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Analysis of Scooter Taxi User Satisfaction from the Aspect of Usability Through the Maxride Application in Makassar Using the Use Questionnaire Method

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Abstract

This study aims to analyze the usability of the Maxride ride-hailing application in Makassar, Indonesia, focusing on user satisfaction from a usability perspective. The research employed a quantitative approach using the USE Questionnaire method. Data was collected from 400 Maxride users in Makassar through an online survey. The questionnaire assessed four usability variables: Usefulness, Ease of Use, Ease of Learning, and Satisfaction.The overall usability score of the Maxride application was 65.60%, falling in the "feasible" category. While the app scored well in Usefulness (68.98%), Ease of Learning (74.06%), and Satisfaction (70.98%), it performed poorly in Ease of Use (48.38%), indicating significant room for improvement in this area.The study was limited to Makassar users and relied solely on quantitative data. As a cross-sectional study, it only captured user perceptions at a single point in time. These limitations suggest opportunities for future research with broader geographical scope, mixed methods, and longitudinal designs. The findings provide actionable insights for Maxride's development team to improve the app's user interface and functionality, particularly in terms of ease of use. Addressing these issues could enhance user satisfaction, retention, and potentially drive business growth.Improving the usability of ride-hailing apps like Maxride can contribute to better urban mobility solutions, potentially impacting transportation habits and quality of life in cities like Makassar.This study represents the first comprehensive usability analysis of the Maxride application, providing valuable insights for both the company and the broader ride-hailing industry in Indonesia. It establishes a baseline for future usability research in this sector and demonstrates the application of the USE Questionnaire method in evaluating mobile app usability.

Keywords: ***Usability, Use Questionnaire, Maxride.***

1. Introduction

Today's technological developments have brought many changes in various aspects of life, including in the field of transportation. According to (Amir et al. 2020), transportation means the movement of people and goods from one place to another. This mobile application-based transportation service was born to solve the problems of public transportation users who often face obstacles such as costs and ease of accessing or ordering public transportation, especially scooter taxis. One of the popular applications in Makassar is Maxride, which brings together bajaj (three-wheeled public transportation) users with bajaj drivers.

Maxride is a technology startup from Indonesia headquartered in Makassar City which is engaged in transportation, lifestyle, and logistics services where this company provides a mobile application that brings drivers together with customers quickly and easily. This company also collaborates with Bajaj RE Company as a provider of Three-Wheeled Units. However, so far there has been no research that specifically examines the level of user satisfaction with Maxride's application services.

Although currently as of February 3, 2024, the Maxride mobile application has a fairly high rating value of 4.9, but if you look at the existing reviews, most of the users complain about service and system quality problems in the Maxride mobile application. Many users feel confused due to the confusing order flow, limited features that are felt to make it easier to use, and several displays that need to be improved. This problem refers to the usability aspect.

Usability is an important aspect in making applications. According to (Riyadi 2019), usability is a qualitative analysis that determines how easy it is for users to use the interface of an application, an application can be said to be usable if its functions can be carried out effectively, efficiently, and satisfactorily. Therefore, a mobile application needs to pay attention to the usability aspect. Because the usability level of an application can be a benchmark for how useful the application is for users. The better the usability level, the more viable the application can be and can have many users. And vice versa, if the usability of the application is low, users tend to leave and switch to using other similar applications (Hadi et al., 2018).

Therefore, it is necessary to evaluate the level of user satisfaction in the form of measuring the usability level of the Maxride mobile application, using the USE (Usefulness, Satisfaction, and Ease of use) Questionnaire model. The USE Questionnaire was chosen because it had parameters that intersected with the problems found in user reviews on the AppStore or Google PlayStore and pre-research surveys, namely efficiency, effectiveness, and satisfaction. The results of this study are expected to provide input for the developers of the MaxRide application in improving service quality and meeting user needs. So the researcher intends to conduct a study with the title "Analysis of Scooter Taxi User Satisfaction from the Usability Aspect through the Maxride Application in Makassar Using the USE Questionnaire Method".

2. Literature Review

The usability of mobile applications, particularly in the ride-hailing sector, has become an increasingly important area of study as these services continue to reshape urban transportation. This literature review focuses on key concepts and previous research relevant to the usability analysis of the Maxride application.

