mean score of 77.53 according to the System Usability Scale (SUS) method.

After obtaining the SUS score, the next step is interpreting the results. There are three perspectives to determine the interpretation of the SUS score calculations:

- Acceptability

Acceptability ranges consist of three levels: not acceptable, marginal (low and high), and acceptable. Acceptability is used to assess the level of user acceptance of the application.

Figure 6. Acceptability Ranges

In the calculation of the SUS score, the previously obtained score was 77.53, indicating that the user acceptance level of the OVO application is categorized as "ACCEPTABLE".

- Grade

The grade scale consists of A, B, C, D, and F, which are used to determine the grade level of the application.

application.

Figure 8. Adjective Ratings

In the calculation of the SUS score, the previously obtained score was 77.53, indicating that the OVO application falls under the "GOOD" category.

E. Improvement Recommendations

Based on the evaluation of user experience conducted using the User Experience Questionnaire (UEQ) method, processed using UEQ Data Analysis Tool Version 12, the following recommendations can be given for the OVO application:

- Provide more innovative, cutting-edge and creative services or features in the OVO application, such as adopting new and innovative features that align with the current trends. It will help improve novelty, ensuring the application stays up-to-date and provides a unique user experience.
- Offer more engaging services or features in the OVO application, such as incorporating gamification elements to earn OVO Points or adding captivating animations and enjoyable sound effects. It will enhance the stimulation aspect, making the user experience more enjoyable and interactive.

4. Conclusion

The user experience and usability evaluation using the

Author

Overall, these recommendations are well-considered and likely to effectively address the issues identified in the user experience evaluation.

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In the calculation of the SUS score, the previously obtained score was 77.53, indicating that the user acceptance level of the OVO application is categorized as "ACCEPTABLE".

- Grade

The grade scale consists of A, B, C, D, and F, which are used to determine the grade level of the application.

among captivating animations and enjoyable sound effects. It will enhance the stimulation aspect, making the user experience more enjoyable and interactive.

4. Conclusion

The user experience and usability evaluation using the User Experience Questionnaire (UEQ) and System Usability Scale (SUS) has been successfully conducted, involving 148 competent respondents who assessed the

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application based on gender, age, duration of usage, and frequency of usage. The benchmark results for the six aspects of UEQ show that one aspect, efficiency, falls into the "good" category with a mean value of 1.55. Additionally, four aspects, namely attractiveness (mean: 1.56), perspicuity (mean: 1.67), dependability (mean: 1.33), and stimulation (mean: 1.16), are classified as "above average" categories. However, one aspect, novelty, falls into the "below average" category with a mean value of 0.64. Regarding the measurement of OVO application usability using the System Usability Scale (SUS) method, the obtained score is

[8] G. E. Saputra, Rakhmi Khalida, and Ratu Nurmatika, "Evaluation of User Experience TEX Training Gate for Competitive Programming Learning Using User Experience Questionnaire and System Usability Scale," *Int. J. Sci. Technol.*, vol. 1, no. 2, pp. 30-37, 2022, doi: 10.36127/ijst.v1i2.142.

[9] B. Langwitz, T. Held, and M. Schrepp, "Construction and Evaluation of a User Experience Questionnaire," *HCI Usability Educ. Work.*, vol. 5298, pp. 63-76, 2008, doi: 10.1007/978-3-540-89350-9\_6.

[10] H. B. Santoso, M. Schrepp, R. Yugo Kartono Isat, A. Y. Utomo, and B. Priyogi, "Measuring user experience of the student-centered e-learning environment," *J. Educ. Online*, vol. 13, no. 1, pp. 1-79, 2016.

Author

It might be helpful to restate the research objective at the beginning of the conclusion section to immediately remind readers of what the study sought to achieve, thus making it easier for them to assess whether or not the research objectives were met.

It would be also beneficial to end the conclusion with a general summary statement reflecting the overall performance of the OVO application based on the research findings, creating a more rounded conclusion.

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## Assessing User Experience and Usability in the OVO Application: Utilizing the User Experience Questionnaire and System Usability Scale for Evaluation

