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Website Quality Measurement of Higher Education Services Institution Region IV Using Webqual 4.0 Method

Rintho Rante Rerung[1], Muhammad Fauzan[2], Hari Hermawan[3]
[1]Department of Informatics Engineering, Nusa Putra University, Indonesia
[2]Department of Informatics Management, Polytechnic of Perdana Mandiri, Indonesia
[3]Department of Informatics Engineering, Pratama Adi Higher Istitution of Technology, Indonesia

Article Info

ABSTRACT

The purpose of this study is to measure and describe the Higher Education Services Institution Region IV website quality using the Webqual 4.0 method. The questionnaire filling, depth interviews, and observation are the methods used in this research. The measurement results showed that the overall of the Higher Education Services Institution Region IV website quality was included in Good criteria. In detail from the measurement results, the dimension criteria that gained the highest score was the usability dimension which is 741,63 with a percentage of 81.05 (good criteria). The information quality dimension obtained an average score of 730,57 with a percentage 79.84 (good criteria). While the dimension that obtained the lowest score was the service interaction dimension which was 710,50 with the percentage of 77.10 (good criteria). In addition, in order to accommodate the needs of visitors, this study found the fact that visitors expected website developers to build the website navigate easily, information updated more, implement a comprehensive recommendation system, and more interactive.

Corresponding Author:

Rintho Rante Rerung,
Department of Informatics Engineering,
Nusa Putra University,
Email: rrantererung@gmail.com

1.   INTRODUCTION

Higher Education Services Institution Region IV (LL-Dikti IV) is a government agency tasked to formulate policies and carry out supervision, control, and development of private higher education in West Java and Banten. In carrying out its duties, LL-Dikti IV has a wide range of functions among others, the implementation of higher education mapping quality, facilitating the implementation of higher education quality improvement, the implementation of higher education quality improvement management, the implementation of higher education readiness in external quality assurance, implementing, evaluating and reporting the implementation of facilitation of the improvement quality of higher education, data management and information in the field of higher education quality, as well as the administration implementation of the higher education in region of West Java and Banten.

Based on DATA FORLAP DIKTI the number of higher education which are under the guidance of LL-Dikti IV recorded 478 higher educations with the distribution are 368 in West Java

and 110 in Banten [1]. The distribution of higher education under the guidance of LL-Dikti IV based on its form can be seen in infographics in the following figure 1.

Figure 1. Inforgraphics of higher education under the guidance of LL-Dikti IV

These facts showed that the LL-Dikti IV need to figure out the information media that can reach the entire academic community in higher education which are under the of LL-Dikti IV. One way that has been done by LL-Dikti IV is using the website to distribute information with regard to the duties and functions. The website can be accessed through the URL www.lldikti4.or.id. As it has been known that one of the website functions is as a means to disseminate information to the public. Similarly with the website LL-Dikti IV is used as a mouthpiece of official information LL-Dikti IV to public, particularly the higher educations which are under the guidance of of LL-Dikti IV. The information between the other information of administrative services of higher education, information of lecturer administrative, information of training and seminars, scholarship information, information of policy and government regulation on higher education and others. So the existence of the website was rated very important and completely needed in particular by the academic community in higher education under the guidance ranging from students, lecturers, staffs to executive and higher education providers.

The Website of LL-Dikti IV has a central role as the mouthpiece of official information to the public in a special academic community of the higher education under the guidance so its quality required to be tested to find out whether the website service is in accordance with the user's expectations. The quality of good website service will affect the intention to use the website. In addition, the website quality can also development of trust to the public towards an institution. The statement is in line with the results of the research Mehrbakhsh Nilashi *et al.* [2] that "general we site quality contributes to the development of trust". One of the methods that can be used to measure the quality of a website is WebQual method. The measurement method is focused on three main dimensions namely usability quality, information quality, and service interaction quality [3].

2.   LITERATURE REVIEW

Information technology is the use of electronic devices especially computers to enter, process, store, analyze and disseminate information. The definition of other information technology is a technology associated with data processing into information and the process of data/information distribution within the limits of time and space [4]. While in the constitution of Indonesia No.11 year 2018 about information and Electronic Tansactions define information

technology as a technique to collect, prepare, store, process, publish, analyze, and/or disseminate information [5]. One of the forms or products of information technology is the website.

