



vol. 16 / 2023



The 7th International Conference on Science Technology

organized by
Faculty of Social Science and
Law Universitas Negeri Manado and
Consortium of International Conference
on Science and Technology

The Innovation Breakthrough in Digital and Disruptive Era

User Interface Design for Grab Merchant Application Version 4.18.0 with Usability Approach

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Abstract. The development of technology is increasingly rapid, providing convenience in various aspects of activities. This has also penetrated business actors so that they can easily access the products and services they offer to many customers. This can take advantage of current technology through smartphone applications. Grab Merchant is an application that offers food and beverage orders that are delivered according to customer needs. However, we found problems with the usability of application features, especially controlling stock from the user side. The purpose of this study is to measure usability of the Grab Merchant application, researchers use the Use Questionnaire method to propose design user interface. The user interface design that is built is an improvement on features in accordance with the results of the distributed questionnaire. The research focus consists of 3 basic aspects of usability measurement, namely effectiveness, efficiency and satisfaction. These three aspects are measured by indicators of Usefulness, Ease of Use, Ease of Learning and Satisfaction in the Use Questionnaire method. As a result, improvements were made to the user interface design of the interface on the features and there was an increase in these 3 indicators.

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1 Page layout

Online food delivery service is one of the alternative solutions in meeting consumer needs at this time [1–3]. In fact, many online services have been offered by business people in expanding their business space, not least following changes in conditions and the environment. Grab Merchant is an application that offers online food delivery service [4]. This application provides services that can provide convenience [5] for business actors to be able to sell food and beverages in an easy way too many customers through a smartphone application. This application can help to share access as wide as possible to those who want to innovate culinary without a large capital. Culinary businesses that adopt online food delivery services are not required to have additional employees and may even require a relatively small number of employees [6]. In terms of facilities, business people do not need to provide a large room to meet the number of buyers who come. This is because the service has changed its function from eating in to a delivery service. The need is only on vehicles for delivery services to consumers. So they can reduce the cost of paying employees, and also don't need a large additional space.

During the rapid development of the Grab Merchant Application, which has been downloaded 5 million times, in reality there are still shortcomings that are felt from the user's side. Some user complaints obtained from Google Play Reviews are reviewing the features of receiving orders, controlling stock and tracking orders. One of the problems that have been mentioned is a problem in terms of usability. The Grab Merchant application needs to be explored further to find out the usability level of the controlling stock feature from the user's perspective, especially for indicators of Usefulness, Ease of Use, Ease of Learning and satisfaction.

Usability is an attribute in appraising how easy to use [7]. An application can be said to continue to be used by users if aspects such as usability are considered [8]. The high usability value of the application can be a reflection or reference whether the application can be useful for users or not. The purpose of usability testing is to identify application usability problems [9]–[13], collect qualitative and quantitative data, and determine user satisfaction with a product [14][15]. With this, it can be seen the level of ease of users in completing tasks when using the Grab Merchant application, the speed level of users in finding the information needed, the level of errors made by users, and the level of satisfaction, so that it can be a reference in improving the controlling stock feature.

Based on these constraints, this research focuses on how to deal with difficulties in using the stock control feature on the Grab Merchant Application. Because of the many complaints, especially on these features. In this study, researchers will measure the usability of the Grab Merchant application using the Use Questionnaire method to propose an interface design according to the perceived constraints. This research will focus on 3 basic aspects of usability

measurement, namely effectiveness, efficiency and satisfaction. These three aspects are measured by indicators of Usefulness, Ease of Use, Ease of Learning and Satisfaction in the Use Questionnaire method. For aspects of efficiency and effectiveness using indicators of Usefulness, Ease Of Use, and Ease Of Learning. While the satisfaction aspect uses the Satisfaction indicator.

2 Research Methods

The research procedure carried out is summarized in the system diagram in Figure 1. Figure 1 is an illustration of the usability research flow of the grab merchant application that will be carried out by researchers. The process begins with the problem identification stage, where this stage contains the formulation of the problem under study, the objectives and benefits of the research, where this research focuses on the usability of using the Grab Merchant application by users, then determines the level of usability of each user using usability testing. This is done to determine improvements to the Grab Merchant application that are in accordance with the level of convenience and comfort by the user. Followed by the next stage is to make preparations, the process is carried out by collecting data using an initial questionnaire. The process is carried out using less than 15 respondents already able to show the existing problems. If a test has limited time and funds, using 4-5 respondents is a good choice because the test results can reach 85%.