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\*Corresponding author

### Abstract

The OVO application, despite having a large user base in Indonesia, has received low ratings compared to other digital wallet apps on the Google Play Store and App Store. Users frequently complain about the user experience, which greatly affects their overall satisfaction. This study evaluates the user experience and usability of the OVO application using the User Experience Questionnaire (UEQ) and System Usability Scale (SUS). The UEQ results show that efficiency is excellent (1.55), while attractiveness, perceptivity, dependability, and stimulation are above average (1.56, 1.67, 1.33, and 1.16, respectively). However, the novelty aspect falls below average (0.64), indicating a need for improvement. The SUS score is 77.53, classifying the app as "Acceptable" with a "C" grade and an overall "Good" rating. Addressing the identified shortcomings can enhance the user experience and usability, ultimately improving user satisfaction. This study contributes valuable empirical data to the field, offering insights for researchers and practitioners in assessing the user experience and usability of mobile applications. The OVO application, despite having a large user base in Indonesia, has received low ratings compared to other digital wallet apps on Google Play Store and App Store. Users frequently complain about the user experience, which greatly affects their overall satisfaction. This study evaluates the user experience and usability of the OVO application using the User Experience Questionnaire (UEQ) and System Usability Scale (SUS). The UEQ results show that efficiency is excellent (1.55), while attractiveness, perceptivity, dependability, and stimulation are above average (1.56, 1.67, 1.33, and 1.16, respectively). However, the novelty aspect falls below average (0.64), indicating a need for improvement. The SUS score is 77.53, classifying the app as "Acceptable" with a "C" grade and an overall "Good" rating. Addressing the identified shortcomings can enhance the user experience and usability, ultimately improving user satisfaction. This study contributes valuable empirical data to the field, offering insights for researchers and practitioners in assessing user experience and usability of mobile applications. Advances in technology in the payment system have changed the role of each used by the public to become more effective and efficient in non-cash payments. OVO has one of the largest user bases in Indonesia. However, the OVO application has the lowest rating compared to other digital wallet applications on Google Play Store and App Store. OVO receives numerous negative reviews on both Google Play Store and App Store. One of the common complaints expressed by users pertains to the user experience of the OVO application, which significantly affects their overall experience with the app. This study aims to evaluate the user experience of the OVO application using the User Experience Questionnaire and measuring usability using the System Usability Scale. The results of the benchmark six aspects of UEQ show that one aspect is included in the excellent category: efficiency (1.55). Then four aspects fall into the above average category: namely the attractiveness aspect (1.56), the perceptivity aspect (1.67), the dependability aspect (1.33), and the stimulation aspect (1.16). However, one aspect is included in the below average category, namely the novelty aspect (0.64), which needs improvement. Then the result of the SUS value obtained is 77.53, meaning that the Acceptability Range category was "Acceptable", the Grade Scale category was "C", and the Adjective Rating category was "Good". Overall, the evaluation results show that OVO applications are acceptable for digital wallet applications.

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1. Introduction  
[Today's modern transactions continue to shift from cash-based transactions to electronic-based transactions. Equal connectedness through Information and Communication Technology (ICT) has contributed significantly to the market transformation of their financial and operational businesses. The trend towards digitization and internet use has brought about significant changes in how the global economy operates. The emergence of various financial technology (FinTech) applications is enabling consumers to go beyond conventional cash-based payment systems. Digital payments are becoming the norm in people's daily lives. This rapid development in the financial sector led to the invention of many digital payment technologies, where payers and payees use digital applications to send and receive money. As such, payment systems are rapidly changing from coin and paper-based cash to convenient, fast and cost-effective forms of digital payments [1]. The development of non-cash transactions is expected to increase yearly globally. In 2022, the growth of non-cash transactions was estimated to reach 1,045.5 billion USD, with the highest growth in developing countries in Asia and the Middle East [2]. Digital wallets are now necessary for people to carry out their activities and meet their needs [3][4]. This positive trend must be followed by good user experience and application usability [5]. E-Wallet is an electronic service that functions to store data and as a payment instrument. In principle, E-Wallet is similar to mobile banking or internet banking services, but the depositor does not use a bank but a digital wallet. E-wallet applications in Indonesia include OVO, Dana, GoRey, ShopeePay, Jentis, LinkAja, and others [6]. OVO is an electronic wallet application in Indonesia that users have used since 2016. OVO offers easy payments for phone credit, data packages and insurance. Nevertheless, OVO got some negative reviews on Google Play and App Store. One of the negative reviews that users feel about the OVO application is a user experience problem which causes the application's user experience to work better than the user expects. Some users complained that the OVO application response process was slow and that the payment process using OVO took too long for them. Negative reviews on OVO have significant implications for its overall performance and user engagement. They can harm OVO's reputation, deter potential users, decrease user engagement and retention, impact competitiveness, and damage the brand's image. Addressing these negative reviews is crucial for OVO's success in the digital payment industry. Negative reviews on OVO have significant implications for its overall performance and user engagement. They can harm OVO's reputation, deter potential users, decrease user engagement and retention, impact competitiveness, and damage the brand's image. Addressing these negative reviews is crucial for OVO's success in the digital payment industry. Negative reviews on OVO have significant implications for its overall performance and user engagement. They can harm OVO's reputation, deter potential users, decrease user engagement and retention, impact competitiveness, and damage the brand's image. Addressing these negative reviews is crucial for OVO's success in the digital payment industry.]

Research using the user experience questionnaire method and system usability scale was conducted by Gunur Eka Saputra, Rakhma Khalida, and Fari Nurmalika from Gusadajana University entitled "Evaluation of User Experience TLX Training Gate for Community Programme Learning with User

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Author  
The introduction to your article presents a detailed overview of the shift from cash-based transactions to electronic transactions and the significance of digital wallets in modern economies. You effectively established the importance of your research in the context of Indonesia's popular OVO app, and adequately highlighted the existing negative reviews regarding the app's user experience. The review of past studies employing similar methodologies to evaluate other applications lends additional credibility to your research approach. Good job!

However, there are areas for improvement. Firstly, you could further elaborate on the implications of these negative reviews on OVO's overall performance and user engagement. This would provide a compelling argument for why it's crucial to study the user experience and usability of the OVO app in particular. Secondly, a more in-depth exploration of the user

6 UEQ scales, namely the attractiveness scale (1.27), perspicuity (0.85), efficiency (1.12), dependability (1.13), stimulation (1.35) and novelty (0.81). All scales get positive impressions, the SUS score is 75 [8].