The Website is a tool that can be used to disseminate information to the public through the internet. Some of the advantages obtained from use of the website, among others, access to information easy, information is easily distributed, as well as multi-platform [6]. Convenience is the main reason many individuals and organizations use website as the media of the information. In addition, the use of the website as a medium of information is considered very strategic. Therefore, it is important for developer to do quality measurement of its website in order to find out the website has been in accordance with userd expectations. To measure the quality of a website, one of the ways that can be used is WebQual method.

WebQual method has been developed since 1998. The method is a development of quality services measurement namely SERVQUAL method. Since it was developed from the first version, namely WebQual 1.0 up to this moment the fourth version, namely WebQual 4.0 have experienced some interaction in the preparation of dimensions and the grain of the question. Even this method can be modified like Gata and Oryza (2017) used the method of WebQual modification with variable usability, information, service interaction and user interface role as the independent variable, while the variable of user satisfaction role as the dependent variable [7]. Basically, WebQual 4.0 is a technique of measuring the quality of a website based on user perceptions. According to the theory, there are three main dimensions of WebQual 4.0 namely usability quality, information quality, and service interaction quality [3],[2],[8],[9],[10].

The quality measurement of LL-Dikti IV website indeed has never been done. However from the results of the literature study found previous research that similar as following:

a. Windu Gata and Oriza Gilang H. (2017) conducted research to evaluate a website for academic services. The research concluded that site yet provide a sense of security for storing personal data and layout information in the site is not yet right and there is a GAP in all dimensions of performance and expectations of students [7].

b. Darmawan Baginda Napitupulu (2017) used the method of WebQual to measure the quality of university website. The research concluded that the variables of usability and services interaction have the significant and positive effect on user's satisfaction, howeve the variable of information quality has no significant effect on users' satisfaction [11].

c. Jasur Hasanov and Haliyana Khalid (2015) conduct a study of the impact of website quality on online purchase using webqual model approach. The results indicate that website quality has indirect impact on online purchase intentions of health foods in Malaysia through the full mediation of customer satisfaction [12].

d. Rajesh Kumar Jain and Santosh Rangnekar (2015) conducted research to measuring website quality of the Indian railways. The research concluded that "The Indian Railways website quality is not on the mark compared to what the users expect in a perceived ideal website" [13].

e. Layla Hasan (2014) conducted research to evaluate the usability of educational websites. The conclusion of the study resulted that the most important for the educational website were easily to use and communication as well as design [14].

From the results of those literature studies, it can be stated that the method of WebQual can be used to measure the quality in different types of website, there's no exception which type of the website, government as well as website LL-Dikti IV website.

3.   RESEARCH METHOD

In carrying out this research, the data collected should be completed, namely primary data and secondary data. It was intended that this research would generate high-quality research. The methods of collecting primary data are through observations, interviews, and questionnaires in order to obtain data and information of the actual state so that data and information were believed to be the truth. Population for primary data collection in this study consisted of the college academic community whose are under the guidance of LL-Dikti IV. The academic community

referred to LL-Dikti IV website visitors such as a lecturer and staff of higher education. The population selected because the website visitors dominated by the lecturers and staffs. For the secondary data obtained through literature studies which explore the relevant references. The reference data will be traced from a book, journal, magazine, article, research reports, and the internet website.

To measure website quality as the main purpose of this research, will use the WebQual 4.0 method. WebQual 4.0 is a technique to measure the quality of website based on user perceptions. This is in line with the statement that Webqual Approach was used to assess the website quality from the user's perspective as well as evaluating the based on webqual dimensions [15]. WebQual 4.0 focusing on the three dimensions of measurement, namely usability quality, information quality, and service interaction quality [3],[2],[8],[9],[10]. For the definition of the dimensions of the measurement are as follows:

a. Usability quality defined as the quality that are associated with the navigation and the picture given to the user [16].
b. Information quality is defined as a quality related to the content of the website, the suitability of the information for users such as accuracy, format and relevance [16],[17].
c. Service interaction quality is defined as a quality related to users interaction and service experiences experienced [16].

