Analysis of the User Experience of Soegiri Mobile Application with the UEQ Method

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Abstract. *Health is a long term investment and something that is very important for all human beings.. The importance of health services for everyone, makes the hospital have an important role in providing health services for the community. RSUD Dr. Soegiri is the largest government-owned hospital in Lamongan which has an application to support health services at the hospital. this is an effort made by the hospital to increase patient satisfaction. However, there are some people who still don't use Soegiri Mobile Application which should make it easier for patients to get health services. Therefore, it is necessary to analyze the user experience of the Soegiri Mobile application. The purpose of this study was to evaluate the user experience of the Soegiri Mobile application by outpatient. The method used in this research is the User Experience Questionnaire (UEQ). The sample in this study was obtained randomly from users of the Soegiri Mobile application with a sample size of 101 respondents. There are six aspects assessed in the UEQ, namely attractiveness, perspicuity, efficiency, dependability, stimulation, and novelty. The six aspects have a excellent value category in the aspect of dependability, for the aspects of attractiveness, perspicuity, efficient, stimulation, and novelty are in a good category.*

Keywords—Hospital, RSUD Dr. Soegiri, Soegiri Mobile, User Experience Evaluation, User Experience Questionnaire.

1. INTRODUCTION

Technology has been widely used for processing data and service provision because it has many advantages including speed, accuracy and service quality improvement. Current technological developments experienced very rapid progress mobile technology in the form of applications [1]. Development of information technology and communication has created a service model health through the application. Applications can help patients more easy and practical in getting health services at the hospital.

RSUD Dr. Soegiri is the largest government-owned hospital in Lamongan which has an application to support health services. the hospital's application that is used to support its services in RSUD Dr. Soegiri is called Soegiri Mobile. The application must be reviewed to determine patient satisfaction as an application user to improve health services. Providing excellent and maximum service will increase the satisfaction of patient.

2. LITERATUE REVIEW

Reviews about Soegiri Mobile and user experience will be discussed on this section

2.1 Soegiri Mobile

Soegiri Mobile is an application used by patients to get services easily at RSUD Dr. Soegiri. The application has many features that can be used, such as online registration, information on poly queues, doctor schedules, room availability, surgery schedules, and drug delivery. The various advantages of Soegiri Mobile are able to attract more people to install the Soegiri Mobile application.

2.2 User Experience

User experiences (UX) the overall interaction from the aspect of the user with the company, its services, and its products. The first requirement of a good user experience is meeting customer needs properly. Then it has simplicity and luxury that can make these products fun to use and own [2]. User Experience (UX) aims to develop services to make it easier for users to use. The main thing in User experience (UX) is that it can be used as a liaison between the user and the program so that it can provide a valuable experience to its users. User Experience (UX) makes a website or application easier to understand so that it can be used by its users [7].

User experience is not about how the components of a product or service work but how the product or service works from an outside perspective when the user is interacting [3]. The important role of User Experience (UX) is to determine the success or failure of a product. User experience focuses on the aspects of experience, perception, and value meaning from human and product interactions. User experience includes the ease of the system to learn, efficiency in use, fun, and so on. The essence of UX is to ensure that users find value in something that is given to them [4].

3. METHODOLOGY

The source of data used in this study is primary data obtained by conducting a survey of outpatient at RSUD Dr. Soegiri. The survey was conducted by interview. The data collection technnique in this study used purposive sampling by selecting respondents based on certain objjectives and considerations. Because the population is unknown, the

sample calculation uses the formula (Lemeshow, 1997) [5]as follows.

$$n = \frac{Z^2_{1-\frac{\alpha}{2}} P(1-P)}{d^2}$$ (1)

Is known:

n : Minimum number of samples

Z : Normal distribution quartile value with significant level $\alpha = 5\%$

P : Maximum estimation (P=0,5)

d : Sampling precision/error rate

So that:

$$n = \frac{Z^2_{1-\frac{\alpha}{2}} P(1-P)}{d^2}$$

$$n = \frac{(1,96)^2.0,5.0,5}{(0,10)^2}$$

$$n = 96,04$$

From the results of the calculation above, it is obtained that the minimum number of samples to be takan is 96 respondents.

