THE EFFECT OF ABDURRAB UNIVERSITY LIBRARY WEBSITE QUALITY ON USER SATISFACTION USING MULTIPLE LINEAR REGRESSION AND IMPORTANCE PERFORMANCE ANALYSIS

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Abstract

Abdurrab University library website is an effort to improve services in providing information in the form of physical book data and digital collections to its users. This study aims to analyze the influence of the quality of the Abdurrab University library website on user satisfaction based on end user perceptions. The WebQual 4.0 method was modified by the researcher with the addition of the variables user interface quality and the quality of reliability to compile this research instrument. The distribution of questionnaires was carried out online and offline to 96 respondents obtained from the results of sample calculations using the slovin formula from a total population of 2552 people. The quality of Abdurrab University library website based on multiple linear regression analysis partially variables Usability Quality and The Quality of Reliability affect user satisfaction while simultaneously all WebQual 4.0 variable modifications affect user satisfaction. The influence of independent variables on dependent variables received a value of 43.6% and 56.4% was influenced by independent variables that were not used in this study, so the quality of the website was classified as poor. The quality of Abdurrab University library website is based on Importance Performance Analysis (IPA) for conformity level analysis of 85.29% and gap analysis of -0.55, with a conformity level analysis value of 85.29% of websites is good. The conclusion of this study is that the quality of the Abdurrab University library website affects user satisfaction, so this research can be used as a reference for improvement by the Abdurrab University library.

Keywords: *Importance Performance Analysis (IPA), Multiple linier regression, User satisfaction, Website quality, WebQual 4.0 modification.*

PENGARUH KUALITAS SITUS WEB PERPUSTAKAAN UNIVERSITAS ABDURRAB TERHADAP KEPUASAN PENGGUNA MENGGUNAKAN REGRESI LINIER BERGANDA DAN IMPORTANCE PERFORMANCE ANALYSIS

Abstrak

Situs *web* perpustakaan Universitas Abdurrab merupakan upaya peningkatan layanan dalam memberikan informasi berupa data buku fisik dan koleksi digital kepada penggunanya. Penelitian ini bertujuan untuk menganalisis pengaruh kualitas situs *web* perpustakaan Universitas Abdurrab terhadap kepuasan pengguna berdasarkan persepsi pengguna akhir. Metode WebQual 4.0 dimodifikasi oleh peneliti dengan penambahan variabel *User Interface Quality* dan *The Quality of Reliability* untuk menyusun instrumen penelitian ini. Penyebaran kuesioner dilakukan secara online dan offline kepada 96 orang responden yang didapatkan dari hasil perhitungan sampel menggunakan rumus *slovin* dari total populasi 2552 orang. Kualitas situs web perpustakaan Universitas Abdurrab berdasarkan analisis regresi linier berganda secara parsial variabel *Usability Quality* dan *The Quality of Reliability* berpengaruh terhadap kepuasan pengguna sedangkan secara simultan seluruh variabel WebQual 4.0 modifikasi berpengaruh terhadap kepuasan pengguna. Pengaruh variabel bebas terhadap variabel terikat mendapatkan nilai sebesar 43,6% dan 56,4% dipengaruhi oleh variabel bebas yang tidak digunakan dalam penelitian ini, sehingga kualitas situs *web* tergolong buruk. Kualitas situs *web* perpustakaan Universitas Abdurrab berdasarkan *Importance Performance Analysis* (IPA) untuk analisis tingkat kesesuaian sebesar 85,29% dan analisis kesenjangan sebesar -0,55, dengan nilai analisis tingkat kesesuaian sebesar 85,29% situs *web* tergolong baik. Kesimpulan dari penelitian ini kualitas situs *web* perpustakaan Universitas Abdurrab berpengaruh terhadap kepuasan pengguna, sehingga penelitian ini bisa dijadikan acuan perbaikan oleh pihak perpustakaan Universitas Abdurrab.

1. INTRODUCTION

In general, websites strive to attract a large number of users, so the quality of the website has an impact on user satisfaction when using it[1]. Satisfaction is a general assessment in evaluating a product or service, based on the user's overall experience in using the product or service[2]. Satisfaction is related to quality. Quality can be perceived as good and satisfactory, if the product or service received can exceed user expectations, then the quality of the product or service is perceived as ideal quality and meets user satisfaction[3]. In the use of the website, user satisfaction is greatly influenced by the quality of the website[4]. In addition, quality also has an influence on increasing user loyalty to the website. Indirectly loyalty can increase user satisfaction from the website. The quality of the college website is an important element to evaluate because the website serves as a virtual representation of the college. On the other hand, in measuring the quality of a website it is very important to do to increase the number of users. In measuring the quality of a website, there are three main aspects, namely usability, ease of use and entertainment which are the main components based on the user's perspective to reuse the website[5]. Ease of use means that everyone even people with disabilities can easily understand, understand, navigate, interact with the website and they can contribute to the website[6]. The ease of use of the website is positively related to user satisfaction based on the end-user perspective of the website[7]. The end-user perspective can be used to assess the quality of a website[8]. The end-user perspective can be used to assess the quality of a website[9].

The Abdurrab University library website is very important for its users, namely librarians at Abdurrab University in obtaining information related to the library in detail and accurately. This website can be accessed by librarians and users through computers and smartphones connected to internet services. Before the existence of digital-based websites, Abdurrab University in providing library services was carried out conventionally through print media as an alternative. With the change of services from conventional to digital through internet-based library websites, it can increase user interest and satisfaction, namely users and librarians at Abdurrab University. The strategic purpose of a digital-based library website is to maintain a level of service quality that guarantees funding of activities and customer satisfaction[10].

Furthermore, the researcher compares the positions or rankings of the library websites at private universities in pekanbaru city. Data retrieved from the site alexa.com in 02 Januari 2022[11]. Abdurrab University library website pustaka.univrab.ac.id is ranked 773,281 globally and 12,566 Indonesia. Library.uir.ac.id ranked 129,757 globally and 1,717 Indonesia. Lib.umri.ac.id obtained a ranking of 181,160 globally and 3,067 in Indonesia. Library.unilak.ac.id ranked 325,838 globally and 6,062 Indonesia. With this low position or ranking, if the problem is not evaluated, then the position or ranking of the Abdurrab University library website will regress and lag behind similar library websites at other private universities in Pekanbaru city.

