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## INFLUENCE ANALYSIS OF SERVICE QUALITY ON WEBSITE USER SATISFACTION BOOKING ONLINE AT TNBTS

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### *Abstract*

*Bromo Tengger Semeru National Park (TNBTS) has a website to book climbing schedules. The forwarding of this online booking website needs to be continuously evaluated and developed in order to provide comfort and satisfaction for its customers or users. The quality of a website according to Barnes and Vidgen can be seen from three aspects, Usability, Information quality and Service interaction. While user satisfaction is seen from the level of overall the quality of the website. This concept is united in a conceptual model known as Webqual 4.0. The Webqual 4.0 method has been used in research on website quality on e-commerce website, school website or educational institution, as well as industrial company websites. The results showed that the quality of service that has the highest ideal score is the quality in the Usability aspect which is 79.54%. While user satisfaction has been very good, which is proven on a scale of 5 (strongly agree) its value reaches 51.5% with an ideal score of 86.8%. Service quality that influences user satisfaction based on correlation analysis and logistic regression results in the same decision. The results of these two methods are only Usability aspects that have a positive and significant effect on the satisfaction of TNBTS website users.*

**Keywords:** *TNBTS, webqual 4.0, usability, information quality, service interaction, user satisfaction*

### **Introduction**

Bromo Tengger Semeru Park was designated as one of the national parks on May 23, 1997 in accordance with the Decree of the Minister of Forestry (Supriatna, 2014). TNBTS has a website that contains news or articles, maps, regions, photos, reporting databases to online bookings for climbing (Admin, 2017). October 1, 2017 is in accordance with the TNBTS Sub Division of Reporting Evaluation and Public Relations Data in (Prodjo, 2017) someone who wants to climb must do online. Online climbing registration or known by online booking is done on the TNBTS website by selecting semeru reservations on the online ordering menu. The existence of a website that provides benefits, one of which is the climber data can be recorded and stored properly. Because the website is very important and has great benefits, it is necessary to use it to provide comfort and satisfaction for customers or users.

User satisfaction is very closely related to the quality of a product or service (Kotler & Keller, 2009). This also applies to the satisfaction of a website. Barnes and Vidgen (2003) designed a concept to measure the quality of a website and user satisfaction known as Webqual 4.0. The quality of a website according to Barnes and Vidgen (2003) is seen from three aspects, Usability, Information quality and Service interaction. While user satisfaction is seen from the level of overall user satisfaction when using the website. The Webqual 4.0 method has been used in research on website quality in e-commerce fields such as Ramadhani (2016), Novinda and Sutopo (2017), Muhsin and Zuliestiana (2017), Pratama (2017), and research by Kurniawati, Kusyanti, and Mursityo (2018). In addition to e-commerce, Ari, Suhandiah, and Sulistiowati (2016) and Manik, Salamah, and Susanti (2017) use Webqual.4.0 to examine the quality of a school or educational institution's website. Likewise, the quality of the website of an industrial company was also examined by Aditiya (2017) using Webqual 4.0.

Although the use of indicators comes from Webqual 4.0, the results of the study show that not all indicators on the quality of the website affect user satisfaction. Ramadhani (2016), Manik, Salamah, and Susanti (2017), and

Aditiya (2017) give results that the quality of websites that affect user satisfaction comes from Usability and Information quality aspects. While other studies show that all indicators on the quality of the website (Usability, Information quality or Service interaction) have a significant and positive influence on user satisfaction. The results of the relationship analysis were obtained based on several application of statistical methods, including linear regression analysis, SEM (Novinda & Sutopo, 2017), or PLS-SEM (Pratama, 2017). Based on this background this research was proposed in order to influence analysis of service quality on website user satisfaction booking online at TNBTS.