3.1 Experiment Tools

User Experience Questionnaire has 26 items questions which are divided into six aspects os assessment namely:

a. Attractiveness

Attractiveness describes about the overall impression of a product.

b. Perspicuity

Perspicuity describe about how much clarity a product has, for example easy to understand or difficult to understand.

c. Efficiency

Efficiency describe about how much the user can complete the task without great effort or efficiently when using the product.

d. Dependability

Dependability describe about the user can control the interaction when using the product.

e. Stimulation

Stimulation describe about how much the user's motivation and desire to use the product.

f. Novelty

Novelty describe about how innovative and creative a product is so that it can attract the attention of users

The User Experience Questionnaire (UEQ) has 26 question items which are divided into 6 aspects assessment. In filling out the questionnaire, the questions that point to the right are not always more positive, but there are also questions that point to the right that are more negative. This is because the respondent can fill out the questionnaire carefully and focus according to the experience that has been felt [6].

4. RESULT

The results of the analysis of the user experience of Soegiri Mobile application by outpatients are written in this section.

4.1 Consistency Scale Analysis

Analysis on the scale consistency is known to acces the correlation between each question item on each aspect of the assessment. UEQ defines a Cronbach alpha Standard Deviation value of more than 0.7, sp the data is quite consistent.

Tabel 1. UEQ Consistency Scale

UEQ Scales	Cronbachs Alpha Consistency
Attractiveness	O,867
Perspicuity	0,825
Efficiency	O,722
Dependability	0,794
Stimulation	0,806
Novelty	0,730

The Cronbachs alpha standard deviation values for the six aspects of the UEQ assessment for the KAI Access application are all more than 0.7, which means that the data is quite consistent.

4.2 User Assesment Soegiri Mobile

The results of the Soegiri Mobile application user experience assessment with 26 UEQ items which have 6 assesment aspects. The following are the results of the UEQ item constructuion shown in table 2.

Table 2. UEQ Scale Structure

Item	Mean	Variance	Std. Dev	No.	Left	Right	Scale	
1	2,0	0,9	0,9	101	annoying	enjoyable	Attractivenss	
2	2,1	1,0	1,0	101	not understandable	understandable	Perspicuity	
3	1,6	1,8	1,4	101	creative	dull	Novelty	

It em	Me an	Varia nce	Std. Dev	No.	Left	Right	Scale	
4	2,0	1,1	1,1	101	easy to learn	difficult to learn	Perspicuity	
5	2,2	1,3	1,1	101	valuable	Inferior	Stimulation	
6	1,2	1,3	1,1	101	boring	Exciting	Stimulation	
7	1,6	1,5	1,2	101	not interesting	interesting	Stimulation	
8	1,2	1,1	1,1	101	unpredictable	Predictable	Dependability	
9	1,4	1,6	1,3	101	fast	Slow	Efficiency	
10	1,8	0,8	0,9	101	inventive	Conventional	Novelty	
11	2,0	0,6	0,8	101	obstructive	Supportive	Dependability	
12	2,1	0,8	0,9	101	good	bad	Attractiveness	
13	1,8	0,8	0,9	101	complicated	easy	Perspicuity	
14	1,3	0,8	0,9	101	unlikable	pleasing	Attractiveness	
15	1,3	1,1	1,0	101	usual	leading edge	Novelty	
16	2,0	0,8	0,9	101	unpleasant	pleasant	Attractiveness	
17	2,2	1,0	1,0	101	secure	not secure	Dependability	
18	1,5	1,1	1,0	101	motivating	demotivating	Stimulation	
19	1,4	1,4	1,2	101	meets expectations	does not meet expectations	Dependability	
20	1,7	1,0	1,0	101	inefficient	efficient	Efficiency	

