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## The Role of Service Quality toward Open University Website on the Level of Student Satisfaction

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### Abstract

The purpose of this research is to find out the impact of variable service usability, information quality, and service interaction quality to students' satisfaction in applying open-university website. The population is non-primary education students on two district areas, that is, West Ceram and Southeast Moluccas including thirty (30) respondents. This research uses purposive sampling as research method in which it fulfils total of thirty (30) respondents. The questionnaire was tested by using reliability test and validity test. Then, it was continued with classic assumption test contained of multicollinearity test, normality test, and heteroskedasticity test. After that, there was hypothesis test and discussion. The results of research in partial showed that variable service usability and service interaction quality have given positive and significant impact to students' level of satisfaction. While, service information quality did not give significant impact to students' level of satisfaction. Results of research conducted jointly from three variables Usability, Information Quality and Service Interaction positive and significant impact on the level of student satisfaction results of research conducted jointly from three variables Usability, Information Quality and Service Interaction positive and significant impact on the level of student satisfaction that  $F_{hitung} = 39.246$  with a significance of  $0.000 < 0.5$ .

**Keyword:** *useability quality, information quality, service interaction quality*

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## Introduction

Distance learning system in open university is different with learning system face to face in higher university. Students of open-university are forced to be able to study independently by using facilities and their competence they have to achieve their goal.

As a distance educational institution, characteristic of open-university is a distance that separate between students and lecturer. For that reason, technology had an important role as a learning media and a communication tool through internet to deliver distance education itself.

The use of this information technology and communication will bridge interaction between students and lecturer. We know that online education is used either on formal or informal education by using internet facility. Internet is a tool of technology product that can increase our need of education. Internet provides any information that can be accessed not only for certain districts but also in all areas of Moluccas province.

The higher development quantity of internet user can increase the benefit of internet itself. It is known that online learning through internet helps students to get much information about science study and other fields. In this case, students may visit open-university website to find their tasks by using facility of searching or browsing in internet. As Zeitahml, et al (2000) says that factors used to measure online service quality are accessibility, ease of navigation, efficiency, site aesthetic, and personalization.

According to O'Brien (2006), technology is a computer network containing many components to process information by using hardware, software, data management, and information network technology. Aji (2005) adds that information is data analyzed to be other beneficial data. On the other hands, information technology is recognized by Thomson *et al.* (1991) cited in Tjhai (2003) as benefit for technology users in doing their job or behavior in using technology while working. These definitions are based on use intensity, use frequency, and numbers of application or software.

Online service through title education or untitled education offers service for students in using internet as media. There are some stages of online in education program process such as: registration, entry test, payment, case study, case discussion, exam, assessment, discussion, announcement, etc. Distance education can use internet technology frequently, effective time and place, even increase education quality. Brotosiswoyo (2003) defines internet as a compilation between development of information technology and telecommunication. It is also a wide and big computer network in the world to connect its user from one country to another country and to provide static, dynamic, and interactive information resource. Website had many pages of data, text, picture, animation data, sounds statically and dynamically to create hyperlink. While dynamic website is two way information website from user or owner to update data based on the user or the owner will. Some examples are Facebook, Twitter, Friendster, Multiply, etc.

According to Kotler (2002), satisfaction is a pleased or disappointed feeling of somebody when he compares his perception and impression toward his work or product result and his hopes. It means that consumer's satisfaction is achievement of his work as same as his hopes. Operational Definitions Usability defined the extent to which people believe that use of a technology is easy. Information quality Is relating to the quality, quantity, accuracy and form of information about the products and services offered on a website (Nusair, et al, 2008 in Sam and Tahir, 2009). Interaction services is the involvement of web site users when studying web site itself so as arising trust and empathy. Satisfaction is a pleased or disappointed feeling of somebody when he compares his perception and impression toward his work or product result and his hopes. It means that consumer's satisfaction is achievement of his work as same as his hopes.