Furthermore, research was conducted by Nina Setyowati and Doni Hossain Bengelohang entitled "The Comparison of Evaluation on User Experience and Usability of Mobile Banking Applications Using User Experience Questionnaire and System Usability Scale". In this study, the 6 UEQ scale measurement on four mobile banking applications received a positive impression on each scale except for BNI Mobile (Efficiency and Novelty) and Laju (Novelty), which received a neutral impression. SUS scores were obtained for the four mobile banking applications, namely BCA Mobile (72.76), Oke Mobile (71.47), BNI Mobile (71.49), and Laju (72.47) [7].

This study aims to evaluate the user experience and measure the usability of the OVO application. The user experience in the OVO application is evaluated using a user experience questionnaire by applying six scales or aspects, namely attractiveness, perspicuity, dependability, efficiency, stimulation, and novelty [9][10]. Meanwhile, to measure usability in the OVO application, the system usability scale is used by applying three categories: acceptability ranges, grade scales, and subjective ratings [11][12].

*User Experience Questionnaire is a questionnaire that provides an overview of the level of user satisfaction based on user experience. The User Experience Questionnaire has six scales with 26 statements. This scale includes attractiveness, perspicuity, dependability, efficiency, stimulation, and novelty. The user experience questionnaire has been tested in several cases to provide an overview of user satisfaction. It usually takes 3-5 minutes to read and complete the user experience questionnaire. One of the other advantages of the user experience questionnaire is the free availability of this questionnaire which is available in the Indonesian language version. User experience questionnaire data analysis was carried out using the UEQ Data Analysis Tool, which compared the value of each aspect with existing product data [13].*

John Brooks created the SUS questionnaire at the Digital Equipment Corporation in England 1986 [14]. This questionnaire measures three crucial aspects: The first aspect is the effectiveness of using the technology in achieving user goals. The second aspect is efficiency, namely how much user effort and resources are expended in achieving these goals. The third aspect is satisfaction, where how satisfying is the user experience

**2. Research Methods**

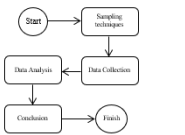
This study aims to assess and quantify the user experience and usability of the OVO application by employing the User Experience Questionnaire (UEQ) and System Usability Scale (SUS). The research methodology and process are illustrated in Figure 1.

**A. Research Design**

The research design in this article is evaluative and descriptive. It aims to measure and explain the success of a specific product, program, or activity, allowing conclusions to be drawn about its feasibility, relevance, effectiveness, and efficiency. This design provides a framework for assessing and analyzing the subject of the study in order to gain insights into its various aspects and evaluate its overall performance. By employing an evaluative and descriptive research design, the researchers can gather data, analyze it, and draw meaningful conclusions about the topic under investigation. [The research design is evaluative and descriptive, which aims to measure and explain the success of a particular product, program, or activity so that conclusions can be drawn about its feasibility, relevance, effectiveness, and efficiency.]

**B. Research Process**

The research framework used as a reference in the research to be carried out is shown in Figure 1.



**Figure 1. Research Process**

Figure 1 explains that the research process begins with the sampling technique and ends with drawing conclusions. Detailed information about each research activity will be presented in the subsequent discussion subsection. Figure 4, merupakan bahwa nilai penelitian dinilai dengan skor perspicuitas, senang, dan berubah dengan penemuan kesimpulan. Informasi rinci tentang setiap kegiatan penelitian akan disajikan dalam sub bab pembahasan selanjutnya [15]

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application. This study uses the Lemeshow formula to determine the number of samples with an unknown population [16]. Through the Lemeshow formula, the number of samples to be taken is at least 100 respondents. The sampling technique used in this study is Non-Probability Sampling, namely Purposive Sampling, a sampling technique selected based on specific criteria that the researcher wants. The criteria used in this study are as follows:

- OVO application users.
- Located in Indonesia.
- Minimum age of 15 years.

The purposive Sampling method was chosen to ensure a targeted selection of participants who meet the specific criteria essential for this study. By utilizing this method, the researcher aimed to include OVO application users from various backgrounds, including diverse age groups, regions within Indonesia, etc. This approach allows researchers to gather a wide range of perspectives and experiences, contributing to a more comprehensive assessment of the user experience and usability of the OVO application. The Purposive Sampling method was chosen to ensure a targeted selection of participants who meet the specific criteria essential for this study. By utilizing this method, researchers aimed to include OVO application users from various backgrounds, including diverse age groups, regions within Indonesia, and socioeconomic statuses. This approach allows researchers to gather a wide range of perspectives and experiences, contributing to a more comprehensive assessment of user experience and usability in the OVO application.