Since it was developed from the first version, namely WebQual 1.0 up to the current fourth version, namely WebQual 4.0 has undergone multiple interactions in the preparation of the dimension and item indicators. The indicators such as on table 1 below:

Table 1. Indicators of WebQual 4.0

Dimentions	Code	Indicators
Usability Quality	X01	The Website is easy to learn to operate
	X02	The Website provides interaction with the user clear and easy to understand
	X03	The Website is easy to navigate
	X04	The Website is easy to use
	X05	The Website has an attractive appearance
	X06	The Website is designed according to its kind
	X07	The Website contains the value of competence
	X08	The Website creates a positive experience
Information Quality	X09	The Website provides accurate information
	X10	The Website provides reliable information
	X11	The Website provides timely information
	X12	The Website provides relevant information
	X13	The Website provides easily understandable information
	X14	The Website provides detailed information
	X15	The Website presents information in the right format
Service Interaction Quality	X16	The Website has a good reputation
	X17	The Website gives a sense of secure to do the transaction
	X18	The Website gives a sense of security to personal information
	X19	The Website provides space for personalization
	X20	The Website gives space to the community
	X21	The Website provides the ease to communicate with the organization
	X22	The Website assured that the service received as promised
Overall	X23	The Website has a good quality overall

Source: Barnes and Vidgen (2003)

Indicators of WebQual 4.0 that will be measured using Likert scale. The Likert scale is a scale used to measure the perception or opinion of a person or group about a question or statement based on the operational definition that has been set by the researcher. The Likert scale developed by Rensis Likert as one of the techniques to measures the perception or someone's opinion in a simple statement approval. The level of agreement referred to in Likert scale consists of 5 options in the form of gradation, namely strongly agree, agree, not decided or neutral, disagree, and strongly disagree [18]. So can be calculated in quantitative form, every gradation need to be given a score. Scoring of the each gradations on the Likert scale is a score of 1 for strongly disagree (STS)

up to a score of 5 for strongly agree (SS). As for the gradation of the Likert scale and the score can be seen in table 2.

Tabel 2. Gradation and Score of Likert Scale

Scale	Gradation	Score
1	Strongly Agree (SS)	5
2	Agree (S)	4
3	Neutral (N)	3
4	Disagree (TS)	2
5	Strongly Disagree (STS)	1

Sumber: Rintho Rante Rerung (2019)

After collecting the answers of the respondents, furthermore, the results of the Likert scale made the score calculation to find the average score. The results of the index in the form of percent will be continued with the analysis of interval. The analysis of that interval will produce the quality criteria. As for the criteria based on intervals can be seen in table 3.

Tabel 3. Criteria base on interval

Interval	Criteria
1	Very Good
2	Good
3	Fair Enough
4	Not Good
5	Bad

Source: Rintho Rante Rerung (2019)

In addition in the form of criteria, the data which has been collected will be analyzed using qualitative approach, descriptive and deep learning. It is intended to describe more detailed the shortcomings of the website on each dimensions and measurement indicators. Thus, the expected results of this study can provide material for consideration or input to those who manage LL-Dikti IV website

4.   RESULTS AND DISCUSSION

LL-Dikti IV as the government agency tasked with fostering higher education in the region of West Java and Banten. The results of observations made through the website Forlap Dikti, the higher education under the guidance of LL-Dikti IV amounted to 478. The number of these scattered in various areas with details of 368 in West Java region and 110 in the region of Banten. Details of these amounts can be seen in table 4 below.

Tabel 4. Higher education under the guidance of LL-Dikti IV

Institution	Regions		Total
	West Java	Banten	
Universities	49	14	63
Institute	9	0	9
Higher Institution	192	63	225
Polytechnic	27	6	33
Academy	88	27	115
Academy Community	3	0	3
Total	368	110	478

Source: Forlap [1]

According to these conditions, LL-Dikti IV requires an effective medium for socializing each activity and convey news related to the duties and functions to the public, in particular the academic community of the higher education under the guidance. One of the options is mostly done by public agencies is to harness information and communication technology (ICT) through the internet network by utilizing a media website [19]. Likewise, the LL-Dikti IV using the website as an information media. As for the website LL-Dikti IV can be accessed through *URL* www.lldikti4.or.id. As for the landing page of the URL can be seen in figure 2.