From the previous explanation, it can be said that the real condition UPBJJ-UT Ambon is many students do not use internet in fulfilling information service to support their education. Besides, other factor likes facility of computer was decreased for students to access open-university website, to see their scores and to follow online tutorial. The problem of this research is how far is the impact of variable service useability, information quality, and service interaction quality to students' satisfaction in applying open-university website. While The purpose of this research is to find out the impact of variable service useability to students' satisfaction in applying open-university website as learning media, to analyze the impact of information quality to students' satisfaction in applying open-university website as learning media, and to identify the impact of service interaction quality to students' satisfaction in applying open-university website as learning media.

## Method

Sample of research are non-primary education students from West Ceram district and Southeast Moluccas district. Sampling method in this research is purposive sampling. Data was collected by delivering questionnaire for respondents. The primary source is 30 students. The questionnaire consisted of questions about research that was conducted. Respondents would select the right answer by crossing or checking the option. The data were analyzed statistically by using validity test and reliability test, classic assumption test contained of multicollinearity test, normality test, and heteroskedastisity test, double regression analysis, hypothesis test, Result and Discussion.

## Result and Discussion

The primary data was collected in this research through questionnaire for respondents. The respondents were selected based on purpose/judgement sampling. The respondents were active students in open-university. While 30 questionnaire were delivered and returned or 100%. The respondents could understand and fill the questionnaire about age, sex, and length of using internet well.

Data analysis showed that most respondents from 2 districts were in age between 21 – 30 years old. Then, there were 16 or 53,3% men and 14 or 47% women. In addition, the number of respondents who used internet was 26 or 87%. While the number of respondents who did not use internet was 4 or 13%.

### Validity Test

The result of validity test is shown in Table 1 below.

Table 1. The Result of Validity Test Data

VARIABLE	ITEM	VALIDITY DATA	NOTES
Usability dimension	DU1	0,970	Valid
	DU2	0,958	Valid
	DU3	0,899	Valid
	DU4	0,544	Valid
Information Quality dimension	DIQ1	0,851	Valid
	DIQ2	0,867	Valid
	DIQ3	0,897	Valid
	DIQ4	0,656	Valid
Service Interaction dimension	DSI1	0,978	Valid
	DSI2	0,984	Valid
	DSI3	0,971	Valid
Satisfaction level	TK1	0,946	Valid
	TK2	0,984	Valid
	TK3	0,978	Valid
	TK4	0,909	Valid

Source : primary data analysis

The table displays about the correlation of each question. It can be seen that the coefficient value is  $> 0,30$ . It means that the question item in the research variable is coefficient valid. So the questions can be applied for the next analysis.

### Reliability Test

Reliability test was using Cronbach Alpha. The result of reliability test is shown in table 2 below.

Table 2. The Result of Reliability Test Data

VARIABLE	RELIABILITY
Usability dimension	0,875
Information Quality dimension	0,819
Service Interaction dimension	0,976
Satisfaction level	0,968

Source : primary data analysis

From the above table showed the reliability data by using cronbach alpha test it was found that the coefficient level data was good enough. It was caused of all research variables had alpha more than 0,6. So, all research variables are reliable.

### Multicollinearity Test

This assumption test was used to find out whether there was correlation between independent variables in regression model or not. In doing multicollinearity test, the research concerned to analyze the correlation of independent variables by counting the tolerance value and the variance inflation factor (VIF). The result of multicollinearity test is shown in table 3 below.

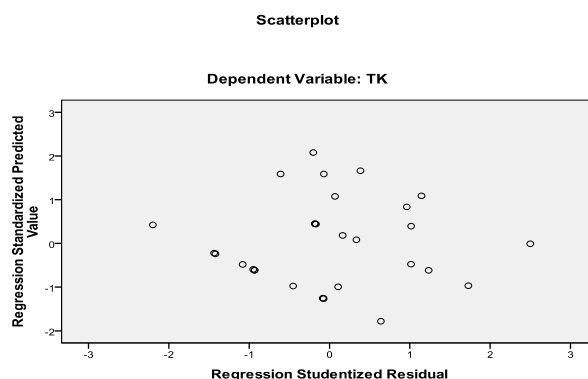
Tabel 3. The Result of Multicollinearity Test Data

Variable	Collinearity Statistic	
	Tolerance	VIF
Usability dimension	0,689	1,451
Information Quality dimension	0,905	1,105
Service Interaction dimension	0,751	1,331

Source : primary data analysis

The result of tolerance value in table 3 was not below 0,10 which meanted that there was no correlation between independent variables that more than 95%. The VIF value hadgot the same result where there was no correlation between independent variables that more than 10. It can be assumed that there was no correlation between independent variables in regression model.

