Quality and User Satisfaction of SIMPADU in Business English Study Program of Languages and Literature Faculty of Universitas Negeri Makassar, Indonesia

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Abstract

This study aims to examine the effect of system quality seen from reliability, ease of use, flexibility and functionality to SIMPADU user satisfaction Universitas Negeri Makassar within Faculty of Languages and Literature in Business English Study Program active in odd semester 2014/2015. This study used four independent variables and one dependent variable. Reliability variable, Ease of use, flexibility, and functionality were independent variables and user satisfaction was dependent variable. The population of this study were all SIMPADU users who are active in the odd semester 2014/2015 in Business English Study Program. They were 300 students, three operators, and ten lecturers. The number of samples used in this study were 161 SIMPADU users that consisted of 8 lecturers, 3operators, and 150 students. For the analysis, the study used multiple linear regression analysis. The result of this study proved that (a) simultaneously or together - reliability, ease of use, flexibility, and functionality had significant effect on user satisfaction on SIMPADU; (2) the results of calculation coefficient of determination of this regression model was 0.540 or 54% reliability, ease of use, flexibility, and functionality variables affected user satisfaction on SIMPADU by 33% error rate assessment of the dependent variable.

Keywords: Simpadu, reliability, ease of use, flexibility, and user satisfaction.

1. Introduction

The use of information technology in the field of education is very helpful in the dissemination of information in a timely and evenly distributed. At this time in the field of education that has many uses of information technology itself in Indonesia is a Private or State University has continued to improve the information technology they use. SIMPADU (Integrated Information System) is an information system used in Universitas Negeri Makassar (UNM) which began to be used by the students in 2011. Although SIMPADU has been there longer, it was only used for certain circles and only in 2011 it was opened simultaneously to nine faculties in Universitas Negeri Makassar for Online Course Selection Sheet (KRS) filling which was previously done manually. SIMPADU is also used for lecturers to input students' final grade. They can use automatic filling facilities where the value of tasks, quizzes, UTS and UAS inputted throughout the semester. The system will automatically generate the final value for each student with the configuration settings of the previous value.

With the use of SIMPADU it is expected that the quality of learning and teaching at the Universitas Negeri Makassar is also better, because this integrated information system also provides applications that can set the distance teaching or giving the material electronics. With this system the students can also view the schedule lectures and lecturers that can be assisted in the recapitulation of value throughout the current semester.

SIMPADU also makes the level of student satisfaction and other SIMPADU users increase. Students can make Online KRS wherever they are, so the habit of returning home made by UNM students can stay use, obligations as a student can be done wherever they are, and with SIMPADU students can also immediately see their value as soon as the lecturer inputs their value. Lecturers can immediately input student grades faster and wherever they are.

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SIMPADU is also expected to improve the quality of service to students because the information can be accepted faster by the students any time. With an update made every year, it is expected to continue delivering new product results. All this is in line with the opinion expressed by Alavi & Gallupe (2003) about the use of information technology in the Higher Education has several goals namely: 1) Improving competitive positioning, 2) Enhancing brand image, 3) Improving the quality of learning and teaching, 4) Increasing student satisfaction, 5) Increasing revenue, 6) Expanding the student base, 7) Improving service quality, 8) Reducing operating costs, 9) Developing new service products (Indriani & Adryan, 2009).

Molla & Licker (2001) conducted a study that resulted in the quality of the computerized e-commerce system affecting user satisfaction. This study is supported by research conducted by DeLone & McLean (2003) which revised their previous study results in 1992 thst showed that the quality of the system affected the user satisfaction. According to Istianingsih & Wijanto (2008) users of information systems will feel satisfied to use the system if they believe that the quality of the system and the quality of information generated from the system used is good.

This study also wanted to see the influence of several variables to measure the quality of the system from study of DeLone & McLean (2003) to SIMPADU users in Business English Study Program, Faculty of Languages and Literature (FBS), Universitas Negeri Makassar.

2. Literature Review

2.1. Information Technology System

Information technology systems applied in the organization become components of the organization together with humans who then interact by using this information technology systems. This interaction creates behavioral problems (Jogiyanto, 2007).

2.2. Behavior Theory

Behavioral theories are part of the science of psychology. The result of merging the behavioral theory with the use of information technology system is organized into the basis of the behavioral information system (Jogiyanto, 2007).
Some theories and models of behavioral information systems are:
a) The theory of reasoned action (TRA)
b) Technology acceptance model (TAM)
c) The theory of planned behavior (TPB)

2.3. User Satisfaction

User satisfaction is the user response to the use of information system output (Jogiyanto, 2007). The user response to output generated from an information system is different but can be measured and observed so that it can be judged on how satisfied the users of an information system to the output generated by the information system itself.