Figure 2. Landing page of LL-Dikti IV website

The Website has become the official website of the LL-Dikti IV. As already known that the website is one of the many media dipergurnakan by various organizations as a funnel of information to the public. Even the websites are also referred to as the window of a organization. Therefore, to see the activities of an organization, it can be done just by searching the official website.

4.1. Factors to use of the website

The use of information technology in the form of a website as a medium of information by a variety of audiences and institutions such as LL-Dikti IV caused by several factors. Such factors, among others, the website is a multi-platform, access a website without being limited space and time, and internet penetration continues to increase.

a. Website is multi-platform. As where it has been known that the website is a media of online information that is easily accessible because *multi-platform*. *Multi-platform* is the flexibility of the software that is able to operate in many electronics devices [6]. Which means, software is multi-platform as well as the website refers to the use of the website which can be accessed in various information technology devices such as Personal Computer (PC), Smart Phone and Tablet. In addition, the multi-platform also refers to the use of the website which can be accessed by either using various types of operating systems like Windows, Android, IOS, or others. Due to of the information technology devices and the type of operating system supports installation of web browsers such as Google Chrome, Mozilla Firefox, Opera, Safari, and others.

b. Access the website without being limited space and time. As a medium of information, the website is considered very effective and efficient because it can be accessed without limited space and time. As has been known, that the website is information technology that is able to penetrate and eliminate boundaries [4]. That is meaning, by using the website, the information can be accessed anywhere. In addition to the limit region, the advantages offered by the use of the website is able to save time. How not, the information has been disseminated through the website can.

c. Internet penetration continues to increase. If talking about the website, then the role of the internet can not be separated. It is because without the internet, the website will not be accessible. Revealed in a research report entitled *Digital in 2019*, Internet penetration in Indonesia in January 2019 has reached 56 percent [20]. When compared with the survey conducted by the Indonesian Internet Service Providers Association (APJII) in February 2018 ago, internet penetration in Indonesia has increased which 143,26 million or equivalent to 54.7 percent of the population in Indonesia has affordable internet [21]. In the report also

mentioned that Java Island is still dominating the internet users in Indonesia with 58,08 percent. The occurrence of such an enhancement does not mean the Indonesian government kept silence, but continually strive to improve the penetration numbers of the internet through the Universal Service Obligation (USO) program and the building optical cable network Palapa Ring. Under these conditions, it is believed the future of internet penetration in Indonesia will continue to increase by leaps and bounds. However, in efforts to develope the internet service that is sustainable, governments need to establish internet regulation to resolve the violations that were confirmed in the constitution [22].

4.2. The purpose of the website

The use of website as a funnel of information that are authorized by a government agency such as LL-Dikti IV in general there is a goal to be achieved. As for the purpose, among others, to carry out the mandate of the Indonesia Constitution (UU) and realize good governance.

a. Aims to carry out the mandate Indonesia Constitution (UU). Indonesia Constitution No.14 year 2008 about The Openness of Public Information (UU-KIP) has mandated that the public agency is obliged to announce public information periodically, the information related to activities and performance, the financial statements and other information according legislation. UU-KIP implicitly says that the public have the right to access information as well as monitoring the activities carried out by public bodies. A public body referred to is the agency/organization that is funded by the state budget (APBN) as well as LL-Dikti IV. The positive impact of the disclosure of information to the public through the use of websites of various public bodies is to ensure transparency and accountability with the goal of anti-corruption. Another literature source states that the arrangement of public information at the national level should be done in a way that is logical, consistent, coherent and easily accessible so that any user, even without knowledge of internet surfing will still be able to obtain information as well as using the online service [23]. The source is implicitly stating that necessary facilities/information delivery media that are affordable for anyone, anywhere, anytime and with any device. One media to realize the setup information in the website is by nature multi-platform and not restricted to time and space. Therefore, when referring to the UU-KIP and statement Doina Banciu (2009) step LL-Dikti IV using the website as a medium of information considered to be very precise. Based on exposure, the use of the website considered to be part of the mandate. UU-KIP.