### Heteroskedastisity Test



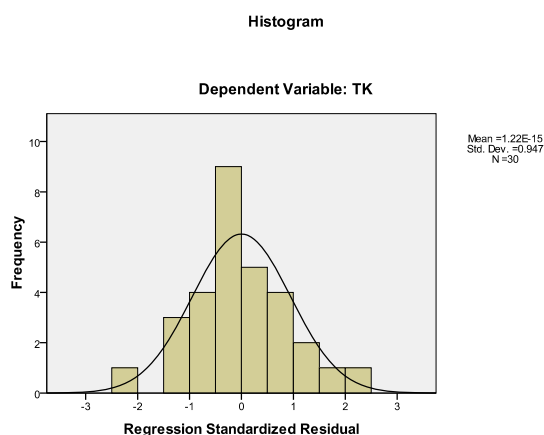
Source : primary data analysis

Picture 1. Scatter Plot

From scatterplot graph, it can be seen that dots were randomly spread above or below 0 on axis Y. It can be concluded from classic assumption of heteroskedastisity that the regression model were free double linear and appropriate to be used in this research.

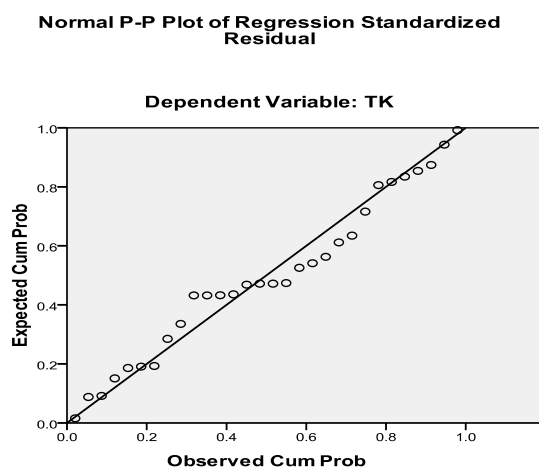
### Normality Test

Normality test was done to identify whether distributed data was normal or not. The result of output histogram graph and normal plot graph is as follows.



*Source : primary data analysis*

Picture 2. Histogram



*Source : primary data analysis*

Picture 3. Normal P-P Plot of Regresi3n Standardized Residual

Based on histogram graph which is balance and dots on normal probability plot graph which is spreaded around diagonal line, the conclusion is data shows a normal distribution pattern.

Analysis of Usability, Information Quality, and Service Interaction dimensions to students' satisfaction level can be represented in double regression analysis as we can see in table 4 below:

Table 4. Partial test (t-test)

		Coefficients <sup>a</sup>				Collinearity Statistics	
		Unstandardized Coefficients		Standardized Coefficients			
Model		B	Std. Error	Beta	t	Sig.	Tolerance VIF
1	(Constant)	.011	3.052		.004	.997	
	DU	.637	.176	.521	3.623	.001	.689 1.451
	DIQ	-.017	.172	-.012	-.097	.923	.905 1.105
	DSI	.528	.183	.397	2.882	.008	.751 1.331

a. Dependent Variable: TK

Source : primary data analysis

### Partial Hypothesis Test

#### The impact of Usability Dimension to students' satisfaction level

From partial test, the impact of usability to students' satisfaction level by using SPSS program it can be said that  $t_{\text{count}}$  is 3,623 and  $t_{\text{table}}$  is 1,699. This value indicates that  $t_{\text{count}} > t_{\text{table}}$  with  $p > \alpha$  that is  $0,001 < 0,05$ . Based on that, usability had positive and significant impact to students' satisfaction level.