## Research methods

This study uses TNBTS online booking website users from October 2017 to December 2017 as respondents. Determination of respondents using Slovin's simple random sampling. Based on the results of the calculation of the sampling technique, it was 97 respondents. The research variables and their indicators use variables that exist in Webqual 4.0 owned by Barnes and Vidgen (2003). In detail variables and indicators are shown in Table 1. Each variable and indicator in Table 1 uses an ordinal measurement scale, with values one for strongly disagree (SD), two for disagree (D), three for neutral (N), four for agree (A) and five for strongly agree (SA).

Tabel 1 Research Variables and Indicators

Variable	Indicator	
Usability	1	The site easy to learn to operate
	2	Interaction with the site is clear and easy to understand
	3	Easy to find menus on the website
	4	The website is easy to use
	5	The site has an attractive appearance
	6	The design is appropriate to the type of site
	7	The site conveys a sense of competency
	8	The site creates a positive experience
Information quality	1	The website provides accurate information
	2	The website provides believable information
	3	The website provides timely information
	4	The website provides relevant information
	5	The website provides easy to understand information
	6	The website provides information at the right level of detail
	7	The website presents the information in an appropriate format
Service interaction	1	The website has a good reputation
	2	The website feels safe to complete transactions
	3	My personal information feels secure
	4	Creates a sense of personalization
	5	Conveys a sense of community
	6	Makes it easy to communicate with the organization
	7	I feel confident that goods/services will be delivered as promised
User Satisfaction	Overall view of the Website	

This study uses descriptive statistical analysis and inference. Descriptive statistical analysis is used to describe the results of the description of the quality of website services (Usability, Information quality, Service interaction) and user satisfaction. Analysis of inferential statistics using Spearman rank correlation analysis and ordinal logistic regression. The use of these two methods is to analyze the effect of the quality of website services on user satisfaction. Both methods of statistical inference analysis were chosen because the values in the research variables had an ordinal scale (Suliyanto, 2014; McCullagh, 1980).

## Research Results and Discussion

The results of this study will be discussed using descriptive of each variable and inferential analysis using rank spearman correlation and ordinal logistic regression analysis. The variable description will begin with the usability variable. Table 2 shows the percentage of usability's respondents in each indicator. Based on Table 2, it can be seen that users are satisfied with the TNBTS online booking website. This can be seen with a fairly high balance score of 86.8% on User Satisfaction. In detail, the usability aspect has a pretty good rating from website users. Referring to Table 2, the usability aspect has the highest balance score compared to the other two aspects, Information quality and Service interaction aspects. In the usability aspect, many users score four (agree) on seven indicators and score five (strongly agree) on one indicator, interaction with the site is clear and easy to understand. Regarding the Information quality aspect, the user gives an assessment with a four (agree) score in terms of

accurate, believable, the right level of detail and presents the information in an appropriate format. While the other two indicators on Information quality, the majority of users give a value of three (neutral). While in the aspect of Service Interaction, many users give a value of three (neutral) for six indicators, and the value of four (agree) on the indicator creates a sense of personalization. This implies that website management must be improved, especially in the aspect of Service Interaction to users, so that user ratings are better than before.

Table 2 The majority percentage of respondents and Ideal score in each variabel

Variable	SD*	D*	N*	A*	SA*	Total*	Ideal Score
Usability	1,0	3,1	6,2	67,0	22,7	100	79,54
Information quality	1,0	1,0	23,7	68,0	6,2	100	74,96
Service interaction	0,0	2,1	43,3	48,5	6,2	100	72,19
User Satisfaction	2,1	0	11,3	35,1	51,5	100	86,8

Value in percentage form

Correlation analysis is used to determine whether there is a correlation between usability, information quality, and service interaction variables on user satisfaction. Correlation analysis uses rank prearman correlation test, because these variables have an ordinal measurement scale. This test uses a significant level ( $\alpha$ ) of 5%. Based on the results of rank spreaman correlation test, as shown by Table 3, only usability variables have a positive and significant relationship. This is indicated by a smaller p-value than the significant level ( $\alpha$ ).

