Usability Measurement of Classroom Booking Information System Integrated with Course Scheduling Information System

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Abstract. The purpose of this research is to help users in the information systems department based on test results. The method used is qualitative research, by giving questionnaires, observations, and previous research. Based on preliminary test results, it is expected that this measurement system can help users in this case lecturers and secretariat in the information systems department to determine the reservation of available classrooms without having to order classes manually. Through the class booking information system it is expected that the secretariat can easily record class booking data and easily oversee the use of classrooms to avoid disputes between lecturers caused by the use of classrooms from other lecturers who are not entitled to classrooms.

1. Introduction
A system with a low level of usability is usually ultimately will be left by the user. In general, currently in the development and implementation of information systems or software carried out by many parties, usability testing is rarely carried out. According Jacob N “Usability is a quality attribute that assesses how easy user interfaces are to use [1]. The word "usability" also refers to methods for improving ease-of-use during the design process”. Usability is the quality attributes describe or measure how easy the use of an interface. The word "Usability" also refers to a method for increasing ease of use during the design process. Most of the direct information system is implemented and used without ever having examined the extent to which the systems usability from the users [2].

This condition encourages the design of simple research, to see the extent to which the usability of an old system that is updated can be used by the user properly. In this case the renewal of the classroom booking system that integrates with course scheduling. According to Arnold M L “Usability appears to consist of usefulness and ease of use, and usefulness and ease of use are correlated [2]. Each factor in turn drives user satisfaction and frequency of use”.

Based on the results of the initial test, it is expected that the measurement of this system can help users in this case the lecturer and secretariat in the information system department to determine the classroom booking of available space without having to classroom booking manually. To resolve the above problems research had done and propose to develop a system call Classroom Booking Information System Integrated with Course Scheduling. Through classroom booking information system is expected secretariat can easily do classroom booking data recording and easy in conducting supervision related to the use of classroom to avoid the dispute between lecturers caused by the use of classroom by other lecturers who are not entitled to the classroom.
2. Method
Technique and procedure method for retrieving data used are:

2.1. Questionnaire
The questionnaire is a research tool or survey consisting of a series of written questions, aimed at getting responses from selected groups of people through personal interviews or by post. Questionnaires will be given to users of the classroom booking information system, namely the secretariat of the information system department and the questionnaire used was USE Questionnaire [2,3].

2.2. The Primary Data Sources
2.2.1. Observation
Observation is a technique of collecting data through direct observation of symptoms or events that occur in the object of research. The author makes observations to observe location of the study, namely the information system department [4].

2.2.2. Interview
Interviews are techniques of collecting data through face-to-face and direct question and answer between data collectors and parties related to the object of research. In this study the interviews were secretariats of information systems department [5].

2.3. Secondary Data Sources
Secondary data source obtained by techniques of documentation. The documentation is a technique of collecting data by way of collecting the documents relating to the object of research. Documents collected as tuition schedules, events lectures, data spaces, data classes, data faculty and curriculum.

In order to avoid errors in interpreting the variables analyzed or to limit the problems in this study, it is necessary to explain the operational definitions of these variables [6, 7].

1. Usefulness is the extent to which the classroom booking Information System has use value and has functions that suit the needs or expectations of the user.
2. Ease of use is the extent to which the classroom booking Information System can be used without having to experience difficulties either from how to use, people who use it or in terms of error repairs.
3. Ease of learning is how far the classroom booking Information System can be learned, remembered and mastered easily and quickly.
4. Satisfaction is the extent to which users have feelings of pleasure, satisfaction, want to have, and objectively provide a good assessment of the classroom booking Information System made.

All research items are measured by the Likert scale in the score 1-7 with the score category: Score 1 = Strongly Disagree, until Score 7 = strongly agree [8].

3. Results and Discussion
Usability measurement is done to find out the form of user acceptance of the classroom booking information system that was built. As for knowing the level of usability, it will first be calculated on the average value for each variable, namely usefulness, Ease of use, Ease of learning and Satisfaction [9].