#### The impact of Information Quality to students' satisfaction level

According to regression value in table 4.7 it had got  $t_{\text{count}} = 0,097$  and  $t_{\text{table}} = 1,699$ . This means that  $t_{\text{count}} < t_{\text{table}}$  and  $p > \alpha$  that is  $0,923 > 0,05$ . In other words, Information Quality had negative and insignificant impact to students' satisfaction level.

#### The impact of Service Interaction to students' satisfaction level

In the result of partial test on table 4.7 above, it had got Service Interaction to students' satisfaction level in which  $t_{\text{count}} = 2,882$  and  $t_{\text{table}} = 1,697$ . This value indicates that  $t_{\text{hitung}} > t_{\text{tabel}}$  with  $p > \alpha$  that is  $0,008 > 0,05$ . Thus, Service Interaction dimension had positive and significant impact to students' satisfaction level.

### Simultant Hypothesis Test

Hypothesis test states that there was a simultant impact of Usability, Information Quality, and Service Interaction dimensions to students' satisfaction level as shown in table 4.8 below.

Table 5. Simultan test (f-test)

		ANOVA <sup>b</sup>				
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	174.583	3	58.194	14.721	.000 <sup>a</sup>
	Residual	102.784	26	3.953		
	Total	277.367	29			

a. Predictors: (Constant), DSI, DIQ, DU

b. Dependent Variable: TK

Source : primary data analysis

Based on f-test, it had got  $f_{\text{count}}$  was 14,721 with  $p = 0,00$ . Because of the probability was less than 0,05, so the regression model can be used to predict students' satisfaction level. Then it can be concluded that Usability, Information Quality, and Service Interaction had given simultant and significant impact to students' satisfaction level.

### Discussion

The result of statistic analysis showed that the variable of usability dimension in this research had significant impact to students' satisfaction level as the users of open-university website service at UPBJJ-UT Ambon. In this case, the usability of website enables open-university students to study many fiturs through teaching learning process which is available in this website, language can be understood,

and the website can operate well. The significant result emerged that factor of usability dimension is main indicator for students to have satisfied feeling when they used open-university website. These results also support the research conducted by Sauda (2015) is the variable of usability had significant impact to user satisfaction.

Next, the result of the second statistic Hypothesis analysis indicated that Information Quality variable found on open-university website had insignificant impact to students' satisfaction level in using open-university website service. It was caused by the accessibility of information for students could not be conducted well for limited internet equipments on both district areas that there was only some internet houses available and minimal hotspot to access open-university website. The results of the study not support the research conducted by Kristiono (2015) that the quality of information a positive effect / influence on customer satisfaction. as well as research conducted by Sauda (2015) showed a significant effect of the variable quality of information on user satisfaction.

Finally the last Hypothesis analysis displayed that the variable of service interaction dimensions in this research had significant impact to students' satisfaction level in using open-university website service. It was found that the interaction service for non-primary education students was in form of online tutorial. It was hoped that the interaction was not only between lecturer and student but also between student and student in discussion and email service. This had supported their feeling of satisfaction in using open-university website service. These findings support the results of research conducted by Abbas (2013) which states that students are satisfied with the service interaction. Other findings support the results of this research was stated by Sauda (2015), that there is a significant relationship between the variables of the Service Interaction on user satisfaction.

### **Conclusion**

Based on the result of the first Hypothesis analysis that usability dimension had significant impact to students' satisfaction level in using Open University website service. Then, the result of the second Hypothesis analysis which showed that Information Quality dimension had insignificant impact to students' satisfaction level. After that, the result of the last Hypothesis analysis indicated that service interaction dimensions had significant impact to students' satisfaction level. In addition, the result of simultant test showed that Usability, Information Quality, and Service Interaction had given positive and significant impact to students' satisfaction level in using open-university website service.

