Analysis of Knowledge Management System in Grabb Mobile Application Based On Usability

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Abstract. Grabb mobile application is a tool that is often used by people to travel. Each will travel then grabb will be ordered and pickup in front of the house and delivered to the destination location according to the address written on the application. Much knowledge can be disseminated through this Grabb application. Among them Grabb car when going to go using a car, grabbike, service and others. The method in this study uses the adoption of a knowledge management system life cycle (KMSLC). Where the stages used are consists of Analysis of Existing Infrastructure Evaluation, Knowledge Capture, Implement the KM system, Evaluation. The steps taken are system analysis, knowledge mapping in the application, the results of implementation and evaluation using usability with 10 respondents through the adoption of Software Usability Measurement Inventory (SUMI). The results of SUMI's Usability are effectiveness with a value of 90, efficiency 70 and satisfaction 70. By looking at these results, the mobile grabb application is included in the good category because the value of usability is above average.

1. Introduction
The use of mobile phones continues to grow and increase rapidly starting from 2G, 3G and 4G [1]. So that demands an all-round internet usage. One issue that is booming is the use of mobile-based vehicles. Where the customer or user can order a vehicle and pick it up at the home dipean. One of the applications that is rife in Indonesia is Grab. Where Grab there are many facilities, namely grab food, grab cars, Grab bikes and others. To know everything related to Grab, knowledge is needed. Where this knowledge is called knowledge management system. One application of knowledge management systems is the knowledge map. For this reason, the writer will map the knowledge map on Grab using the adoption of the knowledge management system method. Where in the system there is usability with a minimum of 10 respondents to prove that the application is really needed and useful for the community [2].

2. Theoretical Basis
2.1 Related research
This study considers the importance of KMS in all fields, especially small businesses and medium businesses [3]. So it is necessary to understand the KMS trend by studying journals from several decades [4]. Other research related to KMs also explains the importance of KMS in a company through four stages of knowledge transformation namely socialization, externalization, combination and internalization [5]. Besides that, the application of KMS also needs to share knowledge about a particular product in the company, for example [6]. Through certain products, it is necessary to contribute users by utilizing technology [7]. The application of KMS in other fields is smart farming where KMS plays a role in storing, editing and verifying crop production [8]. To improve the quality of a system, it is necessary to
have usability, there are several studies related to usability, namely Research entitled Application of Usability Testing Method in Evaluation of Prabumulih City Government Website, the results of this study show that 100% learnability, 66.66% efficiency, memorability 58.33%, 53.33% satisfaction that can be used by users [9]. Research entitled Measurement of Usability of Financial Information Systems Case Study: Ambassador of Internal Transaction Discourse (DuWIT), The results of this study indicate usability above 72% so that this application is declared user friendly[10].

2.2 Knowledge Management System
Knowledge management is also the process of managing knowledge by capturing, storing and disseminating knowledge using information technology media [11]. Knowledge Management consists of software systems as well as integrating and disseminating information for users for the learning process and making decisions [12].

2.3 Usability
To increase the usability of a system for the community, it is needed Usability of the system. In this study the authors used the simplest usability using the SUMI (Software Usability Measurement Inventory) questionnaire was used, a questionnaire developed by Cork Collage University [13]. Usability testing is a bond between the user and the system used where the user will use the system and find flaws [14].

3. Method
The system development method used is the method adopted from the KM System Life Cycle found in [15]. The method in Figure 1 consists of Analysis of Existing Infrastructure Evaluation, Knowledge Capture, Implement the KM system, Evaluation

![Figure 1. KM System Life Cycle](image)

3.1 Analysis Evaluate Existing Infrastructure
This Evaluate Existing Infrastructure process is the first stage of the KM System Life Cycle. This process is carried out by looking at the characteristics of mobile information systems users..

3.2 Knowledge Capture
Knowledge Capture is done by creating a knowledge folder on the application. Where each map is integrated and interconnected

3.3 Implement the KM system and usability evaluation
Implementing the KM system is done by doing a system screenshot.

3.4 Evaluation
Evaluation using the SUMI (Software Usability Measurement Inventory) questionnaire with 10 respondents.

4. Result and Discussion
4.1 Analysis Evaluate Existing Infrastructure
Analysis of system requirements, namely through analysis of data about Explore Grabb.

4.2 Knowledge Capture
The map of knowledge designed in this system consists of part Explore Grabb Figure 2.
4.3 Implement the KM system and usability evaluation
4.4 Evaluation

The next stage the respondents were asked to provide responses to each question from the SUMI questionnaire [14]. The score used for each response is different, 4, 2, 0 for the agree, don't know and disagree responses to the categories of effectiveness, efficiency and satisfaction. The number of questions given to respondents consisted of 30 questions that had 10 questions in each category. After that the results in each category will be multiplied by 2.5. SUMI questionnaire measurement in the form of an assessment with a scale of 0-100. The final score of each category uses the median on each ordered value given by the respondent to get the usability results of a prototype system. According to the provisions of SUMI, if the median measurement results are less than 50, this means that they are still below average. It can be seen in Table 1,2,3,4 that the median score of each category is above the average SUMI provisions of 90, 90, and 70 meaning that the usability on the prototype of this system is good.

| Table 1. Effectiveness category |
|--------------------------------|
| Kategori Efektivitas |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 100 | 80 | 95 | 75 | 90 | 95 | 80 | 95 | 90 | 80 |

| Table 2. Efficiency category |
|-------------------------------|
| Kategori Efisiensi |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 90 | 100 | 65 | 70 | 100 | 85 | 45 | 65 | 70 | 40 |

| Table 3. satisfaction category |
|--------------------------------|
| Kategori Kepuasan |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 90 | 82.5 | 90 | 60 | 65 | 80 | 70 | 60 | 70 | 65 |

| Table 4. The results of SUMI questionnaire calculations |
|--------------------------------------------------------|
| User | Kategori Efektivitas | Efisiensi | Kategori Kepuasan |
|------|----------------------|-----------|------------------|
| 1    | 75 | 40 | 60 |
| 2    | 80 | 45 | 60 |
| 3    | 80 | 65 | 65 |
| 4    | 80 | 65 | 65 |
| 5    | 90 | 70 | 70 |
| 6    | 90 | 70 | 70 |
| 7    | 95 | 85 | 80 |
| 8    | 95 | 90 | 82.5 |
| 9    | 95 | 100 | 90 |
| 10   | 100 | 100 | 90 |
| Med  | 90 | 70 | 70 |

5. Conclusion

This research is an analysis of the knowledge management system with a usability approach to the system. The system analyzed is grabb mobile application. The analysis used uses the adoption of the Knowledge Management System Life Cycle (KMSLC) method with the usability approach through Software Usability Measurement Inventory (SUMI) using a minimum of 10 respondents. Usability results found that the grabb application used is in the good category where the results of the questionnaire show the number 90 for effectiveness, 70 for efficiency and 70 for satisfaction, the results of the respondents above average, the application used is in the good category.
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