2.1 Usability in Mobile Applications

Usability is a critical aspect of mobile application design and development. Nielsen (1993) defines usability as a measure of quality that assesses how easy and pleasant a user interface is to use. In the context of mobile applications, usability directly impacts user adoption, satisfaction, and continued use (Hoehle & Venkatesh, 2015). Several studies have emphasized the importance of usability in mobile applications. For instance, Hussain et al. (2018) found that usability significantly influences user satisfaction and intention to use mobile applications. Similarly, Balapour et al. (2020) demonstrated that perceived ease of use and usefulness are key determinants of user adoption in mobile app contexts.

2.2 Usability Evaluation Methods

Various methods have been developed to evaluate the usability of mobile applications. The USE Questionnaire, developed by Lund (2001), has been widely used due to its comprehensive coverage of usability aspects: Usefulness, Satisfaction, and Ease of use. This method has been applied in numerous studies across different types of applications (Gao et al., 2018; Martins et al., 2020). Other popular usability evaluation methods include the System Usability Scale (SUS) (Brooke, 1996) and the Mobile App Rating Scale (MARS) (Stoyanov et al., 2015). Each of these methods offers unique strengths in assessing different aspects of mobile app usability.

2.3 Usability in Ride-Hailing Applications

The ride-hailing industry has seen rapid growth and technological advancement in recent years. Usability plays a crucial role in the success of ride-hailing applications, as noted by Dickinson et al. (2017) in their study of user experience in mobility-as-a-service platforms. Research by Wang et al. (2019) on ride-hailing apps in China found that ease of use and perceived usefulness significantly impact user satisfaction and continuance intention. Similarly, Ashraf et al. (2020) demonstrated that usability factors such as interface design and navigation significantly influence user loyalty in ride-hailing apps. However, despite the growing body of research on ride-hailing applications, there is a notable gap in studies focusing specifically on the Indonesian market, particularly for newer entrants like Maxride.

3. Research Methodology

The location of the research which is the object of research in data collection is the head office of Bajaj Showroom & Maxride Indonesia which is located on Jl. Landak Lama, Makassar. The research period that will be carried out is approximately one month. The object of research is users of the Maxride application from various groups of Makassar City residents to analyze the level of satisfaction of scooter taxi users from the aspect of usability through the Maxride application. The types of data used in this research are:

3.1 Data Primer

Primary data was obtained by conducting direct observations and interviews with managers of PT. Maxride Indonesia and distributed questionnaires conducted by researchers to resource persons to fill out.

3.2 Data Seconds

Secondary data was obtained through literature studies, journals, scientific articles, and previous research with the theme of usability analysis on the Maxride application as well as the USE Questionnaire method, and various other sources.

4. Result And Discussion

To determine the respondents using the N. Slovin/Slonim formula, the number of respondents is large in accordance with the number of 100,000 user populations who have used the Maxride application, then:

$$n = \left(\frac{N}{1+Ne^2}\right) \quad (1)$$

$$n = \left(\frac{100.000}{1+100.000\ (0,05)^2}\right)$$

$$n = \left(\frac{100.000}{251}\right) = 400$$

Sample calculation using the Slovin formula was obtained with a percentage of 5% leeway, The minimum sample that must be obtained is as many as 400 respondents with the respondent criteria in filling out this questionnaire are various groups of Maxride application users in Makassar

The information data needed in the closed questionnaire is the identity of the respondents classified by age, gender, occupation and experience in using the Maxride application, then in the recapitulation of this questionnaire, data is collected from the questionnaire that has been distributed to 400 respondents, the attributes of user satisfaction in the Maxride application are the results of the recapitulation of the closed questionnaire:

Information:

1 = Strongly Disagree (SD)
2 = Disagree (D)
3 = Neutral (N)
4 = Agree (A)
5 = Strongly Agree (SA)

Table 1. Closed Questionnaire Recapitulation

Code	Statement	Assessment Scale				
		1	2	3	4	5
	Usefulness					
X1	This app helped me be more effective	0	73	102	129	96
X2	This app helps me be more productive	0	81	97	124	98
X3	This app is useful	0	81	88	123	108
X4	This app can better control my daily activities	70	72	93	89	76
X5	This app makes it easier to get something I want to accomplish	63	63	84	104	86
X6	This app saves me more time	66	61	80	100	93
X7	This app meets my needs	0	0	117	154	129
X8	This app does whatever I ask	57	80	87	87	89