Users of this classroom booking information system are secretaries and secretariats of information system department. However, for the process of making a class schedule, it is conducted by the secretariats, so that the respondents in this usability assessment are two respondents. The following are the results of the calculation of each research variable in the form of a calculated average (mean) [10]:

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1. Usefulness
The following is a questionnaire assessment table for usefulness variables, shown in Table 1.

Table 1. Assessment of Questionnaires for Variable Usefulness

| Usefulness | Question | Value |
|------------|----------|-------|
|            | P1       | 7     |
|            | P2       | 7     |
|            | P3       | 7     |
|            | P4       | 5     |
|            | P5       | 6     |
|            | P6       | 7     |
|            | P7       | 7     |
|            | P8       | 6     |
| **Average**|          | **6.5**|

Based on the results of the calculation above, the average calculation for the usefulness variable or usefulness is worth 6.5. This value indicates that the Classroom Booking information system built is very useful.

2. Ease of Use
The following is a table of the assessment questionnaire for Ease of Use variables or ease of use, shown in Table 2.

Table 2. Questionnaire for assessment of Variable Ease of Use.

| Ease of Use | Question | R1 |
|-------------|----------|----|
|             | P1       | 6  |
|             | P2       | 6  |
|             | P3       | 6  |
|             | P4       | 6  |
|             | P5       | 6  |
|             | P6       | 6  |
|             | P7       | 6  |
|             | P8       | 6  |
|             | P9       | 6  |
|             | P10      | 6  |
| **Average** |          | **6**|

Based on the results of the calculation above, the average calculation for the ease of use or ease of use variable is 6. This value shows that the Classroom Booking information system built is easy to use.

3. Ease of Learning
The following is a questionnaire assessment table for Ease of Learning variables or ease of learning, shown in Table 3.
### Table 3. Assessment of Questionnaires for Ease of Learning Variables.

| Ease of Learning | Question | R1 |
|------------------|----------|----|
| P1               | 6        |
| P2               | 6        |
| P3               | 6        |
| P4               | 6        |
| **Average**      | **6**    |

Based on the results of the above calculations, the average calculation for the ease of learning variable or ease of learning is worth 6. This value shows that the Classroom Booking information system built is easy to learn.

### 4. Satisfaction

The following is a questionnaire assessment table for variables Satisfaction, shown in Table 4.

### Table 4. Questionnaire Assessment Table for Variables Satisfaction.

| Satisfaction | Question | R1 |
|--------------|----------|----|
| P1           | 6        |
| P2           | 7        |
| P3           | 6        |
| P4           | 6        |
| P5           | 6        |
| P6           | 6        |
| P7           | 7        |
| **Average**  | **6.28** |

Based on the results of the above calculations, the average count for Satisfaction or Satisfaction variable is 6.28. This value indicates that the user is satisfied with the Classroom Booking information system built is very satisfaction.

Based on the tables above can be calculated the average value of all variables that will be the value of usability. The all value of usability, shown in Table 5.

### Table 5. Average Value of All Variables.

| Variable           | Average value per variable |
|--------------------|-----------------------------|
| Usefulness         | 6.5                         |
| Ease of Use        | 6                           |
| Ease of Learning   | 6                           |
| Satisfaction       | 6.28                        |
| **Average of all Variables** | **6.19**                  |

Based on the results of the calculation above, the calculated average for all research variables or usability values is 6.19 [10].
4. Conclusions
The conclusion that can be taken through this research is this application, the users feel more helpful. Based on the final value of the very high even usefulness parameter, which is 6.5. This application is also very easy to use by the users. This can be proven by looking at the final value of the average Ease of Use parameter which is also fairly high, 6 out of 7. Users also do not feel troubled by using this application due to the use of this application are quite easy and simple. Based on the final value of the average calculation of Ease of Learning parameters, which is 6 of 7, the value of the satisfaction of using this application is considered quite high, which is worth 6.28 of 7. This number is obtained from the calculation of the final value of the average parameter of satisfaction.

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