ANALYSIS OF DIGITAL LIBRARY SERVICE QUALITY ON USER SATISFACTION USING WEBQUAL, LIBQUAL AND IPA METHODS

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Abstract

Universitas Pahlawan Tuanku Tambusai has used the information system Senayan Library Management System (SLiMS) version 7. SliMS is an integrated system to provide information to support operational, management and decision-making functions in libraries. However, there are still obstacles in its use, namely, the lack of tools and technology to support the implementation of the SLiMS system, the unattractive SliMS content, the OPAC service menu is less effective in searching for references in the library, and the book collection is rarely updated so it does not meet what the user needs. This study aims to measure the service quality of SLiMS from the user's perspective. This research instrument used Web Quality (WebQual), Library Quality (LibQual), and Importance Performance Analysis (IPA) methods. The results of this study resulted in a good level of system service quality but GAP was still found from perceived performance which still had a value of <0 or -0.63 and a conformity level of 78%, which meant that there were still results of user dissatisfaction with the performance provided by the service. SLiMS Hero University of Tuanku Tambusai. Quadrant A results are a top priority to be improved. the variables are: Easy to navigate (UQ3), Attractive appearance (UQ5), Latest available information (SI1), Provides detailed information (SI4), Provides up to date information (IC3), Cleanliness and beauty (LP2), Lighting and temperature settings (LP3), Guidance from the librarian (AS5).

Keywords: *IPA, LibQual, Quality of Service, WebQual.*

1. INTRODUCTION

Government and private organizations have viewed the current, rapid growth of information technology as a very essential resource that not only serves as a support function but also plays a crucial operational and high potential role in the organization [1]. Law Number 43 of 2007 concerning libraries, states that the library is an information center in which it collects, processes and disseminates information to the public [2]. One way that information technology can be used in a college or university setting is through the provision of digital library services [3].

The use of digital libraries at the University is used to improve and provide convenience to users [4]. In this case, Senayan Library Management System (SLiMS) version 7 was employed by Universitas Pahlawan Tuanku Tambusai. SliMS is an integrated information delivery system that supports operational, managerial, and decision-making tasks in libraries. The agency has been using this system to support the accomplishment of its vision and purpose since 2017 up until the present. SLiMS offers a number of tools to make managing the library simpler for users or librarians. OPAC (Online Public Access Catalog), Bibliography, Membership, Circulation,

Inventory, and Reporter are a few of these features. The domain library.universitaspahlawan.ac.id provides access to Pahlawan Tuanku Tambusai University's library information system.

Approximately 3,336 students and 144 teachers are currently served by the Tuanku Tambusai University Digital Library. According to statistics information for the 2022 report, there are 6,662 titles or 9,585 copies of library collections available, as well as electronic collections like theses from different fields and collections with local content [5].

According to early research conducted through observation and interviews with library staff and patrons, there are a number of issues and issues with SliMS, including the lack of resources and technology to assist the adoption of the SLiMS system, SliMS content that is less attractive, the OPAC service menu is lacking effective in finding references in the library, collections of books that are rarely updated so that they do not meet what the user needs.

Due to these issues, it is obvious that the service process for users would suffer, and users' interest in utilizing SLiMS will decline as a result of the system's less effective and efficient information generation. The degree to which SLiMS service quality has been able to operate effectively in accordance with users'

desires and expectations must therefore be measured. Web Quality (WebQual), Library Quality (LibQual), and Importance Performance Analysis (IPA) approaches are used to gauge the caliber of library services.

WebQual is a method to determine the quality of a website on user perceptions [6]. WebQual consists of three dimensions, namely usability, information quality, and service interaction quality [7][8]. The Library Quality (LibQual) method is a development of Service Quality (ServQual) [9]. The LibQual method is a service instruction that the library uses to collect, map, understand, and execute the opinions of library users about the quality of library services [10]. There are four dimensions in the LibQual method, namely affect of service, library as place, personal control, and information access [11] [12]. The IPA method is used as a tool in analyzing and comparing the extent to which website performance or services are perceived by users compared to the level of expectations of website users [13] [14].