WebQual is a tool for assessing the quality of service of a website[12]. Theory of Reasoned Action (TRA) is used in developing the WebQual model and the Technology Acceptance Model (TAM). This WebQual 4.0 method was chosen because the framework has been widely used to study and evaluate the quality of websites. For example, a study conducted by Phil Longstreet entitled "Evaluating Website Quality: Applying Cue Utilization Theory to WebQual"[13] and Barnes Stuart & Vidgen Richard entitled "WebQual: An Exploration of Website Quality"[14]. Currently, only WebQual 4.0 has a measurement instrument that focuses on end-user perceptions of website quality[15]. The WebQual 4.0 method was modified by the researcher because of the presence of additional variables such as the user interface quality[16] and the quality of reliability[17], thus the instrument used in this study is WebQual 4.0 modified.

Research related to website quality has been carried out by several previous researchers, such as Eko Retno Wulandari, Edwin Rizal and Elnovani Lusiana. The result of this study is that the quality of the kandaga website has a simultaneous effect on the satisfaction of users of the central library of Padjadjaran University. The quality of the kandaga website has a great influence on the satisfaction of users of the central library of Padjadjaran University. The quality of usability, the quality of service interaction, the quality of the interface, and the quality of digital library services partially have a significant effect on user satisfaction[18]. Furthermore, research was conducted by Frandika Septa, Anton Yudhana and Abdul Fadlil. The conclusion of this study is that by using multiple linear regression, the quality of the SIMSARPRAS website is in the medium classification, or of medium quality. Meanwhile, by using Importance Performance Analysis (IPA), the quality of the SIMSARPRAS website is in the classification of good, or good quality[19]. The last research was conducted by Warjiyono and Hellyana. The result is that in terms of usability quality, information quality, and visual quality, it already has good quality, while

in terms of service interaction quality it does not have good quality, because user satisfaction has not been met[20].

Based on previous research, the novelty of this study is the presence of variable quality reliability. this variable is used to measure the extent of a website's performance level. A working link, ease of access and a website can run well are the frameworks in this variable that can make users feel comfortable using the website.

Therefore, researchers are interested in conducting a combination of multiple linear regression analysis and Importance Performance Analysis (IPA) and comparing the results of the two data analyses using WebQual 4.0 modifications to be able to determine the effect of the quality of the Abdurrab University library website on user satisfaction based on the perception of end users of the website. The results of this study can be used as a reference in evaluating and developing digital-based library websites by Abdurrab University and can be used as a reference for other researchers in conducting research related to the quality of library websites in the future.

2. RESEARCH METHODS

The stages of the research methods that the researcher conducted can be seen in picture 1. Research methods.
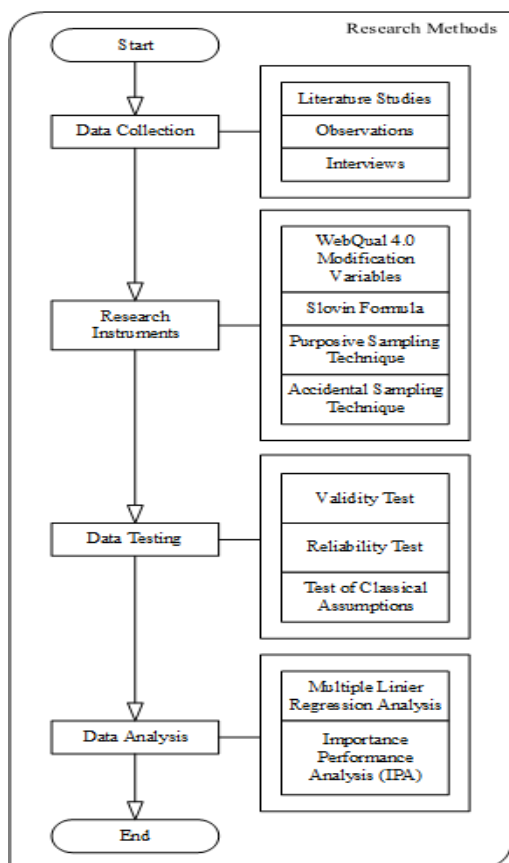
Picture 1. Research Methods

From picture 1. Research methods in this study used causal quantitative research. The causal quantitative research method is a method used to see the relationship of variables to the object under study is more cause and effect (causal), so that in his research there are independent and dependent variables[21]. This study examines the relationship between website quality and end-user satisfaction through the WebQual 4.0 modification instrument. In table 1. WebQual 4.0 modification variables, variables research operations in this study there are five variables X and one variable Y. The variables in WebQual 4.0 modification are usability quality (X1), information quality (X2), service interaction quality (X3), user interface quality (X4)[16], the quality of reliability (X5)[17] and overall impression (Y1).

This research was conducted by researchers starting from January 2021 to June 2022. This study was conducted to measure the effect of the quality of the Abdurrab University library website on user satisfaction and classify the quality of the website into three categories, namely not good, good enough and good. In collecting data, researchers use literature studies, observations and interviews. Literature studies are carried out to collect theories related to research. To obtain data and information through observation, researchers make observations directly to the place of case study, namely in the Abdurrab University library and through the Abdurrab University library website to see the problems on the website. Interviews in this study were conducted by providing questions to the speakers, namely stakeholders who really knew about the services of the Abdurrab University library website. Interviews of researchers conducted with the head of the library, staff and administrators of the library, the central section of computers and information systems, the database section and the active users of the Abdurrab University library website. To see visits to the website from the beginning of its release until now after it was published by researchers using the similarweb.com [22] website, this data was taken in 02 January 2022 with a total of approximately 50,000 visits. The population of this study amounted to 2552 users who were active users of the Abdurrab University library website taken in the period from January 2021 to June 2022. One of the methods used to determine the number of samples is to use the slovin formula. Of the total existing population, researchers took a sample to be used as respondents in this study using the slovin formula with a margin of error of 0.1 or 10%, the sample results obtained were 96 people. Based on the total population and samples obtained by the previous slovin formula, respondents for this questionnaire were active users who were members of the Abdurrab University library and often visited the Abdurrab University library website. The calculation results obtained from the slovin formula must be respresentative so that the results of the study can be generalized.