2.4. Quality of Information Systems

The quality of information systems is information system use to achieve goals and needs between users and user of the system itself. In the information system success model proposed by DeLone & McLean (2003) it states that the quality of the system is a measure of technical success, the quality of information is a measure of semantic success, user satisfaction describes the influence of individuals and organizations which is a measure of effectiveness of success. Some quality system researchers can be measured through ease of use, functionality, reliability, flexibility, data quality, portability, integrity and importance.

2.5. Influence simultaneously

Istianingsih & Wijanto (2008) conducted a study with the aim to analyze the factors that determine user satisfaction in information systems and analyze the impact of user satisfaction on individual performance. The results of this study indicated that the quality of the system, quality of information, and service quality had significantly positive effect on

user satisfaction of information systems. Indriani & Adryan (2009) produced variable reliability, flexibility, functionality influence to internal user satisfaction while the variable ease of use does not affect the internal user satisfaction. Based on some previous researches this research would like to see how the influence of these variables simultaneously, so the hypothesis in this study submitted as follows:

H1: *Reliability, ease of use, flexibility, and functionality have an effect on SIMPADU user satisfaction simultaneously.*
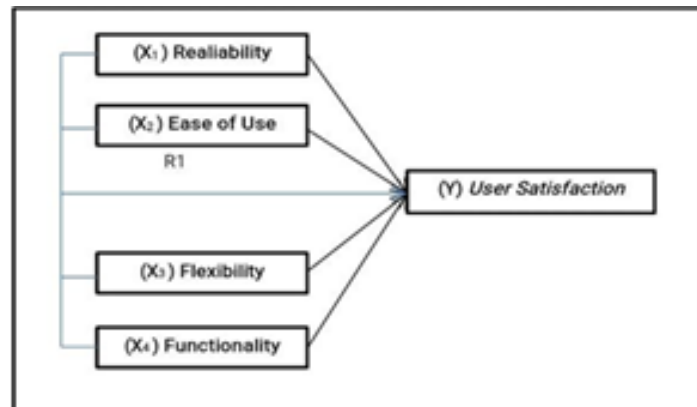
The study model is carried out as follows:

Figure 1. Research Model.

Explanation:

R1 = Influence X1, X2, X3 and X4 simultaneously to Y.

3. Research Method and Materials

This study was conducted to prove the hypothesis that has been formulated before where the factors that affect simultaneously or partially influence on user satisfaction SIMPADU, with sample of students, lecturers, and operators in the area of English Business Study Program of Faculty of Language and Literature, Universitas Negeri Makassar. In this study factors that affect user satisfaction SIMPADU is reliability, ease of use, flexibility, and functionality.

3.1. Research Variable

This study used four independent variables and one dependent variable. Reliability variable, ease of use, flexibility, and functionality were the independent variables and user satisfaction was the dependent variable. The equation was formulated as follows:

$$Y = a + b1X1 + b2\,X2 + b3X3 + b4\,X4 + e$$

where:

Y = user satisfaction,

X1 = realiability,

X2 = ease of use,

X3 = flexibility,

X4 = functionality,

a = constants,

e = error.

3.2. Population and Sample

The population of this study were all SIMPADU users who are active in the odd semester 2014/2015 in Business English study program of FBS UNM. They were 300 students, three operators, and ten lecturers. The number of samples used in this study were 161 SIMPADU users that consisted of eight lecturers, three operators and 150 students.

3.3. Types and Data Sources

This study used data with primary data type where the data was taken directly from sample which become object of study. This primary data used interval 1 to 5 data to represent strongly not agree until strongly agree.

3.4. Data Analysis Method

In this study was analyzed the data with the type of inferential analysis in which this inferential analysis looked at the relationship between the dependent variable and the independent variable by performing hypothesis testing and interpreting the research results and drawing conclusions.

In testing the hypothesis that has been formulated, multiple linear regression analysis used. Multiple linear regression analysis is a linear relationship between two or more independent variables ($X_1, X_2, ..., X_n$) with the dependent variable (Y).

Multiple linear regression equation as follows:

$$Y = a + b_1 X_1 + b_2 X_2 + ... + b_n X_n$$

where:

Y = Dependent variable (predicted value)

$X_1, X_2, ..., X_n$ = independent variable

a = constant (value Y if $X_1, X_2, ..., X_n = 0$)

$b_1, b_2, ..., b_n$ = regression coefficient (value increase or decrease)

(Arikunto, 2006).

4. Results and Discussion

4.1. Testing Validity and Reliability

Test validity of the item is indicated by the correlation or support of the total item (total score), the calculation is done by correlating between the item score and the total score of the item. If the significant value of each correlation coefficient is smaller than 0.05, then all question items are declared valid.

It can be concluded that all the question items used in this study are Reliable because it obtains Cronbach Alpha above 0.6 entirely with an average of 0.8.