Based on previous research conducted by Mardalena & Andryani [15] with the title "Analysis of Website Service Quality at the Open University of Palembang Using the Webqual 4.0 Method and Importance Performance Analysis (IPA)", found that the level of user satisfaction is far from 100% and of each variable at the level of performance (performance) has a percentage value of 92.66% and the total percentage value of each variable at the level of expectation (importance) is 92.68%. So it can be concluded that the quality of website services at the Open University of Palembang as perceived by current users is considered good. Then research conducted by Sihombing & Sihotang [16] with the title "Analysis of UNAI Module Quality on User Satisfaction with WebQual 4.0 and Importance Performance Analysis (IPA)", indicates Need to update, modify, and upgrade the online system. The results of the IPA matrix analysis show that there are items U5, IntQ19, Int21, and OI22 which are in quadrant A which really need to be fixed and improved by adding several features such as chat forums, chat boxes and live chat in the online system. And research conducted by Ihsan, Pulungan & Afiahayati [9] with the title "Evaluating Library Services Quality Using GDSS-AHP, LibQual, and IPA" shows that the level of satisfaction of users/respondents is satisfied or more, namely 44.86%.

Based on the background above, a final project research title was obtained with the title "Analysis of Digital Library Service Quality on User Satisfaction Using WebQual, LibQual, and IPA Methods (Case Study: Pahlawan Tuanku Tambusai University)".

2. RESEARCH METHODS

The following is a proposed research methodology that will be used using a framework.

The Is Research Framework in this study can be seen in Figure 1 below:

Image 1. Research Methodology
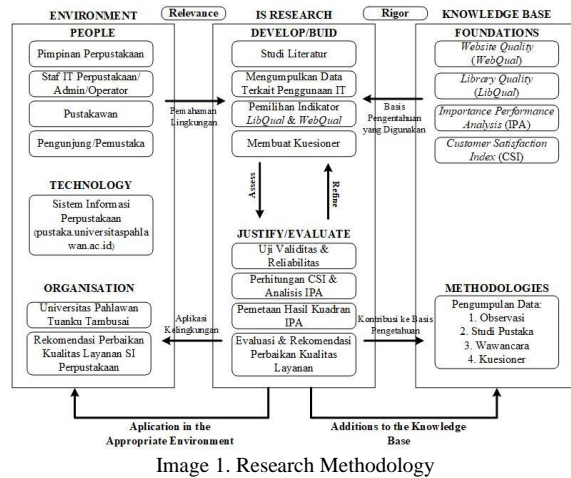
The Is Research Framework methodology is divided into three parts, namely: (1) Environment: Consists of People (Library Leaders, Library IT Staff/Admins/Operators, Librarians, Visitors/Libraries), Technology (Library Information Systems), Organization (Hero Tuanku Tambusai University , Recommendations for Improvement of Libraries IS Services)

(2) Is Research: Consists of Develo/Buid (Literature Study, Collecting Data Related to IT Usage, Selection of Webqual & Libqual Indicators, Making Questionnaires), Justify/Evaluate (Validity & Reliability Test, CSI Calculation & IPA Analysis, Mapping IPA Quadrant Results , Evaluation & Recommendations for Service Quality Improvement)

(3) Knowledge Base: Consists of Foundations (Webqual, Libqual, Science, CSI), Methodologies (Data Collection, Observations, Library Studies, Interviews, Questionnaires).

3. HASIL DAN PEMBAHASAN

3.1. Characteristics of Respondents

It is possible to see the characteristics of each respondent from the data obtained through the distribution of questionnaires at Universitas Pahlawan Tuanku Tambusai. Table 1 provides a description of the traits of the respondents in this study.

Table 1. Characteristics of Respondents by Gender

Gender	Frequency	Percentage
Man	58	58%
Woman	42	42%
Amount	100%	100%

Based on Table 1 and Picture 1, it is clear that there were more female respondents than male ones. The total number of female respondents was 58, or 58% of the total respondents, while the number of male respondents was 42, or 42%.

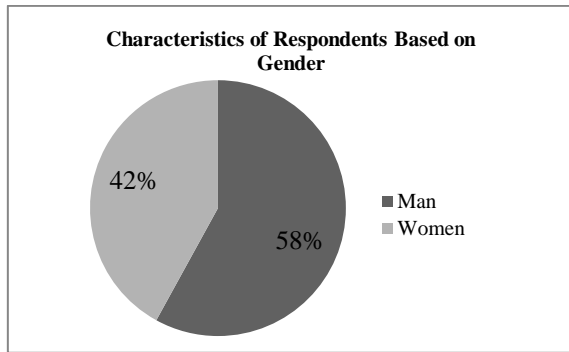Characteristics of Respondents Based on Gender

42%

58%

■ Man
■ Women

Image 2. Respondent Pie Chart by Gender

According to the faculty, the respondents' characteristics included those from the faculties of health sciences, education, engineering, economics, and business, as well as the faculties of life sciences. Table 2 displays the traits of respondents depending on visitor faculties.