Based on the conclusion, the researcher can take several suggestion to be recommended for next research that is other research can use other variable which is not only limited to behavior factor but also technical factor to apply open-university website for students. Next is to have more samples which are not limited on certain areas but it can be advanced to all districts in Moluccas province. The last is to add instruments based on condition and environment of the research object.

The research result may give good contribution in the future such as to support and to enrich other researches in the field of PTJJ especially the institution. And to inform the developer of open-university website in this case Communication Central about the factors which impact on open-university website service.

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### **References**

- Abbas, W. 2013. 'Analisa Kepuasan Mahasiswa terhadap Website Universitas Negeri Yogyakarta (UNY)'. Dalam Prosiding SNST hal 1-6, Universitas Wahid Hasyim Semarang
- Aji Supriono. 2005. Pengantar Teknologi Informasi. Semarang : Salemba Infotik Publisher.
- Brotosiswojo, B.S., 2003. Liku-liku E-Education. Cited in Durri Andriani, (Eds). Cakrawala Pendidikan: E-learning dalam Pendidikan. Jakarta: Open University press.

- Jackson, S.E., & Schuler, R.S. 1990. *Human Resource Planning: Challenges for Industrial/Organization Psychologists*. New York, West Publishing Company
- Kusmayandi dan Ender, 2001, Metode Penelitian Kepariwisata. Jakarta: GramediaPublisher.
- Kotler, Philip. 2002. Manajemen Pemasaran. Edisi Millenium. Jakarta: Pearson Education Asia Pte. Ltd dan PT. Prentihallindo.
- Kristiono, dan Henky Honggo. 2015. Analisis Pengaruh Kualitas Informasi Website terhadap Minat Beli Ulang Pelanggan Belanja Online. Skripsi, STMIK GI MDP, Palembang
- O'Brien, James A. 2006. Pengantar Teknologi Sistem Informasi Perspektif Bisnis dan Manajerial. Jakarta : Salemba Empat Publisher.
- Sam, Mohd Fazli Mohd dan Md Nor Hayati Tahir. 2009 Website Quality and Consumer Online Purchase Intention of Air Ticket. International Journal of Basic and Applied science IJBAS-IJENS
- Schuler. R.S., & Walker, J.W. 1990. *Human Resource Strategy: Focusing on Issues and Actions. Organizational Dynamics*, New York, West Publishing Company.
- Siti Sauda dan Nyimas Sopiah. 2015. Pengukuran Kualitas Layanan Website Perguruan Tinggi Dengan Menggunakan Metode Webqual. Jurnal Ilmiah MATRIK Vol.17 No.1, April 2015
- Sugiyono, 1999, Metode Penelitian Bisnis. Bandung: ALFABETA Publisher.
- Tjhai Fung Jin. 2003. "Analisis Faktor-Faktor yang Mempengaruhi Pemanfaatan Teknologi Informasi dan Pengaruh Pemanfaatan Teknologi Informasi terhadap Kinerja Akuntan Publik". *Jurnal of Business and Accounting*.
- V. Zeithaml, A. Parasuraman and A. Malholtra, 2000, *A Conceptual Framework to Understanding E-Service Quality: Implication For Future Research and Managerial Practice*. Marketing Science Institution Report No. 00-115.
- [http://id.wikipedia.org/wiki/Sumber\\_daya\\_manusia](http://id.wikipedia.org/wiki/Sumber_daya_manusia) [retrieved on July 31<sup>st</sup>, 2014]
- <http://makalahkumakalahmu.wordpress.com/2009/03/25/strategi-perencanaan-sumber-daya-manusia-yang-efektif/> [retrieved on July 31<sup>st</sup>, 2014]
- <http://bank-ilmu.blogspot.com/2007/04/layanan-informasi-untuk-pemberdayaan.html> [retrieved on July 31<sup>st</sup>, 2014]
- <http://www.anneahira.com/pengertian-website.htm>, [retrieved on December 15<sup>th</sup>, 2014)
- <http://erizco.wordpress.com/2010/04/17/strategi-perencanaan-sumber-daya-manusia-yang-efektif/> [retrieved on December 15<sup>th</sup>, 2014]