Although the non-probability nature of purposive Sampling does not guarantee a representative sample of the entire OVO user base, researchers made efforts to ensure diversity within the selected sample. The researcher's intention was to include participants from different demographics to increase the generalizability and relevance of our findings. The researcher reached out to potential participants through various channels, including social media platforms, online communities, and direct invitations to OVO users who matched the researcher's criteria. By employing this approach, researchers aimed to capture a broad spectrum of users and mitigate potential biases that may arise from a more limited sample. Although the non-probability nature of Purposive Sampling does not guarantee a representative sample of the entire OVO user base, researchers made efforts to ensure diversity within the selected sample. The researcher's intention was to include participants from different demographics to increase the generalizability and relevance of our findings. The researcher reached out to potential participants

employing this approach, researchers aimed to capture a broad spectrum of users and mitigate potential biases that may arise from a more limited sample. It is important to note that while the researcher's sample may not represent the entire population of OVO application users, the focus of this study is to assess user experience and usability rather than provide statistically representative data. Nonetheless, the insights gained from this diverse sample will contribute valuable findings and recommendations for enhancing the user experience and usability of the OVO application. It is important to note that while researcher sample may not represent the entire population of OVO application users, the focus of this study is to assess user experience and usability rather than provide statistically representative data. Nonetheless, the insights gained from this diverse sample will contribute valuable findings and recommendations for enhancing the user experience and usability of the OVO application. This stage aims to determine the sample and sampling technique used during the study. The population that is the focus of this research are those who use the OVO application. This study uses the Lemeshow formula to determine the number of samples with an unknown population [16]. Through the Lemeshow formula, the number of samples to be taken is at least 100 respondents. The sampling technique used in this study is Non-Probability Sampling, namely Purposive Sampling, a sampling technique selected based on specific criteria that the researcher wants. The criteria used in this study are as follows:

- OVO application users.
- Located in Indonesia.
- Minimum age of 15 years.

**D. Data Collection**

At this stage, data collection was carried out from predetermined respondents. In this study, the instrument used was a questionnaire. The questionnaire included questions about the respondent's identity, the general use of the OVO application, 26 user experience questionnaire statements, and ten system usability scale statements. To minimize potential biases, researchers implemented several measures in the data collection process. At this stage, data collection was carried out from predetermined respondents. In this study, the instrument used was a questionnaire. The questionnaire included questions about the respondent's identity, the general use of the OVO application, 26 user experience questionnaire statements, and ten system usability scale statements. To minimize potential biases, researchers implemented several measures in data collection

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- Author: Please expand a bit more on why you chose the Purposive Sampling method specifically and how it benefits the study. An explanation on how you
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- Author: A mention of how you addressed any potential bias, particularly response and non-response bias common in online surveys, would make the methodology more robust. An explanation of how you handled incomplete or inappropriate responses would add depth to your data collection process and increase the validity of your study.

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strategy to ensure a representative sample. The researcher reached out to OVO application users through various channels, including social media platforms such as WhatsApp, Telegram, Twitter, Instagram, etc. By utilizing multiple platforms, researchers aimed to reduce the risk of excluding certain user groups that may have different usage patterns or experiences. Additionally, the researcher encouraged participants to share the survey link with their acquaintances who were OVO application users, which helped the researcher reach a wider audience. Finally, to address response bias common in online surveys, researcher employed a diverse recruitment strategy to ensure a representative sample. researcher reached out to OVO application users through various channels, including social media platforms such as WhatsApp, Telegram, Twitter, Instagram, etc. By utilizing multiple platforms, researcher aimed to reduce the risk of excluding certain user groups who may have different user patterns or experiences. Additionally, the researcher encouraged participants to share the survey link with their acquaintances who were OVO application users, which helped researcher reach a wider audience. Secondly, to mitigate non-response bias, researcher made efforts to maximize the response rate and minimize missing data. Extended the survey duration from February 9 to March 16, 2023, allowing participants ample time to complete the questionnaire at their convenience. The researcher also sent out reminders at regular intervals to encourage respondents to participate. Moreover, to handle incomplete or inappropriate responses, researcher implemented validation checks within the online survey platform (Google Forms) to ensure that all required questions were answered and responses within a reasonable range were recorded. In case of incomplete or inappropriate responses, the researcher excluded them from the final analysis to maintain the validity of the study. Secondly, to minimize non-response bias, researcher made efforts to maximize the response rate and minimize missing data. We extended the survey duration from 9 February 2023 to 16 March 2023, allowing participants ample time to complete the questionnaire at their convenience. Researcher We also sent out reminders at regular intervals to encourage respondents to participate. Moreover, to handle incomplete or inappropriate responses, researcher implemented validation checks within the online survey platform (Google Forms) to ensure that all required questions were answered and response within a reasonable range were recorded. In case of incomplete or inappropriate responses, the researcher excluded them from the final analysis. The researcher will include measure

The samples obtained during the deployment were 166 respondents, but 11 were not users of the OVO application, resulting in a remaining sample size of 155 respondents. The User Experience Questionnaire is a questionnaire that provides an overview of the level of user satisfaction based on user experience. The user experience questionnaire has been tested in several cases to provide an overview of user satisfaction. It usually takes 3-5 minutes to read and complete the user experience questionnaire. One of the other advantages of the user experience questionnaire is its free availability, which is available in the Indonesian language version. User experience questionnaire data analysis was carried out using the UEQ Data Analysis Tool, which compared the value of each aspect with existing product data. [13].