The data collection stage was carried out to obtain data according to research needs, where data were obtained by distributing offline questionnaires. The data processing stage is carried out to obtain results from the data that has been obtained by researchers. The process carried out at this stage includes;

- recapitulating the data that has been obtained selecting randomly 10 of the 20 respondents whose data has been obtained.
- conducting a usability assessment of the use of the Grab Merchant application using usability testing.
- analyzing the results of the usability level assessment, and
- Determine the improvement of the Grab Merchant application according to the user's wishes and based on the user's convenience.

The last stage is to analyze the overall results of the data processing process and then adjust it to the method used.

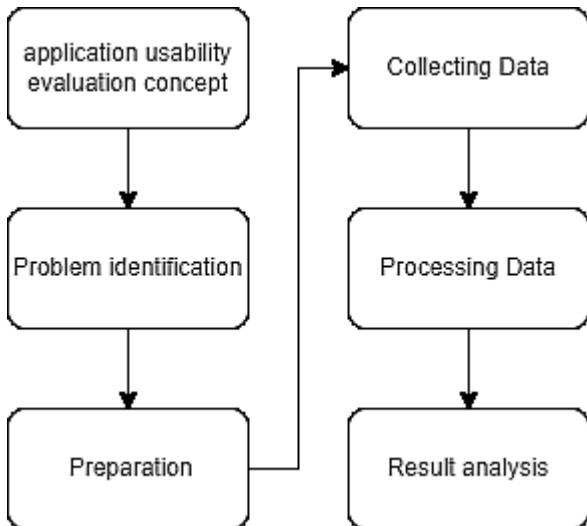


Fig. 1. System design

3 Result and Discussion

3.1 Problem Identification

Grab Merchant is a virtual outlet or online store owned by a seller. Orders are made online through the application and the Seller will process the order. After the order is received, the Seller is required to notify GRAB (driver) no later than 5 minutes if the Seller is unable to fulfill an order, so that GRAB can notify the End User immediately. Grab merchant only applies to Takeaway Services for all food, beverage and/or retail/retail products and Seller will do everything necessary or desirable to give full effect to Takeaway Services in all Seller locations listed in the Commercial Terms and Conditions. Payments are made using e-money and the disbursement is realtime 1 x 24 hours.

3.2 Collecting Data

The test was carried out around the city of Bojonegoro. Questionnaires will be given to respondents which are used to assess the level of usability of the Grab Merchant application with 4 indicators of Usefulness (8 questions), Ease Of Use (11 questions), Use Of Learning (4 questions), and Satisfaction (7 questions). In Table 1 is a table that contains the scale values used in the questionnaire in usability assessment on the Grab Merchant application.

Table 1. Likert scale value

Value	Description
1	Strongly Disagree
2	Don't agree
3	Slightly Disagree
4	Neutral

Value	Description
5	Slightly Agree
6	Agree
7	Strongly agree

The respondents in this study were users of GrabMerchant. Grab merchant users themselves can be the owner and also the cashier on duty. The number of respondents used is 10 people who are randomly selected from 20 respondents.

3.3 Processing Data

Data collection is done offline by distributing questionnaires in the Bojonegoro area. The data obtained is related to the Grab Merchant application which is focused on controlling stock features. Controlling stock itself is a feature that must exist in business management. This feature can find out the available stock which can facilitate the sales process and provide information to buyers of available stock. The shortcomings that occur in the controlling stock feature in the GrabMerchant application are as follows. In Table 2 are the obstacles faced by users of the Grab Merchant application which were obtained after conducting interviews and also conducting questionnaires to Grab Merchant users.

Table 2. Constraints in the grab merchant application.

Name	Description
Features of managing remaining stock	Stock settings that cannot be controlled by merchants when stock runs out or stock availability information
Close the menu that has run out	When the menu or stock is out of stock there is no
Return/refund orders	This return often occurs due to the error of applications that cannot be claimed from drivers or customers so the merchant has to bear it
Order cancellation	Cancellation of orders that can be done both ways and via automatic unconnected confirmation of menu availability
Order notification and remaining stock	Often notifications don't appear when getting an order
Receive order button and connect to menu stock directly	There is no button to accept or reject orders received
Added new restaurant / branch feature with additional remaining stock information	Add branch to do like new registration and menu control automatically
Change menu feature	When the menu is empty we can choose another menu

Name	Description
Order database backup	Provide order backup data to make it easier
Settings and control menu	Features that can facilitate setting and control

Data in this research are 10 respondents taken from 20 existing respondents. This data is determined from respondents who use the Grab Merchant application.