b. Aims to actualize a good governance. To answer the demands of the community, namely creating a system of state life that's organized (good governance), then the required life state system that is transparent, democratic, credible, effective, efficient, secure, peaceful and prosperous [24]. Basically good governance is Indonesia's vision 2020 that are listed in Provision of MPR No.VII/MPR/2001 about Vision of Indonesia's Future. The sound of such a vision is "the realization of indonesian people who are religious, humane, united, democratic, just, prosperous, advanced, independent, as well as good and clean in the administration of the state". To realize the vision of good governance, the government has done a variety of ways, including through Instruction President No. 3 Tahun 2003 that every line in the government is obliged o provide public services electronic-based. Public service electronic-based refers to the use of information technology products such as websites. By utilizing information technology, the government is expected to improve the quality of service to the community or the business, including improving performance of the bureaucracy effectively and efficiently to realize good governance and clean [25]. Governance is believed to be better and cleaner due to the use of information technology such as website which will facilitate community monitoring of each activity. By monitoring, the principles of good governance namely transparency and accountability continues to be done well.

From the exposure of the second objective above, the use of LL-Dikti IV website as a funnel of information is considered very precise because of the use of the website is part of the mandate of the Indonesia Constitution as well as measures to realize good governance.

4.3. The quality of LL-Dikti IV website

The Website LL-Dikti IV have a central role as the mouthpiece of official information to the public in a special academic community of the college assisted. So the quality needs to be tested to find out whether the website service is in accordance with the user's expectations. User expectations will be fulfilled if the users feel satisfied with the website quality [9], [13]. In the measurement of LL-Dikti IV website this will be conducted using the WebQual 4.0 method. The method focuses on three dimensions of measurement, namely usability quality, information quality, and service interaction quality.

The population of respondents in the measurement of the website is composed of the academic community of the college under the guidance of LL-Dikti IV. The academic community consists of lecturers, administrative staffs, and students. The number of respondents who participated by filling the questionnaire was 183 people. Academic respondents can be seen in table 5 below:

Tabel 5. Amount of respondent

Community (Type Respondents)	Amount
Lecturer	171
Staff	10
Student	2
TOTAL	183

Source: Primary Data

There are 148 respondents who wrote on the origin of higher education, which the higher education IPI Garut is the highest i.e. 9 respondents. While that does not write on the origin of higher education amounted to 35 respondents. Respondents write down the origin of the college is derived from 79 higher education. The questionnaire filling have represented about 16% number of higher education under guidance of LL-Dikti IV.

As a first step and basis for the calculation of each indicator, then some variables need to be defined in advance among others:

a. The calculation of the highest and lowest score (IS)
   In order to determine the assessment against each indicator, first it has to be known highest score (SMax) and the lowest score (SMin) for the assessment indicators with the following formula:
   SMax : SS x respondents, SMin : STS x respondents
   Total score grading "Strongly Agree (SS)" is 5 and the score gradient "Strongly Disagree (STS)" is 1 then:
   SMax   : 5 x 183 = 915, SMin : 1 x 183 = 183

b. Criteria of the quality
   Assessment Data will be converted in the form of a score scale of 5 with provisions in the table 6 below.

Tabel 6. The provisions of the criteria

Interval	Criteria
$\overline{X}$ > Mi + 1,8 SDi	Very Good
Mi + 0,6 SDi < $\overline{X}$ ≤ Mi + 1,8 SDi	Good
Mi - 0,6 SDi < $\overline{X}$ ≤ Mi + 0,6 SDi	Fair Enough
Mi - 1,8 SDi < $\overline{X}$ ≤ Mi - 0,6 SDi	Not Good
$\overline{X}$ ≤ Mi - 1,8 SDi	Bad

Source: Rintho Rante Rerung (2019)

Desc.
$\overline{X}$ = Score average
Mi   = Mean ideal
SDi   = Standard deviation ideal
Formula Mi   = (1/2) (SMax+SMin)
                 = (1/2) (915+183)
                 = 549

$$\text{Formula SDi} = (1/2) (1/3) (\text{SMax-SMin})$$
$$= (1/6) (915\text{-}183)$$
$$= 122$$

So, for the assessment criteria of the quality of the website can be seen in table 7.