Table 1. WebQual 4.0 Modification variables

Variable	Questionnaire Items	Code
	The website is easy to operate and learn by its users	X1.1
	Interaction with the website is clear and understandable	X1.2
	The website has clear navigation	X1.3
	The website is easy to use	X1.4
Usability Quality (X1)	The website has an attractive or attractive appearance	X1.5
	Website design according to the type of website library	X1.6
	Websites contain competence or competitiveness with similar websites	X1.7
	Websites create a positive experience for users	X1.8
	The Website provides appropriate and accurate information	X2.1
	The website provides reliable information	X2.2
	The website provides timely information (up to date)	X2.3
Information Quality (X2)	The Website provides relevant information (according to the usefulness of the website)	X2.4
	The website provides easy to understand information	
	The website presents detailed information	X2.5
	The website presents information in the appropriate format	X2.6
		X2.7
	The website has a good reputation	X3.1
	Users feel safe in accessing the website	X3.2
	The website guarantees the security of users' personal information	X3.3
Service Interaction Quality (X3)	The website provides space for personalization of users	X3.4
	The website provides space for the library community	X3.5
	The website makes it easy to communicate with service providers	X3.6
	I feel confident that the information that the website provides is of high quality	X3.7
	The website uses the right image (according to the theme)	X4.1
	The website uses letters that are easy to read	X4.2
	The website uses the appropriate color display (inconspicuous)	X4.3
User Interface Quality (X4)	The website presents a display design that is in accordance with its function	X4.4
	The website has a consistent menu structure and layout	X4.5
	The website provides links that work well	X4.6
	The website can be accessed at any time	X5.1
	I didn't wait long when opening/logging into the website	X5.2
The Quality of Reliability (X5)	The website always appears if the address is pustaka.univrab.ac.id	X5.3
	The website runs fine using the default computer browser/leptop/gadget	X5.4
Overall Impression (Y1)	I would recommend the website to friends who need library services	Y1.1

Purposive sampling technique is a sample determination technique with certain considerations carried out to select a population, based on the criteria selected by the researcher. The criteria chosen by the researchers are user satisfaction, which is specifically for active users and has experience using the Abdurrab University library website. It aims to attract respondents who truly understand the Abdurrab University library website. Accidental sampling is a technique of determining samples based on accidental, that is, anyone who coincidentally meets the researcher can be used as a sample, if it is seen that the person who happens to be met is appropriate as a data source. The researcher's accidental sampling technique is used as an alternative to selecting samples from respondents that are existing or unplanned when encountered when the distribution of questionnaire links through goggle forms takes place offline at the case study site. This researchers did because of the limited energy and time in the process of distributing the goggle form questionnaire link.

The distribution of questionnaire items is carried out online and offline. The google form function, which is available for free on the google website, was used by researchers to disseminate questionnaires in this study. The questionnaire was created using a modified version of the WebQual 4.0 approach which consists of variables of usability quality, information quality, service interaction quality, user interface quality, the quality of reliability which is an independent variable (free) and overall impression which is a dependent (bound) variable used by researcher as a user satisfaction variable. The questionnaire concluded because the researcher had made an answer choice, which included 8 different types of responses and four different likert scales. The likert scale with values 1-4 was used in the measurement scale of as many as 33 items of questionnaire item statements regarding the quality of the website and user satisfaction consisting of the level of performance and the level of expectations.

One of the important steps that must be done in a study is to test the validity of the data, so that it can be known whether the data that has been obtained is data that can describe the actual state or in accordance with the reality that occurs, so that the data is worthy of further research and can be used to measure the object under study. According to Imam Ghozali[23] explains that the validity test is used to measure the validity or validity if the question of a questionnaire,

a questionnaire is said to be a valid question and the questionnaire is able to reveal something that the questionnaire will measure. Validity tests are generally used to determine the validity of items in a list of questions in defining a variable. The validity test was carried out by the researcher using the product moment technique by correlating each statement to the answer to the level of expectation and performance with the score results of each variable. The figure obtained from the calculation r calculate is compared with the r table owned. If r calculate > r table then the research instrument is valid. On the other hand, if the r calculate < r table then the research instrument is invalid. The r table value is generated from the r table (= 0.01, df = n-2) and the r calculate value is obtained from the pearson correlation result from the IBM SPSS Statistical program. The IBM SPSS Statistical program that the researchers used is version 25.

Furthermore, a reliability test is carried out. According to Imam Ghozali[23] reliability is to measure a questionnaire that is a variable indicator. The reliability test aims to determine whether the data collection tool basically shows the level of accuracy, accuracy, stability or consistency of the tool in revealing certain symptoms of a group of individuals, even though it is carried out at different times. If there is an invalid instrument, then at the time of testing the invalid reliabel is immediately abolished. This reliability test uses cronbach's alpha model, because the alternative answers used in the answers to this questionnaire are more than 3 choices. According to Imam Ghozali[23] cronbach alpha a construct or variable is said to be realiable if it gives a cronbach alpha value of >0,7. The results of cronbach's alpha, consulted with a list of interachisements of coefficient r. Testing the level of expectation and performance level of the Abdurrab University library website based on the perception of its users, the value is reliable, if all the values of cronbach's alpha are greater than 0.7 then this research questionnaire is worthy of being used as a research instrument.