According to Table 2 and Image 2, the faculty of health sciences received 20 responses in a matter of 20%, the faculty of education received 20 responses in a matter of 20%, the faculty of engineering received 20 responses in a matter of 20%, the faculty of economics and business received 20 responses in a matter of 20%, and the faculty of life sciences received 20 responses in a matter of 20%.

3.2. Validity Test

The test is run by comparing the Product Correlation values, sometimes known as t tables or t counts, with the requirement that t counts be greater than t tables. The data is deemed genuine if the t count exceeds the t table, and the survey can be used in the subsequent study. In this investigation, 100 samples were used, and t table = 0.201 revealed a significant level of 5%. The correlation value (t count) below 0.201 is therefore deemed invalid. The outcomes of evaluating the reliability of the survey information in Tables 3 and 4 are listed below.

Table 3. User Performance Validity Test

Variable	Statement Points	T Count	T Table	Information
Usability Quality	UQ1	0,625	0,201	Valid
	UQ2	0,637	0,201	Valid
	UQ3	0,679	0,201	Valid
	UQ4	0,612	0,201	Valid
	UQ5	0,614	0,201	Valid
Informatio n Quality	IQ1	0,519	0,201	Valid
	IQ2	0,698	0,201	Valid
	IQ3	0,597	0,201	Valid
	IQ4	0,622	0,201	Valid
	IQ5	0,576	0,201	Valid
Service Interactio n Quality	SI1	0,628	0,201	Valid
	SI2	0,696	0,201	Valid
	SI3	0,605	0,201	Valid
	SI4	0,645	0,201	Valid
	SI5	0,638	0,201	Valid
Affect of Service	AS1	0,516	0,201	Valid
	AS2	0,632	0,201	Valid
	AS3	0,494	0,201	Valid
	AS4	0,561	0,201	Valid
	AS5	0,542	0,201	Valid

Variable	Statement Points	T Count	T Table	Information
Informatio n Control Acces	IC1	0,530	0,201	Valid
	IC2	0,621	0,201	Valid
	IC3	0,521	0,201	Valid
	IC4	0,519	0,201	Valid
	IC5	0,542	0,201	Valid
Library as Place	LP1	0,603	0,201	Valid
	LP2	0,613	0,201	Valid
	LP3	0,517	0,201	Valid
	LP4	0,684	0,201	Valid
	LP5	0,527	0,201	Valid

Table 4 shows the outcomes of evaluating the accuracy of user expectations from information processed for user questionnaires at the Hero Tuanku Tambusai University Digital Library.

Table 4. Test the Validity of User Expectations

Variable	Statement Points	T Count	T Table	Information
Usability Quality	UQ1	0,525	0,201	Valid
	UQ2	0,562	0,201	Valid
	UQ3	0,631	0,201	Valid
	UQ4	0,675	0,201	Valid
	UQ5	0,637	0,201	Valid
Information Quality	IQ1	0,673	0,201	Valid
	IQ2	0,617	0,201	Valid
	IQ3	0,655	0,201	Valid
	IQ4	0,726	0,201	Valid
	IQ5	0,669	0,201	Valid
Service Interaction Quality	SI1	0,625	0,201	Valid
	SI2	0,672	0,201	Valid
	SI3	0,692	0,201	Valid
	SI4	0,703	0,201	Valid
	SI5	0,661	0,201	Valid
Affect of Service	AS1	0,685	0,201	Valid
	AS2	0,685	0,201	Valid
	AS3	0,715	0,201	Valid
	AS4	0,620	0,201	Valid
	AS5	0,621	0,201	Valid
Information Control Acces	IC1	0,687	0,201	Valid
	IC2	0,628	0,201	Valid
	IC3	0,526	0,201	Valid
	IC4	0,518	0,201	Valid
	IC5	0,541	0,201	Valid
Library as Place	LP1	0,613	0,201	Valid
	LP2	0,610	0,201	Valid
	LP3	0,516	0,201	Valid
	LP4	0,683	0,201	Valid
	LP5	0,526	0,201	Valid

The overall finding of the validity test analysis demonstrates the validity of all the employed indicators, with the correlation value of each statement exceeding the t table of 0.201, allowing for the use of all the instruments used in the questionnaire for further study.

3.3. Reliability Test

Reliability is a metric that demonstrates how consistently a measuring tool measures the same symptoms across time. The reliability test demonstrates measurement stability. Stability in this context refers to the questionnaire's consistency when measuring concepts or constructs under different conditions. The Cronbach's Alpha value was used to conduct the reliability test; a Cronbach's Alpha value greater than 0.600 was considered dependable. All of

the claims in the research questionnaire were deemed reliable based on the Cronbach's Alpha rating.

The results of user performance reliability testing of each statement in this study can be seen in Table 5.