The user experience questionnaire consisted of six scales divided into 26 indicator questions, as shown in Table 1. The user experience questionnaire used a 7-point semantic differential scale. Respondents were asked to rate from 1 to 7 on 26 UEQ indicator items according to their subjective assessment. The User Experience Questionnaire (UEQ) was used to measure user experience, consisting of 26 question components in various aspects. The user experience questionnaire consisted of 6 scales divided into 26 indicator questions, as shown in Table 1. The user experience questionnaire used a 7-point semantic differential scale. Respondents were asked to assess from 1 to 7 on 26 UEQ indicator items according to their subjective assessment. The User Experience Questionnaire (UEQ) was used to measure user experience, consisting of 26 question components in various aspects. [17]. At this stage, data collection was carried out from predetermined respondents. In this study, the instrument used was a questionnaire. The questionnaire will include measure

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- Author: A brief discussion on how you mitigated any potential errors or bias in your data analysis, and how you handled any outliers or missing data.
- Resolved
- Author: The approach of analyzing data inconsistencies using the UEQ Data Analysis Tools Version 12 is a valuable
- Resolved



questionnaires will be distributed via social media such as Whatsapp, Telegram, Twitter and Instagram. Questionnaires will be created and filled out using Google Forms. The dissemination was done from 9 February 2023 to 16 March 2023. The samples obtained during the deployment were 166 respondents, but 11 were not users of the OVO application, so the remaining 155 respondents.

The user experience questionnaire consists of 6 scales divided into 26 indicator questions, as shown in Table 1. The user experience questionnaire uses a 7-point semantic differential scale. Respondents were asked to assess from 1 to 7 on 26 UEQ indicator items according to their subjective assessment. The User Experience Questionnaire (UEQ) is used to measure user experience consisting of 26 question components covering aspects [17]:

- Attractiveness  
The product should look attractive, enjoyable, friendly, and pleasant.
- Efficiency  
I should perform my tasks with the product fast, efficient, and in a pragmatic way.
- Perspiciuity  
The product should be easy to understand, clear, simple, and easy to learn.
- Dependability  
The interaction with the product should be predictable, secure, and meets my expectations.
- Stimulation  
Using the product should be interesting, exiting, and motivating.
- Novelty  
The product should be innovative, inventive, and creatively designed.

The components of the UEQ questions based on the aspects assessed are shown in Table 1.

Table 1. UEQ Testing Instruments

Scale	Indicator	Item	
Attractiveness	Inconvenient	Enjoyable	ATT1
	Good	Bad	ATT2
	Dislike	Gratifying	ATT3
	Uncomfortable	Comfortable	ATT4
	Attractive	Unattractive	ATT5
	User-friendly	User-unfriendly	ATT6
Perspiciuity	Not understood	Understandable	PER1
	Easily understood	Hardly understood	PER2
	Complicated	Simple	PER3
	Clear	Confusing	PER4
Efficiency	Fast	Slow	EFF1
	Inefficient	Efficient	EFF2
	Impractical	Practical	EFF3

Questions	Item
I needed to learn a lot of things before I could get going with this system	SUS10

## E. Data Analysis

At this stage, data inconsistencies analysis, quantitative data analysis, demographic analysis, and descriptive statistical analysis of the data that has been obtained are carried out. The data obtained will be processed using IBM SPSS Statistics 25, UEQ Data Analysis Tool, and Microsoft Excel. Additionally, measures were taken to mitigate potential errors or biases in the analysis and handle outliers or missing data. Additionally, measures were taken to mitigate potential errors or biases in the analysis and to handle outliers or missing data.

To address potential errors or biases in the data analysis process, several steps were taken. Firstly, data inconsistencies were analyzed using the UEQ Data Analysis Tool Version 12. This analysis involved assessing the seriousness of respondents' answers to the questionnaire and identifying any suspicious data. Specifically, a critical value greater than 2 and a critical length value exceeding 15 were used as criteria to detect errors in questionnaire completion. In cases where such errors were identified, the respective data points were removed from the analysis. To address potential errors or biases in the data analysis process, several steps were taken. Firstly, data inconsistencies were analyzed using the UEQ Data Analysis Tool Version 12. This analysis involved assessing the seriousness of respondents in answering the questionnaire and identifying any suspicious data. Specifically, a critical value greater than 2 and a critical length value exceeding 15 were used as criteria to detect errors in questionnaire completion. In cases where such errors were identified, the respective data points were removed from the analysis. In analyzing data inconsistencies using the UEQ Data Analysis Tool Version 12. At this stage, the seriousness of the respondents was tested in answering the questionnaire and detecting suspicious data. If the critical value is > 2 and the critical length value is > 15, this indicates an error in filling out the questionnaire, and it is better to delete the data.

In the analysis of quantitative data, a validity test and a reliability test will be carried out on the data that has been obtained. The validity test was carried out by looking at the Pearson correlation value of each indicator for each variable. In contrast, the reliability test was carried out by looking at Cronbach's alpha ( $\alpha$ ) value of each research variable.

Regarding demographic analysis, respondent data was categorized based on gender, age, duration of use, and frequency of use. This categorization allowed for a

Scale	Indicator	Item	
Stimulation	Beneficial	Less beneficial	ST11
	Tedious	Engaging	ST12
	Unappealing	Interesting	ST13
	Motivational	Unmotivating	ST14
Novelty	Creative	Monotonous	NOV1
	Unnovative	Conventional	NOV2
	Commonplace	Leading-edge	NOV3
	Conservative	Innovative	NOV4