According to Imam Ghozali[23] regression with the ordinary Least Square (OLS) estimation method will give the Best Linear Unbiased Estimator (BLUE) results if it meets all the classic assumptions. If in the classical assumption test there are assumptions that are not met, then a data transformation is carried out and all existing assumptions are retested. Classical assumption tests are used as requirements that must be met on multiple linear regression analysis. The classical assumption test is an analysis carried out to assess whether in a regression model there are problems of classical assumptions. The classical assumption test consists of normality test, multicholinearity and VIF test, heterokedasticity test and durbin watson autocorrelation test. According to Imam Ghozali[23] the normality test aims to test whether in the regression model the intruder or residual variable has a normal distribution. The

multicholinearity and VIF test is to test whether the regression model found any correlation between independent variables[23]. The selection of tolerance value or Variance Inflation Factor (VIF) in this study is because this method is a common way to do and is considered more reliable in detecting the presence or absence of multicolonierity in regression models and testing with tolerance value or Variance Inflation Factor (VIF) more complete in analyzing data. The heteroskedasticity test is to see if there is a variance inequality from the residual of one observation to another[23]. A good regression model is one that is homoskedasticity or does not occur heteroskedasticity[23]. According to Imam Ghozali[23] durbin watson autocorrelation test is used to test whether in the linear regression model there is a choleration between the disruptor error in the t period and the disruptor error in the t-1 period (previously), if there is an autocoleration then it is called an autocoleration problem. A good regression model is a regression that is free of autocorrelation[23].

In conducting data analysis, researchers use multiple linear regression analysis and Importance Performance Analysis (IPA). Multiple linear regression is an analysis that explains how closely related several independent variables are to a dependent variable. According to Sugiono[21] explaining that multiple linear analysis is used by the researcher, if the study has the intention of predicting how the state (ups and downs) of the dependent variables, if two independent variables become factors of the predicate manipulated (dinaik lower the value). Website quality analysis using multiple linear regression is performed with t test (partial) and f test (simultaneous). According to the Imam Ghozali[23], the t test basically shows how far the influence of one independent variable individually is in describing the dependent variable. According to the Test criteria set out on the t test (partial) is used by comparing the significance value and the t calculate and the t table value with a significance level of 0.05. According to Imam Ghozali[23] the f test basically indicates whether all the independent variables intended in the model have a simultaneous influence on the dependent variables. The test criteria set on the f test (simultaneous) are used by comparing significance values and values f calculate and value f table with a significance level of 0.05. Furthermore, the researcher uses the coefficient of determination to find out the amount of value generated by the independent variable to influence the value of the dependent variable.

Importance Performance Analysis (IPA) is an analytical method used to analyze the level of importance and performance[24]. Importance Performance Analysis (IPA) will display indicators that need improvement because of their low performance. Importance Performance Analysis (IPA) will compare expectation levels with

performance levels to determine the scale of service priorities that will be prioritized to scale up. This method has the ability to provide information appropriately in the assessment of a website with an efficient format to maximize user satisfaction in the use of a website[25]. On this method, respondents were asked to assess the level of expectations and performance from the Abdurrab University library website. Importance Performance Analysis (IPA) consists of conformity analysis, gap analysis and quadrant analysis.

Conformity analysis is the result of a comparison between the implementation performance score (Performance) and the importance score (Importance) to determine the value of end user satisfaction with a website. This analysis will generate a sequence to determine which attributes should be prioritized[26]. The suitability level analysis will determine the priority scale that will be used in handling the results of the quadrant analysis. The criteria for assessing the level of conformity of users are: (1) if the results of the conformity analysis state >100% means that the user's satisfaction level exceeds the desired level of expectations and the user feels very satisfied, (2) if the conformity analysis results state =100% it means that the user's satisfaction level reaches the desired level of expectation and the user is satisfied, (3) if the conformity analysis results state <100% it means that the user's satisfaction level does not reach the desired expectation level and the user is not satisfied.

Gap analysis is used as a business evaluation tool that focuses on current organizational performance gaps with previously targeted performance[27]. Gap analysis is an innovative and useful approach for conducting needs assessments and for evaluating websites. The gap calculation results show that users are satisfied if the gap value is positive and show that users are dissatisfied if the gap value is negative.

The first stage for quadrant analysis is to use a prestigious diagram with the intersection of the axes (X) and (Y) so that 4 quadrants are formed. The (X) axis represents performance and the (Y) axis represents expectation. This value intersects perpendicular to the horizontal axis, that is, the axis that reflects the performance of the attribute (X), while the value intersects perpendicular to the vertical axis, that is, the axis that reflects the importance of the attribute (Y). Below are the assessment criteria of the Importance Performance Analysis (IPA) quadrant diagram including (1) the first quadrant of "priorities for improvement" attributes that are within the scope of the first quadrant with low performance but are very influential because they have high importance priorities so that they become an important point in quality improvement points, (2) the second quadrant "keep ip the good work" attribute that is within the scope of the second quadrant with the same performance and priority of importance so that it only

needs to be maintained its value to maintain quality, (3) the third quadrant of "low priority" attributes that are within the scope of the second quadrant with the same low performance and importance priority so that there needs to be an improvement in the aspects contained in the scope of this quadrant, (4) the fourth quadrant "possible overkill" of attributes that are within the scope of the second quadrant with too high performance compared to their level of importance so that there is a need for distribution on aspects contained in the scope of other quadrants as in the first quadrant[28].

3. RESULTS AND DISCUSSION

In this study the questionnaire was distributed to 96 active users of the Abdurrab University library website who were respondents in the study. From the results of respondents' answers to the questionnaire that had been previously shared, the researcher conducted a validity test. This validity test is necessary to find out whether the questionnaire results are valid or not. This test was carried out using SPSS version 25 software by comparing the value of the r calculate (pearson corellation) with the r table with a signification value of 0.01% (2-tailed). The results of this validity test use answers from the expectation level and performance questionnaire. The results of the expectation level answer validity test can be seen in table 2. Expectation level validity test of the following.