Tabel 7. Criteria of quality based on the interval

Interval	Kriteria
$\overline{X} > 768,6$	Very Good
$622,2 < \overline{X} \le 768,6$	Good
$475,8 < \overline{X} \le 622,2$	Fair Enough
$329,4 < \overline{X} \le 475,8$	Not Good
$\overline{X} \le 329,4$	Bad

Source: Rintho Rante Rerung (2019)

After knowing the intervals and criteria then the next calculation will be done. The stages of calculation and measurement results website LL-Dikti IV can be seen in table 8 and table 9.

Tabel 8. The results of the calculation of each indicator and an average of score

Indicators	Respondent					Resp.	Score					$\overline{X}$
	SS	S	N	TS	STS		SS.5	S.4	N.3	TS.2	STS.1	
X01	53	118	10	2	0	183	265	472	30	4	0	771
X02	39	126	17	1	0	183	195	504	51	2	0	752
X03	31	121	30	1	0	183	155	484	90	2	0	731
X04	43	121	18	1	0	183	215	484	54	2	0	755
X05	33	108	40	2	0	183	165	432	120	4	0	721
X06	29	124	29	1	0	183	145	496	87	2	0	730
X07	32	121	29	1	0	183	160	484	87	2	0	733
X08	35	121	27	0	0	183	175	484	81	0	0	740
X09	41	117	24	1	0	183	205	468	72	2	0	747
X10	48	110	25	0	0	183	240	440	75	0	0	755
X11	26	116	38	3	0	183	130	464	114	6	0	714
X12	39	124	20	0	0	183	195	496	60	0	0	751
X13	30	132	21	0	0	183	150	528	63	0	0	741
X14	22	102	56	3	0	183	110	408	168	6	0	692
X15	25	117	39	2	0	183	125	468	117	4	0	714
X16	38	119	23	3	0	183	190	476	69	6	0	741
X17	26	93	59	5	0	183	130	372	177	10	0	689
X18	26	99	55	3	0	183	130	396	165	6	0	697
X19	19	106	52	5	1	183	95	424	156	10	1	686
X20	29	108	37	7	2	183	145	432	111	14	2	704
X21	24	120	35	3	1	183	120	480	105	6	1	712
X22	28	108	43	4	0	183	140	432	129	8	0	709
X23	31	135	17	0	0	183	155	540	51	0	0	746

Source: Primary Data

From the results of the calculation of the total score based on the assessment of each indicator by respondents, the next will be the interpretation of the score. For example the indicator X01. The results of the measurement indicators of the X01 that is the website easy to learn to operated to obtain the final average score of 771 with the percentage 84,26 is in the criteria Very Good. As for the results of the measurement as a whole can be seen in table 9 below:

Tabel 9. The results of the calculation of the average score, percentage, and criteria

Indicators		$\overline{X}$	Persentage (%)	Criteria
Usability				
X01	The Website is easy to learn to operate	771	84,26	Very Good
X02	The Website provides interaction with the user clear and easy to understand	752	82,19	Good
X03	The Website is easy to navigate	731	79,89	Good
X04	The Website is easy to use	755	82,51	Good
X05	The Website has an attractive appearance	721	78,80	Good
X06	The Website is designed according to its kind	730	79,78	Good
X07	The Website contains the value of competence	733	80,11	Good
X08	The Website creates a positive experience	740	80,87	Good
Information Quality				

X09	The Website provides accurate information	747	81,64	Good
X10	The Website provides reliable information	755	82,51	Good
X11	The Website provides timely information	714	78,03	Good
X12	The Website provides relevant information	751	82,08	Good
X13	The Website provides easily understandable information	741	80,98	Good
X14	The Website provides detailed information	692	75,63	Good
X15	The Website presents information in the right format	714	78,03	Good
Service Interaction Quality				
X16	The Website has a good reputation	741	80,98	Good
X17	The Website gives a sense of secure to do the transaction	689	75,30	Good
X18	The Website gives a sense of security to personal information	697	76,17	Good
X19	The Website provides space for personalization	686	74,97	Good
X20	The Website gives space to the community	704	76,94	Good
X21	The Website provides the ease to communicate with the organization	712	77,81	Good
X22	The Website assured that the service received as promised	709	77,49	Good
Overall				
X23	The Website has a good quality overall	746	81,53	Good