From the Table 1, it can be seen the value of VIF for Reliability variable was worth 1.655, Ease of use is worth 1.329, flexibility was worth 1.614, and functionality was worth 1.440. This regression model does not have multicollinearity problem if the value of VIF model is not more than 5. So it can be concluded this multiple regression model did not have multicollinearity problem because all VIF values of each variable had a value smaller than 5 which according to Santoso (2014) VIF value below 5 means no multicollinearity problem.

From the Table 2, output of nonparametric correlations by using Spearman's correlation analysis, it can be seen that the correlation between reliability with unstandardized residual yielded a significance value of 0.680, the correlation between ease of use with unstandardized residual yielded a significance value of 0.889, the correlation between flexibility with unstandardized residual yielded a significance value of 0.599, and correlation between functionality with unstandardized residual produced a significance value of 0.869, with correlation above of 0.05, so it can be concluded that the regression model did not have heteroscedasticity problem.

Table 1. Multicollinearity Test.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.192	.190		6.266	.000		
	Reliability	.298	.053	.390	5.653	.000	.604	1.655
	Ease of Use	.212	.050	.262	4.242	.000	.752	1.329
	Flexibility	.143	.044	.219	3.216	.002	.619	1.614
	Functionality	.051	.051	.063	.986	.326	.694	1.440

a. Dependent Variable: User Satisfaction

Table 2. Heteroskedasticity Test

Correlations

			Unstandardized Residual	Reliability	Ease of Use	Flexibility	Functionality
Spearman's rho	Unstandardized Residual	Correlation Coefficient	1.000	-.033	-.011	-.042	-.013
		Sig. (2-tailed)	.	.680	.889	.599	.869
		N	161	161	161	161	161
	Reliability	Correlation Coefficient	-.033	1.000	.399[**]	.548[**]	.441[**]
		Sig. (2-tailed)	.680	.	.000	.000	.000
		N	161	161	161	161	161
	Ease of Use	Correlation Coefficient	-.011	.399[**]	1.000	.375[**]	.286[**]
		Sig. (2-tailed)	.889	.000	.	.000	.000
		N	161	161	161	161	161
	Flexibility	Correlation Coefficient	-.042	.548[**]	.375[**]	1.000	.508[**]
		Sig. (2-tailed)	.599	.000	.000	.	.000
		N	161	161	161	161	161
	Functionality	Correlation Coefficient	-.013	.441[**]	.286[**]	.508[**]	1.000
		Sig. (2-tailed)	.869	.000	.000	.000	.
		N	161	161	161	161	161

**. Correlation is significant at the 0.01 level (2-tailed).

From the Figure 1, it can also be concluded there is no problem heteroskedasticity obtained. It can be explained by the spread of points above of 0 and below of 0 with the spread and without forming a particular pattern.

From the Table 3, it can be seen Durbin Watson value for this regression model was worth 1.692 which according to Anderson 2001, no autocorrelation occurs if $-2 \leq DW \leq 2$, so it can be concluded that this regression model did not have autocorrelation problem because the DW value of this model was between -2 and 2 (Sarwono, 2014).

To see how the data is normally distributed then the normality test is expected to answer it. On the figure 2, it can be seen the point spread and follow the diagonal line so it can be drawn conclusion that the data spread normally.

4.2. Hypothesis Testing Results and Discussion

This study used multiple linear regression analysis in which the test was done with SPSS to be able to prove the hypothesis that has been prepared. After testing the classical assumption, it can be concluded that the regression equation or regression model in this study is feasible to be tested further in the form of testing the hypothesis that includes F test and t test.

The test is conducted in order to know whether or not the influence of independent variables with the dependent variable in the regression model of this study.
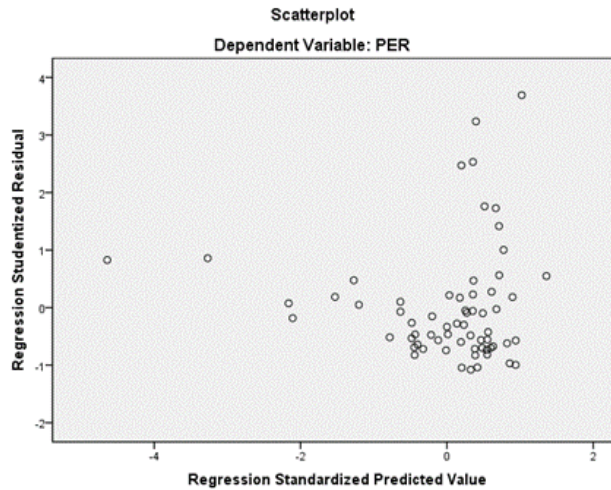

Figure 1. Scatterplot.