Table 2. Expectation Level Validity Test

No	Items	Expectation		
		r calculate	r table	Status
1.	X1.1	0,830	0,2617	Valid
2.	X1.2	0,754	0,2617	Valid
3.	X1.3	0,856	0,2617	Valid
4.	X1.4	0,870	0,2617	Valid
5.	X1.5	0,786	0,2617	Valid
6.	X1.6	0,743	0,2617	Valid
7.	X1.7	0,726	0,2617	Valid
8.	X1.8	0,766	0,2617	Valid
9.	X2.1	0,825	0,2617	Valid
10.	X2.2	0,818	0,2617	Valid
11.	X2.3	0,778	0,2617	Valid
12.	X2.4	0,832	0,2617	Valid
13.	X2.5	0,800	0,2617	Valid
14.	X2.6	0,776	0,2617	Valid
15.	X2.7	0,845	0,2617	Valid
16	X3.1	0,879	0,2617	Valid
17.	X3.2	0,766	0,2617	Valid
18.	X3.3	0,859	0,2617	Valid
19.	X3.4	0,848	0,2617	Valid
20.	X3.5	0,894	0,2617	Valid
21.	X3.6	0,849	0,2617	Valid
22.	X3.7	0,832	0,2617	Valid
23.	X4.1	0,843	0,2617	Valid
24.	X4.2	0,863	0,2617	Valid
25.	X4.3	0,847	0,2617	Valid
26.	X4.4	0,806	0,2617	Valid
27.	X4.5	0,839	0,2617	Valid
28.	X4.6	0,681	0,2617	Valid
29.	X5.1	0,908	0,2617	Valid
30.	X5.2	0,904	0,2617	Valid
31.	X5.3	0,890	0,2617	Valid
32.	X5.4	0,927	0,2617	Valid
33.	Y1.1	1,000	0,2617	Valid

The results of the performance level answer validity test can be seen in table 3. Performance level validity test of the following.

Table 3. Performance Level Validity Test

No	Items	Performance		
		r calculate	r table	Status
1.	X1.1	0,705	0,2617	Valid
2.	X1.2	0,851	0,2617	Valid
3.	X1.3	0,752	0,2617	Valid
4.	X1.4	0,809	0,2617	Valid
5.	X1.5	0,511	0,2617	Valid
6.	X1.6	0,839	0,2617	Valid
7.	X1.7	0,769	0,2617	Valid
8.	X1.8	0,687	0,2617	Valid
9.	X2.1	0,738	0,2617	Valid
10.	X2.2	0,721	0,2617	Valid
11.	X2.3	0,517	0,2617	Valid
12.	X2.4	0,783	0,2617	Valid
13.	X2.5	0,765	0,2617	Valid
14.	X2.6	0,755	0,2617	Valid
15.	X2.7	0,791	0,2617	Valid
16	X3.1	0,708	0,2617	Valid
17.	X3.2	0,749	0,2617	Valid
18.	X3.3	0,747	0,2617	Valid
19.	X3.4	0,751	0,2617	Valid
20.	X3.5	0,702	0,2617	Valid
21.	X3.6	0,538	0,2617	Valid
22.	X3.7	0,762	0,2617	Valid
23.	X4.1	0,720	0,2617	Valid
24.	X4.2	0,546	0,2617	Valid
25.	X4.3	0,696	0,2617	Valid
26.	X4.4	0,778	0,2617	Valid
27.	X4.5	0,789	0,2617	Valid
28.	X4.6	0,629	0,2617	Valid
29.	X5.1	0,830	0,2617	Valid
30.	X5.2	0,875	0,2617	Valid
31.	X5.3	0,867	0,2617	Valid
32.	X5.4	0,784	0,2617	Valid
33.	Y1.1	1,000	0,2617	Valid

From table 2. Expectation level validity test and table 3. Performance level validity test can be concluded that the answer to the level of expectation and performance of all questionnaire items from the variables of usability quality, information quality, service interaction quality, user interface quality, the quality of reliability and overall impression are declared valid because the value of r calculate > r table.

After the questionnaire items are declared valid, the researcher conducts a reliability test of all questionnaire answers to the level of expectation and performance. The results of the expectation and performance level reliability testing are as follows.

Table 4. Expectation and Performance Level Reliability Test

No	Level	Cronbach's alpha	Status
1.	Expectation	0,975	Reliable
2.	Performance	0,952	Reliable

Based on table 4. Expectation and performance level reliability can be seen that the results of the reliability test of each variable in this study are reliable because the value of cronbach's alpha obtained is greater than 0.7[23]. Based on the results of testing the validity and reliability of each variable

in the questionnaire item of the level of expectation and performance, it can be said that the questionnaire item in this study is worthy of being used as research material.

The classical assumption test consists of a normality test, a multicholinearity tolerance and VIF test, a heterochedasticity test and a durbin watson autocorrelation test. The normality test is a test to determine whether or not the residual value distribution is normal. To test the normality of the data, researchers used the spss version 25 program. One example of a good regression model has a normally distributed residual value. Normality test probability plot according to Imam Ghozali[23] if the data ploting regression model (points) follows a diagonal line, the data distribution runs normally and vice versa if the data ploting (points) spreads far from the direction of the line or does not follow the diagonal line then it is not distributed normally. The results of the probability plot normality test can be seen in picture 2. Probability plot normality test
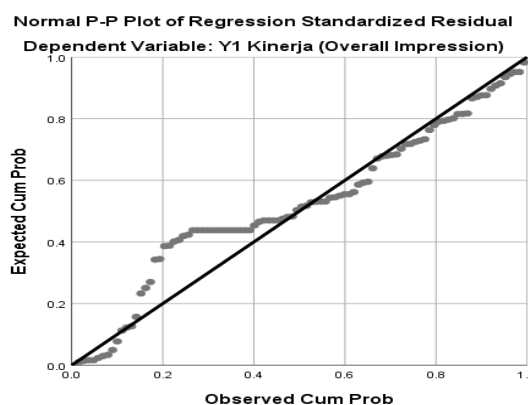
Picture 2. Probability Plot Normality Test

From picture 2. Probability plot normality test results in the normal conditions of the distribution of residual values of the data are met and the data is normally distributed because the plotting data (dots) approach and follow the diagonal line, so that the results of this analysis can be used in the next stage in the analysis of multiple linear regression.

Multicholinearity tolerance and VIF test according to Imam Ghozali[23] if the tolerance value >0.100 and the VIF value <10.00, then there are no symptoms of multicollinearity. The results of the multicholinearity tolerance and VIF tests can be seen in table 5. Multicholinearity and VIF test.