John Brooke created the SUS questionnaire at the Digital Equipment Corporation in England in 1986. John Brooke created the SUS questionnaire at the Digital Equipment Corporation in England 1986 [14]. This questionnaire measures three crucial aspects. The first aspect is the effectiveness of using this technology to achieve user goals. The second aspect is efficiency, namely how much user effort and resources are expended in achieving these goals. The third aspect is satisfaction, or how satisfying is the user experience? This questionnaire measures three crucial aspects. The first aspect is the effectiveness of using this technology in achieving user goals. The second aspect is efficiency, namely how much user effort and resources are expended in achieving these goals. The third aspect is satisfaction, where how satisfying is the user experience [15]. The system usability scale questionnaire consists of 10 statements, as shown in Table 2. The system usability scale questionnaire uses a 5-point Likert scale. Respondents were asked to provide an assessment of "Strongly Disagree", "Disagree", "Neutral", "Agree", and "Strongly Agree" on the 10 SUS statements according to their subjective assessment. The System Usability Scale (SUS) measures the usability attributes of the OVO application, namely aspects of effectiveness, efficiency, satisfaction, satisfaction, easy to learn, ease to remember and few errors. SUS gives an overall score between 0 and 100. The SUS half section (odd statements, i.e. 1, 3, 5, 7, and 9) describes a positive evaluation (items with positive polarity). The other half of the sections (even statements, i.e. 2, 4, 6, 8, and 10) depict negative evaluations (items with negative polarity). For items with positive polarity, answers were coded as 0 to 4 from disagreement to agreement. Whereas for items with negative polarity, the answers are coded from 4 to 0 [18]. The list of SUS statements is shown in Table 2.

Table 12. SUS Testing Instruments [14]

Questions	Item
I think that I would like to use this system frequently	SUS1
I found the system unnecessarily complex	SUS2
I thought the system was easy to use	SUS3
I think that I would need the support of a technical person to be able to use this system	SUS4
I found the various functions in this system were well integrated	SUS5

presented in the form of charts or graphs to facilitate comprehension and interpretation. In the analysis of demographic data, respondent data will be grouped based on gender, age, duration of use, and frequency of use. The data will then be represented as a chart or graph.

In the descriptive statistical analysis using UEQ Data Analysis Tool Version 12 and Microsoft Excel. The data presented in this descriptive statistical test shows data that can be seen from the mean, which is the average value of each measured scale; the maximum, which is the highest value of each measured scale; the minimum, which is the lowest value of each measured scale, and the standard deviation used to determine the distribution of data from the sample and used to describe each research variable.

To handle outliers or missing data, specific procedures were implemented. Outliers, which are data points that deviate significantly from the overall pattern, were identified and assessed for their impact on the analysis results. Depending on the nature and extent of the outliers, options such as excluding them from the analysis or conducting sensitivity analyses were considered. Additionally, missing data points were identified, and appropriate strategies, such as imputation techniques or the exclusion of incomplete cases, were employed to ensure a comprehensive analysis. To handle outliers or missing data, specific procedures were implemented. Outliers, which are data points that deviate significantly from the overall pattern, were identified and assessed for their impact on the analysis results. Depending on the nature and extent of the outliers, options such as excluding them from the analysis or conducting sensitivity analyses were considered. Additionally, missing data points were identified and appropriate strategies, such as imputation techniques or exclusion of incomplete cases, were employed to ensure a comprehensive analysis.

By implementing these measures, researchers aimed to mitigate potential errors or biases in the data analysis process and address outliers or missing data effectively. These steps enhance the robustness and reliability of the findings, providing a more comprehensive assessment of the user experience and usability of the OVO application. By implementing these measures, researchers aimed to mitigate potential errors or biases in the data analysis process and address outliers or missing data effectively. These steps enhance the robustness and reliability of the findings, providing a more comprehensive assessment of user experience and usability in the OVO application.

Several rules must be considered when transforming

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- a. Each answer in the UEQ questionnaire is rated on a scale of 1 to 7, indicating the level of user acceptance from "negative" to "positive".
- b. These items have a scale from -3 to +3. Thus, -3 represents the most negative answer, 0 is a neutral answer, and +3 is the most positive answer [19].

After the data transformation, only the average or mean assessment can be carried out for each scale or question item on the UEQ from each respondent's answer. The following are the rules for the average or mean rating scale in UEQ which can be seen in Table 3:

Table 224 UEQ Mean Rating Scale

Mean Value Range	Evaluation
> 0.8	Positive Evaluation
-0.8 - 0.8	Neutral Evaluation
< -0.8	Negative Evaluation

If the mean value of an item is more significant than 0.8, then the item will enter into the positive evaluation category and, in the diagram, is in the green area. If the mean value of an item is between -0.8 to 0.8, then the item will fall into the normal or neutral evaluation category and, in the diagram, is in the yellow area. Meanwhile, if the mean value of an item is less than -0.8, then the item will enter into the negative evaluation category and in the diagram, it is in the red area.

Then several rules must be considered when calculating scores on questionnaire data using SUS:

- a. For every odd-numbered question (1, 3, 5, 7, 9), the score obtained from user responses will be reduced by 1.
 
$$\text{odd weight} = xi - 1 \quad (1)$$
- b. Each even-numbered question (2, 4, 6, 8, 10) will have its final score calculated by subtracting the user's score from 5.
 
$$\text{even weight} = 5 - xi \quad (2)$$
- c. The SUS score is obtained by summing up the scores of each question and then multiplying it by 2.5.
 
$$\text{SUS Score} = (\text{odd weight} + \text{even weight}) \times 2.5 \quad (3)$$
- d. The scoring rules mentioned above apply to one respondent. For multiple respondents, the SUS scores of each respondent are summed up and then divided by the number of respondents to calculate the average SUS score.