Table 3. Autocorrelation Test.

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.743^a	.552	.540	.33127	1.692

a. Predictors: (Constant), Functionality, Ease of Use, Flexibility, Reliability
b. Dependent Variable: User Satisfaction

Figure 2. Normality test.

Table 4. Determination Analysis (R^2)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.743[a]	.552	.540	.33127	1.692

a. Predictors: (Constant), Functionality, Ease of Use, Flexibility, Reliability
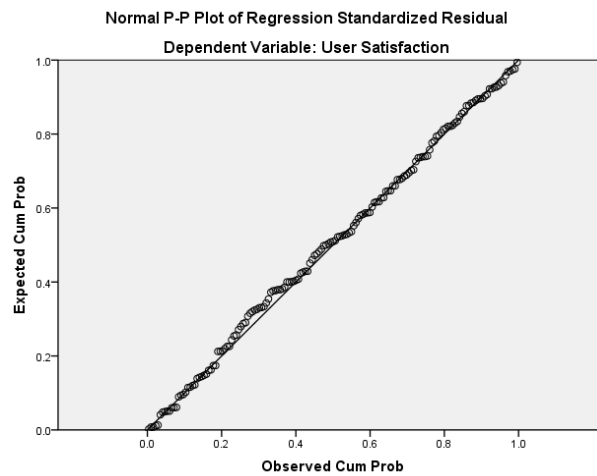b. Dependent Variable: User Satisfaction

From the Table 4, it can be seen the value of R^2 of 0.552 which means the influence contributed by independent variables of reliability, ease of use, flexibility, and functionality was strong enough because the independent variable affected 55% of the dependent variable of use satisfaction. According to Santoso (2014) that for regression with two independent variables or more adjusted R^2 is used as the coefficient of determination. While Std. Error of the Estimate is a measure of the number of mistakes regression model in predicting the value of Y. So that from the the output results can be drawn conclusion that coefficient of determination of this regression model was 0.540 or 54% independent variable affected the dependent variable and by 33% error rate assessment of the dependent variable.

Table 5. Individual Parameter Significant Test (Test Statistic t)

Coefficients[a]

Model		Standardized Coefficients Beta	T	Sig.	Collinearity Statistics	
					Tolerance	VIF
1	(Constant)		6.266	.000		
	Reliability	.390	5.653	.000	.604	1.655
	Ease of Use	.262	4.242	.000	.752	1.329
	Flexibility	.219	3.216	.002	.619	1.614
	Functionality	.063	.986	.326	.694	1.440

From the Table 5, t value for each independent variable, reliability was worth 5.653, ease of use was worth 4.242, flexibility was worth 3.216 and functionality was worth 0.986 while t_{table} for this regression model was 1.975. It can be seen coefficients reliability, ease of use, and flexibility had t_{count} bigger than t_{table} so that it was concluded that reliability, ease of use, and flexibility had significant influence to user satisfaction, whereas for functionality with t_{count} smaller than t_{table} (0.986 <1.975) was interpreted functionality not significantly affected user satisfaction.

Table 6. Simultaneous Significant Test (F statistic test)

ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	21.053	4	5.263	47.960	.000[a]
	Residual	17.120	156	.110		
	Total	38.173	160			

a. Predictors: (Constant), Functionality, Ease of Use, Flexibility, Reliability
b. Dependent Variable: User Satisfaction

From the output of ANOVA (Table 6), it can be seen F_{count} on this regression model is 47.960 while for F_{table} for this regression model which had one dependent variable and four independent variables with the number of n as much as 161 so obtained F_{table} of 2.43. Since F_{count} was greater than F_{table} then the independent variables together influenced the dependent variable.

The results of this study were in line with previous research conducted by DeLone and McLean (2003) state that reliability, ease of use, flexibility, and functionality is a measure of system quality. Ilias et al. (2007) in they study, the reliability and ease of use system is a system that affected user satisfaction at the responsibility center of the government system in Labuan, Malaysia. Meanwhile, Olsina, Lafuente, & Rossi (2001) considered that functionality as one of the characteristics of quality attributes for academic websites.

5. Conclusion

This study was field study on SIMPADU quality and SIMPADU user satisfaction in specializing in Business English study program of FBS UNM which aims to find out how far the measurement variable of quality of information system that affect SIMPADU user satisfaction in Business English study program of FBS UNM in 2015/2015 given period. The data that has been done can be concluded as follows:

a) This study proved that simultaneously or together - reliability, ease of use, flexibility, and functionality - had significant effect on user satisfaction on SIMPADU.

b) The results of calculation coefficient of determination of this regression model was 0.540 or 54% reliability, ease of use, flexibility, and functionality variables affected user satisfaction on SIMPADU by 33% error rate assessment of the dependent variable.

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