Table 5. Multicholinearity and VIF Test

	Type	Collinearity Statistics	
		Tolerance	VIF
	(Constant)		
	X1 (Usability Quality)	.475	2.106
	X2 (Information Quality)	.244	4.099
1	X3 (Service Interaction Quality)	.254	3.933
	X4 (User Interface Quality)	.432	2.317
	X5 (The Quality of Reliability)	.417	2.399

a. Dependent Variable: Y1 (Overall Impression)

From the data in table 5. Multicholinearity and VIF test above can be concluded for variables X1 (usability quality) tolerance value (0.475)>(0.100) and VIF value (2.106)<(10.00), X2 (information quality) tolerance value (0.244)>(0.100) and VIF value (4.099)<(10.00), X3 (service interaction quality) tolerance value (0.254)>(0.100) and VIF value (3.933)<(10.00), X4 (user interface quality) tolerance value (0.432)>(0.100) and VIF value (2.317)<(10.00), X5 (the quality of reliability) tolerance value (0.417)>(0.100) and VIF value (2,399)<(10.00). From the results of the comparison of the amount of tolerance and VIF values in multicholinearity testing, there were no symptoms of multicholinearity.

Heteroskedasticity test of scatterplots according to Imam Ghozali[23], if there is no clear pattern (wavy, widened then narrowed) in the scatterplots figure, as well as points spreading above and below the number 0 on the Y-axis, then no heteroskedasticity occurs. Here's picture 3. Results the heteroskedasticity test of scatterplots.
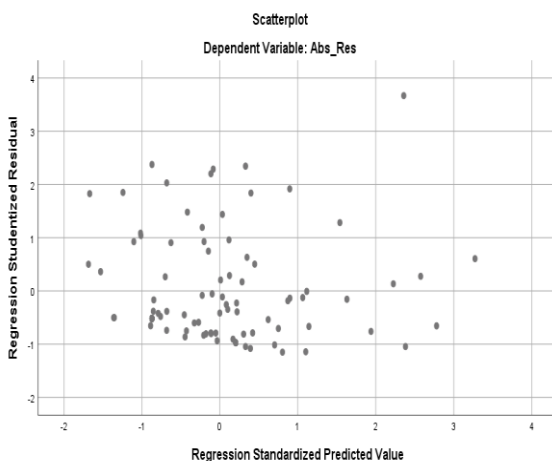
Picture 3. Results The Heteroskedasticity Test of Scatterplots

From picture 3. Results the heteroskedasticity test of scatterplots above, it can be concluded that the pattern formed spreads above and below the number 0, then the condition that there are no symptoms of heteroskedasticity is met. In this study, a glejser test was used. The glejser test is carried out by regressing the residual absolute value against an independent variable. If the significance value is more than 0.05, heteroskedasticity does not occur[23].

Durbin watson autocorrelation test according to Imam Ghozali[23], if the Durbin Watson value is located between du to (4-du), then no autocorrelation occurs. The durbin watson autocorrelation test with a level of significance alpha = 0.05, obtained a value of du (1.7785)< Durbin Watson (2.032)< 4-du (2.221) so that there were no symptoms of autocorrelation.

After the stages of the classical assumption test were completed, the researcher proceeded to analyze the data using multiple linear regression. In this analysis, a partial t-test and a simultaneous f test were carried out as well as the output of the results of the correlation of the coefficient of determination. Partial t-tests and simultaneous f-tests are performed on the basis of significance values and comparison of calculated and table values. according to Imam Ghozali[23] the independent variable (X) partially affects the dependent variable (Y), if the sig value. <0.05. Partial t-test based on significance value obtained variable X1 (usability quality) partially affects variable Y1 (overall impression) because it has a significance value (0.04)<(0.05). Variable X2 (information quality) partially has no effect on variable Y1 (overall impression) because it has a significance value (0.51)>(0.05). Variable X3 (service interaction quality) partially has no effect on variable Y1 (overall impression) because it has a significance value (0.30)>(0.05). The variable X4 (user interface quality) partially has no effect on the variable Y1 (overall impression) because it has a significance value (0.12)>(0.05). The variable X5 (the quality of reliability) partially affects the variable Y1 (overall impression) because it has a significance value (0.00)<(0.05). According to V. Wiratna Sujarweni[29], the independent variable (X) partially affects the dependent variable (Y), if the value t calculate > t table[29]. Partial t-test based on calculated value and table can be formulated by looking for t table = $(\alpha/2 ; n - k - 1) = (0,05/2 ; 96 - 5 - 1) = (0,025 ; 90) = 1,990$. The result obtained is that the variable X1 (usability quality) has a positive effect on the variable Y1 (overall impression) because it has a value of t calculate (2.067)>(1.990) t table. The variable X2 (information quality) has no effect on the variable Y1 (overall impression) because it has a value of t calculate (0.657)<(1.990) t table. Variable X3 (service interaction quality) has no effect on variable Y1 (overall impression) because it has a value of t calculate (1,042)<(1,990) t table. Variable X4 (user interface quality) has no effect on variable Y1 (overall impression) because it has a value of t calculate (-1,550)<(1,990) t table. Variable X5 (the quality of reliability) has a positive effect on variable Y1 (overall impression) because it has a value of t calculate (3,223)>(1,990) t table.

Simultaneous F test according to Imam Ghozali [23], if the independent variable (X) simultaneously affects the dependent variable (Y), if it has a significance value of <0.05. The results of the simultaneous F test based on significance, namely variables usability quality, information quality, service interaction quality, user interface quality and the quality of reliability) simultaneously affect the variable (overall impression) because it has a significance value (0.00)<(0.05). According to V. Wiratna Sujarweni [29] Simultaneous F-tests based on calculated calculations and tables based on independent variables (X) simultaneously affect the dependent variables (Y) if the value of f calculate > f table[29]. Simultaneous F test results based on the

formula of searching f table = (k ; n – k) = (5 ; 96 – 5) = (5 ; 91) = 2,31. The conclusion is that the variables usability quality, information quality, service interaction quality, user interface quality and the quality of reliability simultaneously affect the variables overall impression because they have a value of f calculate (13.91)>(2.31) f table. Furthermore, the researcher looked for the amount of value of the independent variable (X) that affects the value of the dependent variable (Y) using the output of the value of the in table 6. Coefficient of determination.