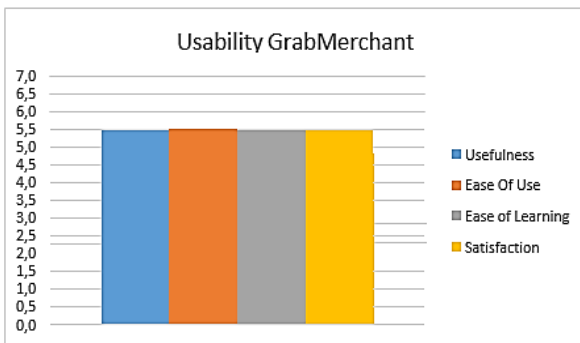


Fig. 2. Grab Merchant app rating chart

Figure 2 is a graph of the usability of the gobis application where the usefulness value is 5.45, Ease Of Use is 5.55, Ease Of Learning is 5.5 and satisfaction is 5.45. In this assessment, what is obtained is a good value with an average of 5.45.

3.4 Result Analysis

Based on the results of application usability with the questionnaire distribution technique, improvements were made to the application to produce more useful applications.

- Proposed improvements to the Grab Merchant Stock Controlling User Interface Design, this design was assisted by a questionnaire detailing the constraints on the controlling stock feature. The constraints faced are displayed constraint data that can be used as a reference as a user interface design design in the controlling stock feature shown in Table 3

Table 3. Reference to design of application stock controlling feature.

Name	Description
Features of managing remaining stock	Stock settings that cannot be controlled by merchants when stock runs out or stock availability information
Close the menu that has run out	When the menu or stock is out of stock there is no quick action button to indicate that the stock is out
quick action button to indicate that the stock is out	Often notifications don't appear when getting an order

Table 3 are the obstacles faced by users of the Grab Merchant application which are used as a basis or reference as a user interface design for controlling stock features

- Proposed improvements to the User Interface Design, the design of the user interface that was carried out after the obstacles experienced by the user is shown in Figure3. In Figure 3 is an image of the first improvement for the menu feature that is in the middle to be moved to the bottom of the display to make it easier when viewing or changing the controlling stock.

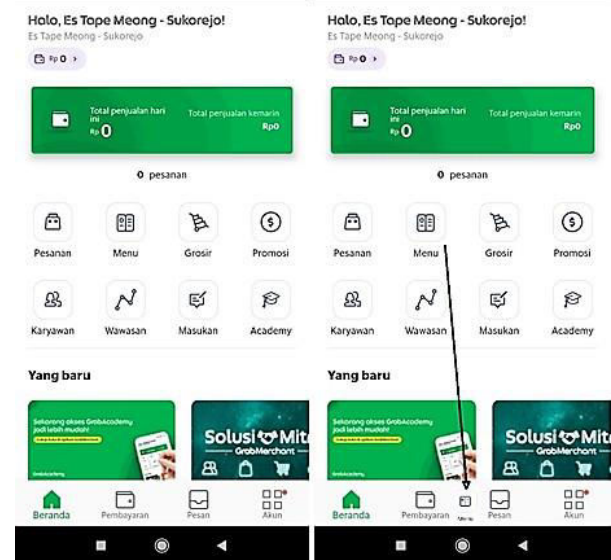


Fig. 1. The first improvement proposal on the app

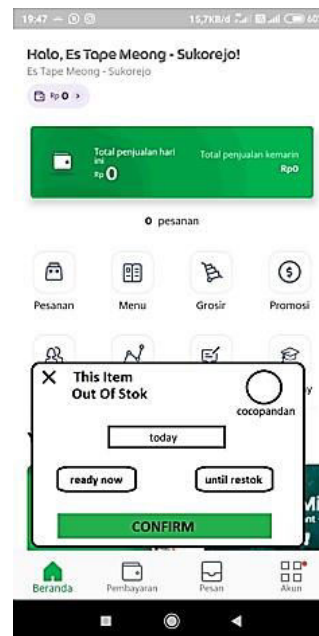


Fig. 4. Second improvement proposal on the app

Figure 4 is the second improvement on the Grab Merchant application, which will appear a notification when the stock is out of stock. And also provide quick action button to confirm stock availability. Figure 5 is the third improvement image which contains improvements to the appearance of available stock information when entering the menu list page. And also to provide quick action, namely adding an out

button on each existing menu when it is known that the menu is no longer available.