### 3. Results and Discussions

#### A. Analysis of Data Inconsistencies

To ensure the reliability of the responses, the study employed UEQ Data Analysis Tools Version 12 to analyze data inconsistencies. This approach adds value to the study by filtering out potentially careless or insincere responses, thereby enhancing the credibility of the results. By setting critical value parameters, the seriousness of respondents' responses to the questionnaire was assessed, and any haphazard or insincere responses were identified along with suspicious data to identify errors in completing the questionnaire, a critical value greater than two and a critical length exceeding 15 were considered indicating inconsistencies. Based on these criteria, it is recommended to remove such data from the analysis. This rigorous step strengthens the methodological aspects of the study and underscores the significance of accurate and thoughtful input from respondents in deriving reliable and insightful conclusions to ensure the reliability of the responses. The study employed UEQ Data Analysis Tools Version 12 to analyze data inconsistencies. This approach adds value to the study by filtering out potentially careless or insincere responses, thereby enhancing the credibility of the results. By setting critical value parameters, the seriousness of respondents in answering the questionnaire was assessed, and any haphazard or insincere responses were identified along with suspicious data to identify errors in completing the questionnaire, a critical value greater than two and a critical length exceeding 15 were considered indicating inconsistencies. Based on these criteria, it is recommended to remove such data from the analysis. This rigorous step strengthens the methodological aspects of the study and underscores the significance of accurate and thoughtful input from respondents in deriving reliable and insightful conclusions. The analysis of inconsistencies in the data is conducted using UEQ Data Analysis Tools Version 12, specifically on the Inconsistencies tab. Inconsistencies are utilized to assess respondents' seriousness in answering the questionnaire, determining whether they responded haphazardly or without seriousness, and detecting suspicious data. If the critical value is more significant than two and the critical length exceeds 15, it indicates errors in completing the questionnaire, and it is recommended to remove such data.

Table 224 Inconsistencies Data

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73	25	42.5	147	26	65
74	29	72.5	148	22	52
Average SUS score					
77.53					

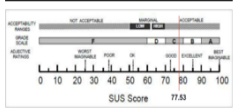


Figure 5. SUS Score Value [20]

Table 25 and Figure 5 summarize SUS score calculations from the questionnaires distributed to 148 respondents, resulting in an average or mean score of 77.53 according to the System Usability Scale (SUS) method.

After obtaining the SUS score, the next step is interpreting the results. There are three perspectives to determine the interpretation of the SUS score calculations:

- a. Acceptability
 

Acceptability ranges consist of three levels: not acceptable, marginal (low and high), and acceptable. Acceptability is used to assess the level of user acceptance of the application.

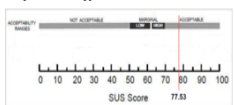


Figure 6. Acceptability Ranges

In the calculation of the SUS score, the previously obtained score was 77.53, indicating that the user acceptance level of the OVO application is categorized as "ACCEPTABLE".

- b. Grade
 

The grade scale consists of A, B, C, D, and F, which are used to determine the grade level of the application.

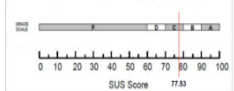


Figure 7. Grade Scales

#### c. Adjective

Adjective ratings consist of the categories worst imaginable, poor, ok, good, and best imaginable. Adjective ratings are used to determine the rating of the application.

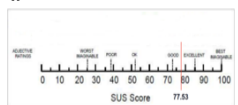


Figure 8. Adjective Ratings

In the calculation of the SUS score, the previously obtained score was 77.53, indicating that the OVO application falls under the "GOOD" category.

#### E. Improvement Recommendations

Based on the evaluation of the user experience conducted using the User Experience Questionnaire (UEQ) method and processed with UEQ Data Analysis Tool Version 12, the following recommendations can be made for enhancing the OVO application. Based on the evaluation of user experience conducted using the User Experience Questionnaire (UEQ) method, processed using UEQ Data Analysis Tool Version 12, the following recommendations can be given for the OVO application:

- a. Consider incorporating more innovative, cutting-edge, and creative services or features into the OVO application. This could involve adopting new and innovative features that align with current trends in the industry. These additions will help improve novelty, ensuring the application stays up-to-date and provides a unique user experience. Consider incorporating more innovative, cutting-edge, and creative services or features into the OVO application. This could involve adopting new and innovative features that align with current trends in the industry. These additions will help improve novelty, ensuring the application stays up-to-date and provides a unique user experience. Provide more innovative, cutting-edge, and creative services or feature in the OVO application, such as adopting new and innovative features that align with the current trends. It will help improve novelty, ensuring the application stays up-to-date and provides a unique user experience.
- b. Explore the inclusion of more engaging services or features within the OVO application. For instance, consider incorporating gamification

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### COMMENTS

New

non-response bias common in online surveys, would make the methodology

Resolved

Author

A brief discussion on how you mitigated any potential errors or bias in your data analysis, and how you handled any outliers or missing data,

Resolved

Author

The approach of analyzing data inconsistencies using the UEQ Data Analysis Tools Version 12 is a valuable step that ensures the reliability of the responses. By setting critical value parameters, you enhance the credibility of your results, filtering out potentially careless or insincere responses. This rigorous step adds to the methodological strength of your study, emphasizing the importance of accurate, thoughtful input from respondents for reliable, insightful conclusions.