Table 6. Coefficient of Determination

Type	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.660ª	.436	.405	.442

Based on table 6. Coefficient of determination, the value of R (correlation) of 0.660 and R Square (Coefficient of Determination) of 0.436 (43.6%). From these results, it can be concluded that the dependent variable (Y) or overall impression is able to influence the independent variable (X) by 43.6% and the correlation value of 0.660 can be interpreted to mean that the relationship of the dependent variable (Y) or overall impression to the independent variable (X) in this study is strong, because it is in the range of values 0.60-0.799[21]. Another independent variable (X) not used in this study had an influence on the dependent variable (Y) Overall Impression of (100%) – (43.6%(value of the coefficient of determination)) = 56.4%.

Importance Performance Analysis (IPA) in this study consists of conformity level analysis, gap analysis and quadrant analysis. Analysis of the level of conformity was carried out per-item calculation of the questionnaire based on each variable in this study and analysis of the total level of conformity of the results of the number of calculation scores from the level of expectation and performance. The value obtained in the usability quality variable is 86.25%, which is presented in table 7. Tki usability quality.

Table 7. Tki Usability Quality

No	Items	Performance Score	Expectation Score	Tki
1	X1.1	319	368	86,68%
2	X1.2	315	367	85,83%
3	X1.3	310	361	85,87%
4	X1.4	326	368	88,58%
5	X1.5	286	361	79,22%
6	X1.6	325	366	88,79%
7	X1.7	323	368	87,77%
8	X1.8	319	366	87,15%
Total		2523	2925	86,25%

The value obtained in the information quality variable is 84.65%, which is presented in table 8. Tki information quality.

Table 8. Tki Information Quality

No	Items	Performance Score	Expectation Score	Tki
9	X2.1	305	367	83,10%
10	X2.2	325	369	88,07%
11	X2.3	279	370	75,40%
12	X2.4	323	367	88,01%
13	X2.5	321	370	86,75%
14	X2.6	320	364	87,91%
15	X2.7	306	367	83,37%
Total		2179	2574	84,65%

The value obtained in the variable service interaction quality is 83.67%, which is presented in table 9. Tki service interaction quality.

Table 9. Tki Service Interaction Quality

No	Items	Performance Score	Expectation Score	Tki
16	X3.1	326	366	89,07%
17	X3.2	324	366	88,52%
18	X3.3	323	363	88,98%
19	X3.4	278	360	77,22%
20	X3.5	282	362	77,90%
21	X3.6	275	369	74,52%
22	X3.7	325	363	89,53%
Total		2133	2549	83,67%

The value obtained in the user interface quality variable is 83.67%, which is presented in table 10. Tki user interface quality.

Table 10. Tki User Interface Quality

No	Items	Performance Score	Expectation Score	Tki
23	X4.1	294	368	79,89%
24	X4.2	327	369	88,61%
25	X4.3	328	362	90,60%
26	X4.4	301	366	82,24%
27	X4.5	294	367	80,10%
28	X4.6	296	367	80,65%
Total		1840	2199	83,67%

The value obtained in the quality of reliability is 89.73%, which is presented in table 11. Tki the quality of reliability.

Table 11. Tki The Quality of Reliability

No	Items	Performance Score	Expectation Score	Tki
29	X5.1	324	366	88,52%
30	X5.2	335	363	92,28%
31	X5.3	331	366	90,43%
32	X5.4	321	366	87,70%
Total		1311	1461	89,73%

The overall total score of the results of the number of questionnaire scores of the level of expectation and performance got a score of 85.29%, which is presented in the following table 12. ∑Tki overall value total.

Table 12. ∑Tki Overall Value Total

Performance Score	Expectation Score	∑Tki
9986	11708	85.29%

The conclusions that can be drawn from the results of the calculation of the analysis of the degree of conformity of the overall total score of the results of the number of questionnaire scores of the level of expectation and performance that users of the Abdurrab University library website are quite satisfied, against the quality of the website.

Gap analysis is carried out by calculating the answers to the questionnaire with the average value of the performance level minus the average value of the expectation level. The gap value obtained in the usability quality variable is -0.52, which is presented in table 13. Usability quality gap.

Table 13. Usability Quality Gap

No	Items	Performance Average	Expectation Average	Gap
1	X1.1	3,32	3,83	-0,51
2	X1.2	3,28	3,82	-0,54
3	X1.3	3,22	3,76	-0,54
4	X1.4	3,39	3,83	-0,44
5	X1.5	2,97	3,76	-0,79
6	X1.6	3,38	3,81	-0,43
7	X1.7	3,36	3,83	-0,47
8	X1.8	3,32	3,81	-0,49
	Average	**3,28**	**3,80**	**-0,52**

The gap value obtained in the information quality variable is -0.59, which is presented in table 14. Information quality gap.

Table 14. Information Quality Gap

No	Items	Performance Average	Expectation Average	Gap
9	X2.1	3,17	3,82	-0,65
10	X2.2	3,38	3,84	-0,46
11	X2.3	2,90	3,85	-0,95
12	X2.4	3,36	3,82	-0,46
13	X2.5	3,34	3,85	-0,51
14	X2.6	3,33	3,79	-0,46
15	X2.7	3,18	3,82	-0,64
	Average	**3,24**	**3,82**	**-0,59**

The gap value obtained in the service interaction quality variable is -0.62, which is presented in table 15. Service interaction quality gap.

Tabel 15. Service Interaction Quality Gap

No	Items	Performance Average	Expectation Average	Gap
16	X3.1	3,39	3,81	-0,42
17	X3.2	3,37	3,81	-0,44
18	X3.3	3,36	3,78	-0,42
19	X3.4	2,89	3,75	-0,86
20	X3.5	2,93	3,77	-0,84
21	X3.6	2,86	3,84	-0,98
22	X3.7	3,38	3,78	-0,4
	Average	**3.17**	**3,79**	**-0,62**

The gap value obtained in the user interface quality variable is -0.62, which is presented in table 16. User interface quality Gap.