	Ease of Use					
X9	The app is easy to use	59	61	75	107	98
X10	The app is simple to use	0	88	98	102	112
X11	This application is easy to understand/use (user friendly)	60	71	76	93	100
X12	This app requires the least amount of steps to achieve my desired goal with this app	78	70	79	90	83
X13	The app is flexible	0	89	89	108	114
X14	Using this app is quite easy	0	89	93	113	105
X15	I can use this app without written instructions	0	91	81	111	117
X16	The app is always consistent	73	57	85	97	88
X17	New and existing users will love this app	65	63	92	93	87
X18	I was able to get out of the problem with this app quickly	62	79	87	86	86
X19	I can use it without any problems at any time	57	73	88	97	85
	Ease of Learning					
X20	I learned this app quickly	0	100	78	112	110
X21	I easily remember how to use this app	0	1	116	147	136
X22	It is easy to learn to use this app	0	97	87	110	106
X23	I quickly became skilled using this app	0	79	101	111	109
	Satisfaction					
X24	I'm satisfied with this app	72	68	73	107	80
X25	I would recommend this app to my friends	0	74	91	110	125
X26	The app is fun to use	0	75	81	137	107
X27	This app works as I mean	0	0	100	154	146
X28	This app is awesome	63	60	90	103	84
X29	I feel like I should have this app	54	71	83	94	98
X30	The app is convenient to use	0	75	91	114	120

From the results of the recapitulation of the questionnaire respondents' data, it was shown that all respondents expressed satisfaction with the users of the Maxride application in Makassar. Based on the table above, the total accumulation of respondents can be known and become a reference to find out the validation of the data to measure or find out the valid items and invalid items by comparing the value of the Corrected Item-Total Correlation obtained from the output of the SPSS 26 software with the value of r table obtained from the statistical test r table with a value of n = 400 with a significance level of 5% which is 0.0983. Question items that are significantly correlated with the total score show that these items are able to provide support in revealing what they want to reveal is valid. If r calculates ≥ r table (2-sided test with sig. 0.05), then the instrument or question items are significantly correlated with the total score (declared valid) (Musrifah, 2021). The following are the results of the validity test using SPSS 26 software:

Table 2 Validity Test Results

Attribute	rcalculate	rtabel	Conclusion
1	0,321	0,0983	Valid
2	0,242	0,0983	Valid
3	0,385	0,0983	Valid
4	0,351	0,0983	Valid
5	0,374	0,0983	Valid
6	0,390	0,0983	Valid
7	0,218	0,0983	Valid
8	0,311	0,0983	Valid
9	0,374	0,0983	Valid
10	0,337	0,0983	Valid
11	0,424	0,0983	Valid
12	0,434	0,0983	Valid
13	0,335	0,0983	Valid
14	0,378	0,0983	Valid
15	0,355	0,0983	Valid
16	0,417	0,0983	Valid
17	0,415	0,0983	Valid
18	0,397	0,0983	Valid

19	0,373	0,0983	Valid
20	0,418	0,0983	Valid
21	0,254	0,0983	Valid
22	0,401	0,0983	Valid
23	0,408	0,0983	Valid
24	0,454	0,0983	Valid
25	0,402	0,0983	Valid
26	0,388	0,0983	Valid
27	0,262	0,0983	Valid
28	0,449	0,0983	Valid
29	0,420	0,0983	Valid
30	0,395	0,0983	Valid

Based on the results of the validity test in table 2, all items have a correlation coefficient (r calculus) with a positive value and greater than the r of the table, which is 0.983, which means that the results show that all the attributes of the statement in this research questionnaire are valid. Based on the validity test above, it will also produce the output of Cronbach's alpha value which is used as a comparison to see the consistency of the visitor's answers. The greater the value of Cronbach's alpha (the closer to 1, the more reliable the questionnaire is. In this study, the reality test uses the help of SPSS 26 software with Cronbach's Alpha technique to test whether a questionnaire is reliable or not. The questionnaire is said to be reliable if the value of Cronbach's Alpha > 0.6.

Reliability Statistics

Cronbach's Alpha	N of Items
,784	30

Fig. 1. Reliability Test Results

From the results of the calculation of the reliability test of the performance level, it is known that the Cronbach's Alpha value is 0.784 > 0.6, so the relationship between the results of the questionnaire is said to be reliable or closely related. The data from the respondents' answers was described in 2 stages, namely measurement of each variable, namely Usefulness, Ease of use, Ease of Learning and Satisfaction and measurement of all variables to find the average and get the value of the usability level of the four variables.

Table 3. Usefulness Variable Research Data

No.	Statement	Total Score
1	This app helped me be more effective	1448
2	This app helps me be more productive	1439
3	This app is useful	1458
4	This app can better control my daily activities	1229
5	This app makes it easier to get something I want to accomplish	1287
6	This app saves me more time	1293
7	This app meets my needs	1612
8	This app does whatever I ask	1271
	Sum	11037
	Maximum score : 5 × 8 × 400 = 16000	16000
	$\boldsymbol{Pk(\%) = \frac{jumlah\ skor\ per\ variabel}{skor\ maksimal\ per\ variabel} . 100\%}$	**68,98 %**

Based on table 3, it is known that the feasibility level of the usefulness variable is 68.98%, which is included in the feasible category.