Source: Primary Data

Based on the results of assessment in table 8 obtained information that the average score of the indicators X01 up to X22 (does not include indicators X23) is 726,59. The following more detailed information based on the measurement results has been presented in table 8 and table 9 is as follows:

a. Indicators with the highest score was the indicator of the X01 that is the website easy to learn to operate. The indicator obtained an average score of 771 with the persentage 84,28 so it is included in the criteria Very Good. While the indicator with the lowest score was the indicator of the X19 which website give the room a personalized. Inidikator earn an average score of 684 with the persentage 74,97. However, these indicators are still included in Good criteria.

b. Indicators that are above the average score amounted to 12 indicators, namely X01, X02, X03, X04, X06, X07, X08, X09, X10, X12, X13 and X16. While the indicators are below the average score of 10 indicators, namely X05, X11, X14, X15, X17, X18, X19, X20, X21 and X22.

c. The dimensions of the measurement obtained the highest average score was the instrument of usability namely 741,63 with the persentage 81,05. The dimensions of information quality obtained an average score of 730,57 with the persentage 79,84. While the dimensions that gained the average low score was the dimension of service interaction quality i.e. 705,43 with the persentage 77,10.

The results of the calculation of the score along with the criteria based on table 9, information was obtained that the overall (indicator X23) the quality of the website LL-higher education IV, including the criteria Very Good with the the average score of 746 (percentage 81,53). However, there are some records from the respondents by filling the questionnaire can be seen in table 10.

4.2. User expectation LL-Dikti IV website

LL-Dikti IV website has a major role as a center of information in particular the academic community in the region of West Java and Banten. Therefore, through filling a questionnaire that has been done, some of the respondents who are academics have written his hope that the website is better.

Tabel 9. Respondents note

Resp.	Note
N22	*Regulasi dan perlindungan hukum bagi pengunjung yang memberikan data pribadi, diutamakan secure data tersebut*
	(Law protection and regulation to visitors who give personal data, preferred secure those data)
N40	*Agar supaya lebih menarik dan tidak mengalami low access*
	(In order to be more attractive and it doesn't occure low access)

N61	*Interface agar lebih mudah di navigasi* (Interface navigate easily)
N63	*Semoga info yang disampaikan bisa lebih lengkap, update, akurat* (The information are expected to be delivered more updated, accurate and complete)
N101	*Menerapkan sistem rekomendasi* (Recommendation system applied)
N141	*Sebaiknya ada website khusus untuk dosen PNS DPK yang terpisah dari dosen yayasan* (It is better to have particular website for government lecturers, separated from institution lecturers)
N174	*Lebih interaktif* (More interactive)
N179	*Bisa lebih update infonya* (The information are more updated)

Source: Primary Data

Those notes or such expectations, the researchers tried to observe LL-Dikti IV website to obtain the information and provide feedback or recommendations to the manager of the website. Special to the record the respondent N141 will be ignored because user's expectations out of the main purpose of this research.

Note respondents N22, i.e., "Law protection and regulation to visitor who give personal data, preferred secure those data". From the observation of the researchers on the website regarding such records, the researcher did not find the feature/page that requires visitors to provide personal data. So that the note can be ignored.

Note respondents N40, i.e., "In order to be more attractive and it doesn't occure low access". From the results of observations of note, the researchers argue that the design of the website is quite interesting, because the design of the website displays an image that is attractive in the form of a slide show, use a color that is not excessive, the use of the font is quite appropriate (not too small), as well as the most important page is the website responsive which can be accessed by either using the various devices like smartphone, tablet, or laptop. And regarding the other notes, namely low access, researchers perpendapat that it is caused by the use of images in any article or news. But overall, the low access that occurred was in the reasonable category.

Note respondents N61, i.e., "Interface navigate easily". This note is one of the assessment indicators in the questionnaire, namely X03 with the results of the interpretation of the score 79,89% (Good criteria). However, the item indeed needs to be improved for the better. From the results of observation of the website LL-Dikti IV deficiencies were found situated on the eye-catching of menu and links. Therefore, some of the things that need to be added is a menu must be eye-catching so easily recognizable. Links are made different when highlighted mouse or clicked so that visitors feel the changes that occur so as to provide information that links can be clickable and lead the visitor to another page.