It em	Me an	Varia nce	Std. Dev	No.	Left	Right	Scale	
21	1,9	1,1	1,1	101	clear	confusing	Perspicuity	
22	1,9	0,8	0,9	101	impractical	practical	Efficiency	
23	1,5	0,9	0,9	101	organized	cluttered	Efficiency	
24	1,3	0,9	0,9	101	attractive	unattractive	Attractiveness	
25	2,0	1,1	1,1	101	friendly	unfriendly	Attractiveness	
26	1,5	1,5	1,2	101	conservative	innovative	Novelty	

The 26 UEQ items obtained a positive average with a value greater than 0 which means there is no problem in measuring the UEQ question items.

4.3 UEQ Benchmark

Analysis on the Benchmark sheet is the final result of the UEQ, which is depicted in the benchmark chart by showing the quality of the product into five categories, namely: excellent, good, above average, below average, and bad. To see the assessment categories of the six aspects of UEQ can be seen as follows.

Table 3. Benchmark Data SetResults

Scale	Mean	Results
Attractiveness	1,80	**Good**
Perspicuity	1,92	**Good**
Efficiency	1,63	**Good**
Dependability	1,71	**Excellent**
Stimulation	1,62	**Good**
Novelty	1,52	**Good**

Based on Table 3, it can be concluded that the Soegiri Mobile application does not lack in every aspect. Furthermore, for recommendations for improvement, the researcher only provides recommendations to improve the novelty aspect which has the lowest average. Novelty (novelty) includes making applications more advanced, innovative, and creative. The results on the aspect of dependability (accuracy) have received excellent impressions. On the aspects of attractiveness, perspicuity, efficiency, and stimulation have also received good impressions.
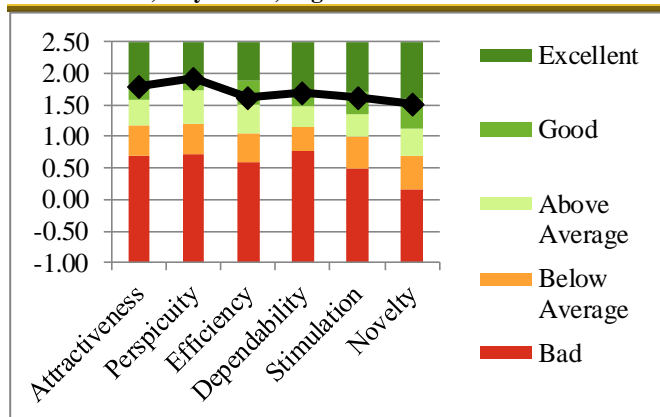
Figure 1. Soegiri Mobile Bencmark Graphic Results

In Figure 1, it can be seen that the average value of all question items according to the group, namely the average value of attractiveness, perspicuity, efficiency, stimulation, and novelty, gets a good impression on the green chart. Furthermore, on the aspect of dependability, the impression is excellent also on the green chart. The Soegiri Mobile application tends to have positive impressions on each scale, so it can be concluded that users are satisfied with the application system that is already running.

5. CONCLUSION

Based on the UEQ analysis, it can be concluded that the soegiri mobile application from six aspects of the assesment each has an average value of 1,80 for attractiveness aspect, 1,92 for perspicuity aspect, 1,63 for efficiency aspect, 1,71 for dependability aspect, 1,62 for stimulation aspect, and 1,52 for novelty aspect. So the results of the application assesment are positive, quality, and useful for users.

Recommendations for improvements to the Soegiri Mobile, the researcher only provides recommendations for improvements in the novelty aspect both in terms of feature innovation and appearance so that it is not monotonous and the Soegiri Mobile application provides more uses for patient. This recommendation for improvement is given because of the six aspects of the UEQ assessment, and the novelty aspect has the lowest score.

6. REFERENCES

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