Table 4. Ease of Use Variable Research Data

No.	Statement	Total Score
9	The app is easy to use	1324
10	The app is simple to use	1438
11	This application is easy to understand/use (*user friendly*)	1302
12	This app requires the least amount of steps to achieve my desired goals with this app	1230
13	The app is flexible	1447
14	Using this app is quite easy	1434
15	I can use this app without written instructions	1454
16	The app is always consistent	1270
17	New and existing users will love this app	1274
18	I was able to get out of the problem with this app quickly	1255
19	I can use it without any problems at any time	1280
	Sum	10644
	Maximum score : 5 × 11 × 400 = 22000	22000
	$\boldsymbol{Pk(\%) = \frac{jumlah\ skor\ per\ variabel}{skor\ maksimal\ per\ variabel} . 100\%}$	**48,38 %**

Based on table 4, it is known that the feasibility level of the Ease of Use variable is 48.38% which is included in the sufficient category.

Table 5. Research Data on Ease of Learning Variables

No.	Statement	Total Score
20	I learned this app quickly	1432
21	I easily remember how to use this app	1618
22	It is easy to learn to use this app	1425
23	I quickly became skilled using this application	1450
	Sum	5925
	Maximum score : 5 × 4 × 400 = 16000	8000
	$\boldsymbol{Pk(\%) = \frac{jumlah\ skor\ per\ variabel}{skor\ maksimal\ per\ variabel} . 100\%}$	**74,06 %**

Based on table 5, it is known that the feasibility level of the Ease of Learning variable is 76.06%, which is included in the feasible category.

Table 6. Satisfaction Variable Research Data

No.	Statement	Total Score
24	I'm satisfied with this app	1255
25	I would recommend this app to my friends	1486
26	The app is fun to use	1476
27	This app works as I mean	1646
28	This app is awesome	1285
29	I feel like I should have this app	1311
30	The app is convenient to use	1479
	Sum	9938
	Maximum score : 5 × 7 × 400 = 14000	14000
	$\boldsymbol{Pk(\%) = \frac{jumlah\ skor\ per\ variabel}{skor\ maksimal\ per\ variabel} . 100\%}$	**70,98 %**

Based on table 6, it is known that the feasibility level of the satisfaction variable (Satisfaction) is 70.98%, which is included in the feasible category. After analyzing each variable, the four variables will be searched on average from the usability level of user satisfaction with the Maxride application.

Table 7. Overall Usability

No.	Variable	Value
1	Usefulness	68,98
2	Ease *of Use*	48,38
3	Ease *of Learning*	74,06
4	Satisfaction	70,98
	Sum	**262,41**
	$(\%) = \frac{\boldsymbol{jumlah\ skor}}{\boldsymbol{4}}$	**65,60 %**

Based on the test results in the table above, it can be seen that the overall feasibility level of the Maxride application is 65.60%, which is included in the feasible category. This means that the Maxride application is rated by respondents as a product worthy of use.

5. Conclusion

5.1 Conclusion

Based on the analysis and discussion that has been carried out, conclusions can be drawn, which are as follows:

1. The use of the Maxride application has a level of satisfaction with a value that is worthy of being used by customers because it has a value of 65.60%.
2. Of the four usability variables, the variable that received the lowest total score was the Ease of Use variable, which was 48.38% in the sufficient category. These variables have a value that is far from the expectation of a good usability value so that it can affect the level of satisfaction with the use of the application. This needs further improvements, especially in terms of ease of use or Ease of Use.

5.2 Suggestion

Based on the research that has been conducted, there are recommended suggestions for companies, as follows:

1. The results of this study can be used as a reference for PT. Maxride Indonesia to find out what attributes need to be improved and what attributes the implementation has been in accordance with the interests and meet customer expectations.
2. To fix some user satisfaction that is lacking from using the Maxride app. In this research, what must be carried out by the company PT. Maxride Indonesia should fix the poor navigation application system, the application display is not intuitive, difficulties in overcoming problems when using the application, as well as technical problems such as reorders and applications that often close by themselves (force close) so that users can use the application easily.
3. Research using the USE method *Questionnaire* to analyze the usability level of the Maxride application is used for the first time. Therefore, this study can provide a reference for future studies.

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