Table 16. User Interface Quality Gap

No	Items	Performance Average	Expectation Average	Gap
23	X4.1	3,06	3,83	-0,77
24	X4.2	3,40	3,84	-0,44
25	X4.3	3,41	3,77	-0,36
26	X4.4	3,13	3,81	-0,68
27	X4.5	3,06	3,82	-0,76
28	X4.6	3,08	3,82	-0,74
	Average	**3,19**	**3,81**	**-0,62**

The gap value obtained in the quality of reliability variable is -0.39, which is presented in table 17. The quality of reliability Gap.

Table 17. The Quality of Reliability Gap

| No	Items	Performance Average	Expectation Average	Gap
29	X5.1	3,37	3,81	-0,44
30	X5.2	3,48	3,78	-0,3
31	X5.3	3,44	3,81	-0,37
32	X5.4	3,34	3,81	-0,47
	Average	**3,41**	**3,80**	**-0,39**

The total value of the overall gap from the results of the number of questionnaire scores of the level of expectation and performance got a value of -0.55, which is presented in table 18. Overall gap value total.

Table 18. Overall Gap Value Total

Performance Average	Expectation Average	Gap Average
3,25	3,80	-0,55

The overall total gap value of the variables usability quality, information quality, service interaction quality, user interface quality and the quality of reliability) get negative results, so that the performance produced by the abdurrab library website has not reached the expectations desired by its users and it can be concluded that user satisfaction has not been Fulfilled.

Cartesian diagrams are used to divide the regions in each quadrant, based on the results of the calculation of the expectation level questionnaire items and performance from the Abdurrab University library website. the cartesian diagram can be seen in picture 4. Cartesian diagram.
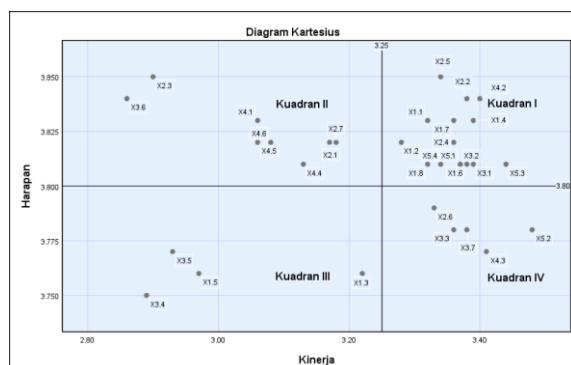
Picture 4. Cartesian Diagram

Based on picture 4. Cartesian diagram can be known that: (1) variable questionnaire items X1.1, X1.2, X1.4, X1.6, X1.7, X1.8, X2.2, X2.4, X2.5, X3.1, X3.2, X4.2, X5.1, X5.3, X5.4 are located in the first quadrant. This means that the level of expectation and performance according to the user is high so it must be maintained performance and quality because the user is satisfied, (2) the variable questionnaire items X2.1, X2.3, X2.7, X3.6, X4.1, X4.4, X4.4, X4.6 are located in the second quadrant. This means high expectations but low performance. The items in this quadrant are very important to the user because the user's expectations of the item are high but the performance of the item is still low, so the user feels that they are still not satisfied. This is the first priority in improvement. (3) the variable questionnaire items X1.3, X1.5, X3.4, X3.5 are located in the third quadrant. This means low levels of expectations and performance. Therefore this variable is not very important for improvement because it does not affect user satisfaction, (4) the questionnaire items of the variables X2.6, X3.3, X3.7, X4.3, X5.2 are located in the fourth quadrant. This means that the level of expectation is low, but the performance is high so it is not too prioritized, because the performance of these variables is already very good.

The quality classification of the abdurrab university library website was carried out after the data analysis was completed. This classification is carried out to compare the results of data analysis from multiple linear regression analysis with Importance Performance Analysis (IPA). The quality classification of the abdurrab University library website can be seen in picture 5. Abdurrab university library website classification.
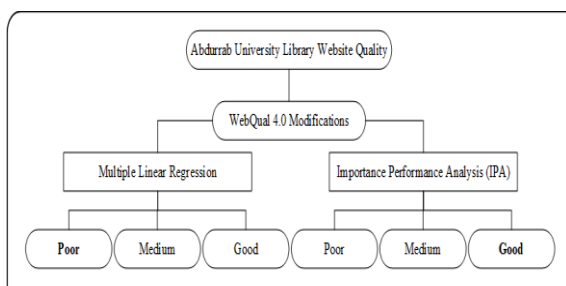
Picture 5. Abdurrab University Library Website Classification

From picture 5. Abdurrab university library website classification can be concluded the results of data analysis using multiple linear regression analysis show the quality of abdurrab university library websites is of "poor" quality and the results of Importance Performance Analysis (IPA) show the quality of abdurrab university library websites are of "good" quality.

4. CONCLUSION

The conclusions obtained from this study are in the variables usability quality, information quality,

service interaction quality user interface quality, the quality of reliability to user satisfaction there are no symptoms of multicholinearity, heteroskedasticity and autocorrelation durbin watson so it can be said that this modified WebQual 4.0 instrument has a normally distributed residual value and worthy of being used as a research instrument.

Partially the variables usability quality and the quality of reliability based on significance values and comparisons of calculated values and table values, both variables affect user satisfaction. This result is a finding in this study that the variable the quality of reliability is the most influential variable, because it has a greater influence value compared to the variable usability quality. Whereas simultaneously all WebQual 4.0 variable modifications affect user satisfaction, based on significance values and calculated values and table values.

From the results of the multiple linear regression analysis, the results of the coefficient of determination showed the influence of the dependent variable on the independent variable getting a value of 43.6% and for the influence of other dependent variables that were not in this study by 56.4%, so that the quality of the website is classified as poor.

As for the Importance Performance Analysis (IPA), the influence of dependent variables on independent variables received a value of 85.29%. The results of the gap analysis obtained by -0.55 from the total conformity level analysis of 85.29%, can be interpreted to mean that user satisfaction with the quality of the Abdurrab University library website is good.

In the comparison of the value of the results of multiple linear regression analysis, the quality of the website is classified as poor, while for Importance Performance Analysis (IPA) the quality of the website is good.

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