Note respondents N63, i.e., "The information are expected to be delivered more updated, accurate and complete". The same thing also be a record of respondents N179, i.e., "The information are more updated". Based on the results of in-depth interviews with some of the visitors, found the fact that the information does not update refers to an article that expired, such as the submission of information on the Functional Position of Lecturer (Jafung). Sometimes, the information is not relevant because of the new rules but not yet updated. Note that the information is complete and accurate according to the researchers is caused by the article that is expired or is not yet update. Therefore, the manager of the website must update any information as early as possible so that the user's expectations (complete and accurate) can be met.

Note respondents N101, i.e., "recommendation system applied". Understanding simple recommendation system is a result of prediction of an object provided the system automatically to the user. So the recommendation system can act as a personal assistant users of the system. Such predictions can be either relevant information or relevant or sustainable. Specifically on the website, the recommendation system generally aims to make it easy for users to find the information ongoing or information related with the page/article that is being accessed. In this case,

the researchers conducted observations of LL-Dikti IV website and find the the fact that the information published in the form of articles or news in general have been using the recommendation system to display the link related on any article or news. But in some other part of such information service online academic position as a lecturer. So the researchers concluded that the website has implemented a recommendation system but not yet thosroughly.

Note respondents N174, i.e., "More interactive". According to KBBI online, "interactive" is defined "mutual action; mutually active". So it can be said that an interactive system is a system that allows users to response either in real time or not. Based on the results of observation of the website found the fact that the nature of the website in providing public information services is still showing limited, but has yet to provide a service that is interactive. This is due to the comment area on each article is disabled. Non-active facilities are generally intended to avoid disturbance of the security of the user not answerable, such as the use of SQL Injection. Therefore, one way that can be used so that the website remains interactive is to use the live chat service from a third party. An example of such a service among others Tawk.to, Koyako Live Chat, Provide Person, Live Person, WGChat, Comm100, Zopim, and others (as shown in Figure 3).
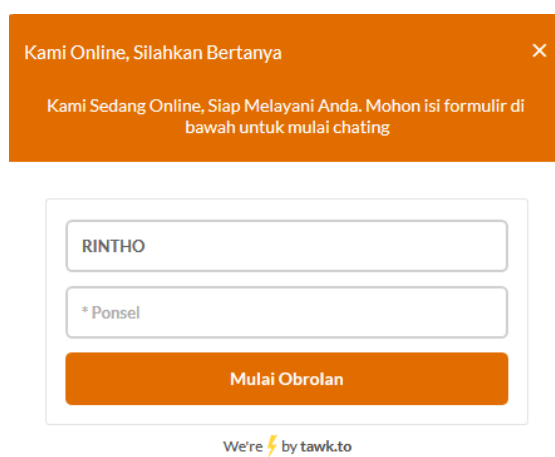

Figure 3. Tawk.to Interface

The application can be glued on the pages of the website but not using the system database on the webserver itself so that it can minimize the security risk.

5. CONCLUSION

From the measurement of the quality of the webiste LL-Dikti IV through a questionnaire obtained the conclusion that the overall quality of the LL-Dikti IV website, including Very Good criteria with the the average score of 746 (percentage 81,53). The detailed information obtained from these measurements is:

a. The highest score of the indicator is X01, i.e., "the website is easy to learn to operate" with the to obtain an average score of 771 (percentage 84,28), so included in Very Good criteria. While the indicator with the lowest score is the indicator of the X19 which "website give the room a personalized". The indicators obtained an average score of 684 with the persentage 74,97. However, these indicators are still included in Good criteria.

b. Indicators that are above the average score amounted to 12 indicators, namely X01, X02, X03, X04, X06, X07, X08, X09, X10, X12, X13 and X16. While the indicators are below the average score of 10 indicators, namely X05, X11, X14, X15, X17, X18, X19, X20, X21 and X22.

c. Dimensions obtaining the highest average score is the dimension of usability namely 741,63 with the persentage 81,05. As for the dimensions of information quality to obtain an average score of 730,57 with the persentage 79,84. While the dimensions of the gain score of the

average low is the dimension of service interaction quality i.e. 705,43 with the persentage 77,10.

In addition, in order to accommodate the needs of visitors, the study found the fact that the visitors look forward to the manager of the website so that the website is easy to navigate, information is updates, apply system recommendations thoroughly, as well as the website more interactive.

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