Table 3 Spearman rank correlation values between variables

Variabel	Nilai Korelasi	Nilai P-value
Usability Vs User Satisfaction	0,296	0,003
Information quality Vs User Satisfaction	0,127	0,217
Service interaction Vs User Satisfaction	0,133	0,193

Other inferential statistical analyzes use ordinal logistic regression analysis. The first will be explained is the discussion of assumption tests on ordinal logistic regression, including model suitability test and model goodness test. The second thing that will be discussed about the description and significance of the parameters in the model. And the final discussion is the interpretation of model determination coefficient. Test the suitability of the model can be seen from the value of deviance test. The results showed that the p-value in the significance deviance test was 1. The decision taken was to accept  $H_0$  because the significance value was greater than 0.05. The conclusion is that the ordinal logistic regression model obtained is feasible to use. The second assumption test is the model significance test. This test is done by comparing the model without the independent variable with the model accompanied by the independent variable. Based on information output, it is found that the G value is 22.006 and the p-value is 0.000. This indicates that  $H_0$  has been rejected because the p-value is smaller than the significant level. The conclusions obtained are at least one parameter ( $\beta_p$ ) which is not equal to 0.

Table 4 Parameter Estimate with ordinal logistic regression analysis

Variable	Estimate	Std. Error	Wald Test	df	P-value	
User Satisfactin	[US = 1]	2,681	1,803	2,21	1	0,137
	[US = 3]	5,242	1,864	7,909	1	0,005
	[US = 4]	7,368	1,936	14,482	1	0,000
Variabel independent	Usability	0,203	0,048	17,932	1	0,000
	Information quality	-0,005	0,06	0,007	1	0,934
	Service interaction	0,04	0,06	0,445	1	0,505

The results of the description and parameter testing (using the Wald test) can be seen in Table 4. Based on Table 4 only usability variables have a significant influence on user satisfaction website booking online TNBTS. This is because the p-value of the variable has a smaller value than the significant level. Whereas for other variables can be said to have no significant effect on user satisfaction. The conclusion of ordinal logistic regression analysis is the same as the conclusion on Spearman rank correlation analysis. This indicates that both testing individually or jointly, variables that significantly affect user satisfaction are only usability variables. Because there is only one variable that affects user satisfaction, the coefficient of determination of the model is also low. The coefficient of determination in the ordinal logistic regression model is indicated by the values of

Mc Fadden, Cox and Snell, or Nagelkerke R-Square. Based on the output of the research, the value of Nagelkerke R Square is 0.232 or 23.2%. This means that the independent variable only affects user satisfaction by 23.2% and the remaining 76.8% is influenced by other variables that are not in the model test.

### Conclusions and recommendations

The quality of service on TNBTS Booking Online has the highest score on the Usability variable which is 79.54%. Usability variable majority of the highest value is on scale four (agree) and there is one indicator whose highest value is on scale five (strongly agree) that interaction is clear and easy to understand. In the information quality variable there are two indicators whose highest value is on scale three (neutral), and there are five indicators whose highest value is on scale 4 (agree). Among the five indicators, the highest is the information indicator is on time. For Service Interaction variables there are six indicators whose highest value is on scale three (neutral) and there is one indicator with the highest value on scale four (agree) that is privacy guaranteed. The user satisfaction variable has a very good assessment. This is evidenced by the majority of indicators being on a scale of five (strongly agree) and the frequency reached 51.5% with an ideal score of 86.8%. Service quality that influences user satisfaction based on rank spearman correlation and ordinal logistic regression results in the same decision, namely only usability which has a positive and significant effect on the satisfaction of TNBTS website users. For further research, it is necessary to add a sample to explore the relationship between quality variable and user satisfaction in TNBTS online ordering. If the number of samples is large enough (more than 200) it is recommended to use structural equation models during the analysis process.

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