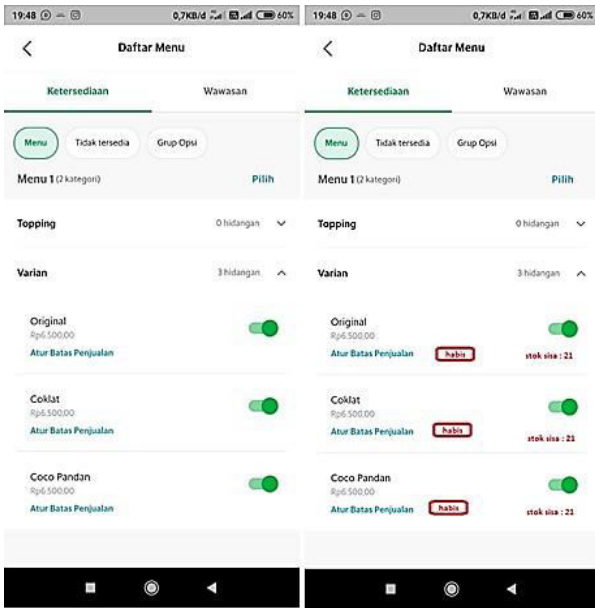


Fig. 5. Third improvement proposal on the app

- Usability Assessment after repair, Usability assessment of the controlling stock feature in the Grab Merchant application is shown in Figure 6. which was obtained after making improvements to the Grab Merchant application where there were improvements in every aspect. Where it is obtained for the usefulness value of 5.8, Ease Of Use 6, Ease Of Learning 6 and satisfaction

6.2. In this assessment, the gobis obtained is a good value with an average of 6. Figure 7 is a comparison chart before and after the proposed improvement. It can be seen that there is an increase in the usability value of the four indicators that there is an increase in each of the indicators.

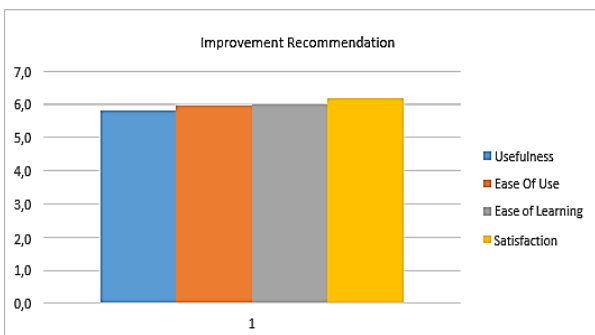


Fig. 6. Improvement recommendation chart

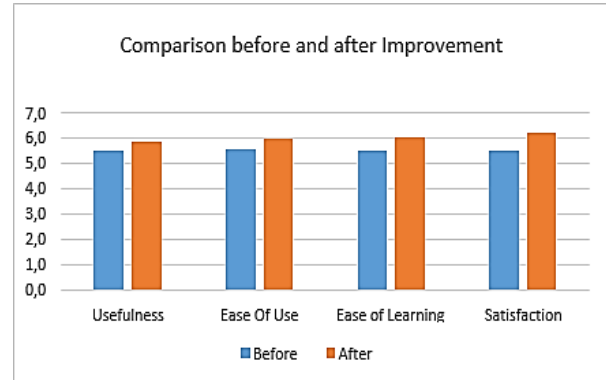


Fig. 7. Comparison graph before and after proposed improvements

Basically, the resulting product is a service that customers need regarding functionality and utility [7]. Thus, it can be said that the success of a product in the market can be determined by the aesthetic appeal, pleasure, and satisfaction it provides to customers. This is what underlies the research that application usability testing is applied to determine the level of success. And propose an application interface design to improve user satisfaction.

4 CONCLUSION

After conducting research and data processing on the Grab Merchant application in the bojonegoro area, it was found that the usability value of the Grab Merchant application version 4.18.0 with users in bojonegoro using 4 indicators, namely usefulness 5.45, Ease Of Use 5.55, Ease Of Learning 5.5 and satisfaction 5.45. In the study, it was found that there are still quite a lot of obstacles experienced by users of this application, especially on the controlling stock feature, where some of them have been discussed with the controlling stock feature. After the distribution of questionnaires and interviews, it turned out that there were many obstacles that were obtained and suggestions for improvements were found that were used to make the interface design design on the controlling stock feature.

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