### COMMENTS

New

non-response bias common in online surveys, would make the methodology

Resolved

Author

A brief discussion on how you mitigated any potential errors or bias in your data analysis, and how you handled any outliers or missing data,

Resolved

Author

The approach of analyzing data inconsistencies using the UEQ Data Analysis Tools Version 12 is a valuable

Resolved

Author

Overall, these recommendations are well-considered and likely to effectively address the issues identified in the user experience evaluation.

elements that allow users to earn OVO Points or integrating captivating animations and enjoyable sound effects. Such enhancements will enhance the stimulation aspect of the application, making the overall user experience more enjoyable and interactive. Explore the inclusion of more engaging services or features within the OVO application. For instance, consider incorporating gamification elements that allow users to earn OVO Points or integrating captivating animations and enjoyable sound effects. Such enhancements will enhance the stimulation aspect of the application, making the overall user experience more enjoyable and interactive. Offer more engaging services or features in the OVO application, such as incorporating gamification elements to earn OVO Points or adding captivating animations and enjoyable sound effects. It will enhance the stimulation aspect, making the user experience more enjoyable and interactive.

By implementing these recommendations, it is anticipated that the OVO application can address the identified issues and provide a more satisfactory user experience.

#### 4. Conclusion

The user experience and usability evaluation using the User Experience Questionnaire (UEQ) and System Usability Scale (SUS) has been successfully conducted involving 148 competent respondents who assessed the application based on gender, age, duration of usage, and frequency of usage. The benchmark results for the six aspects of UEQ show that one aspect, efficiency, falls into the "good" category with a mean value of 1.55. Additionally, four aspects, namely attractiveness (mean: 1.56), perspicuity (mean: 1.67), dependability (mean: 1.33), and stimulation (mean: 1.16), are classified as "above average" categories. However, one aspect, novelty, falls into the "below average" category with a mean value of 0.64. Regarding the measurement of OVO application usability using the System Usability Scale (SUS) method, the obtained score is 77.53. This score falls within the "Acceptable" range in the Acceptability Ranges category, a "C" grade in the Grade Scale category, and is rated as "Good" in the Adjective Ratings category. The user experience and usability evaluation using the User Experience Questionnaire (UEQ) and System Usability Scale (SUS) has been successfully conducted, involving 148 competent respondents who assessed the application based on gender, age, duration of usage, and frequency of usage. The benchmark results for the six aspects of UEQ show that one aspect, efficiency, falls into the

classified as "above average" categories. However, one aspect, novelty, falls into the "below average" category with a mean value of 0.64. Regarding the measurement of OVO application usability using the System Usability Scale (SUS) method, the obtained score is 77.53. This score falls within the "Acceptable" range in the Acceptability Ranges category, a "C" grade in the Grade Scale category, and is rated as "Good" in the Adjective Ratings category.

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The screenshot shows a web browser window with a notification overlay. The notification is from [RESTI] Editor Decision, dated 2023-08-07 01:55 AM. It is addressed to Ali Ibrahim and concerns a submission to Jurnal RESTI (Rekayasa Sistem dan Teknologi Informasi), "Assessing User Experience and Usability in the OVO Application: Utilizing the User Experience Questionnaire and System Usability Scale for Evaluation". The decision is to accept the submission. The notification also provides contact information for Dr. Ir. Yuhfizar, S.Kom., M.Kom., IPM, Politeknik Negeri Padang, and the journal's website URL, jurnal@iaii.or.id. The background shows a dark-themed interface with a sidebar containing "Submissions", "Assessing User Experience", "Round 1", "Round 2 Status Submission", "Notifications", and "Reviewer's".

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Journal RESTI (Rekayasa Sistem dan Teknologi Informasi)

Assessing Usability Scale for Evaluation

Submissions

Ali Ibrahim

Submission

Round 1

Round 2 Status Submission

Notifications

[RESTI] Edit

[RESTI] Edit

Reviewer's

Apakah penggunaan angka dan tabel cukup berkualitas dan jelas terbaca ?

Ya

Apakah penggunaan gambar sudah tepat dan jelas terbaca ?

Ya

Apakah penalaran ilmiah, argumentasi dan interpretasi penulis memadai ?

Ya

Apakah referensi dari penelitian sebelumnya cukup memadai dijelaskan, terutama pada latar belakang penelitian ?

Ya

Apakah gaya penulisannya sudah ilmiah serta bahasanya jelas dan benar?

Ya

2023-07-11 09:34 PM

2023-08-07 01:55 AM

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Apakah penggunaan angka dan tabel cukup berkualitas dan jelas terbaca ?

Ya

Apakah penggunaan gambar sudah tepat dan jelas terbaca ?

Ya

Apakah penalaran ilmiah, argumentasi dan interpretasi penulis memadai ?

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Ya

Apakah gaya penulisannya sudah ilmiah serta bahasanya jelas dan benar?

Ya

2023-07-11 09:34 PM

2023-08-07 01:55 AM

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Berikan komentar Anda terhadap manuskrip ini ?

Penulis sudah melakukan perbaikan seperti yang direkomendasikan

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