Table 5. User Performance Reliability Test Results

Variable	Statement Points	Cronbach Alpha	Alpha value	Information
Usability Quality	UQ1	0,822	0,600	Reliable
	UQ2	0,821	0,600	Reliable
	UQ3	0,821	0,600	Reliable
	UQ4	0,822	0,600	Reliable
	UQ5	0,824	0,600	Reliable
Information Quality	IQ1	0,822	0,600	Reliable
	IQ2	0,821	0,600	Reliable
	IQ3	0,821	0,600	Reliable
	IQ4	0,823	0,600	Reliable
	IQ5	0,822	0,600	Reliable
Service Interaction Quality	SI1	0,824	0,600	Reliable
	SI2	0,820	0,600	Reliable
	SI3	0,822	0,600	Reliable
	SI4	0,823	0,600	Reliable
	SI5	0,822	0,600	Reliable
Affect of Service	AS1	0,821	0,600	Reliable
	AS2	0,822	0,600	Reliable
	AS3	0,822	0,600	Reliable
	AS4	0,822	0,600	Reliable
	AS5	0,820	0,600	Reliable
Information Control Acces	IC1	0,822	0,600	Reliable
	IC2	0,821	0,600	Reliable
	IC3	0,823	0,600	Reliable
	IC4	0,822	0,600	Reliable
	IC5	0,822	0,600	Reliable
Library as Place	LP1	0,824	0,600	Reliable
	LP2	0,821	0,600	Reliable
	LP3	0,822	0,600	Reliable
	LP4	0,822	0,600	Reliable
	LP5	0,823	0,600	Reliable
Average Value		**0,821**		

Table 6 displays the findings of the analysis of the User expectations from each statement in this study.

Table 6. User Expectations Reliability Test Results

Variable	Statement Points	Cronbach Alpha	Alpha value	Information
Usability Quality	UQ1	0,836	0,600	Reliable
	UQ2	0,835	0,600	Reliable
	UQ3	0,834	0,600	Reliable
	UQ4	0,834	0,600	Reliable
	UQ5	0,834	0,600	Reliable
Information Quality	IQ1	0,835	0,600	Reliable
	IQ2	0,834	0,600	Reliable
	IQ3	0,833	0,600	Reliable
	IQ4	0,834	0,600	Reliable
	IQ5	0,835	0,600	Reliable
Service Interaction Quality	SI1	0,834	0,600	Reliable
	SI2	0,833	0,600	Reliable
	SI3	0,833	0,600	Reliable
	SI4	0,832	0,600	Reliable
	SI5	0,835	0,600	Reliable
Affect of Service	AS1	0,833	0,600	Reliable
	AS2	0,834	0,600	Reliable
	AS3	0,835	0,600	Reliable
	AS4	0,832	0,600	Reliable
	AS5	0,832	0,600	Reliable
Information Control Acces	IC1	0,834	0,600	Reliable
	IC2	0,832	0,600	Reliable
	IC3	0,832	0,600	Reliable
	IC4	0,833	0,600	Reliable
	IC5	0,834	0,600	Reliable
Library as Place	LP1	0,834	0,600	Reliable
	LP2	0,832	0,600	Reliable
	LP3	0,832	0,600	Reliable
	LP4	0,834	0,600	Reliable
	LP5	0,833	0,600	Reliable
Average Value		**0,833**		

Test of Reliability Because each Cronbach's Alpha value acquired was > 0.600 and Cronbach's Alpha each had an average value > 0.833, the reliability test analysis' concluding findings revealed that the measures utilized to distribute the questionnaires matched the criteria regarded reliable. demonstrates the instrument's high degree of dependability, i.e., its ability to consistently return the same results when used repeatedly to measure the same item.

3.4. Conformity Level Analysis

The comparison of digital library performance scores with digital library importance scores is determined using the proper analysis. The outcomes of this appropriateness study show whether or not the performance meets the user's expectations or interests, which can be determined using the formula.

If the conformance value displays a result of 100 percent, it means that the expected quality meets the users' expectations. However, if the conformance number is less than 100%, it means that the quality is currently lacking or has fallen short of expectations. Table 7 displays the acceptable level of performance and expectations at Pahlawan Tuanku Tambusai University's digital library.

Table 7. Conformity Value Results

Variable	Statement Points	Performance Score	Expectation Score	Conformity Value
Usability Quality	UQ1	237	323	74%
	UQ2	271	331	82%
	UQ3	256	329	78%
	UQ4	291	325	89%
	UQ5	272	330	78%
Information Quality	IQ1	237	327	83%
	IQ2	237	320	77%
	IQ3	275	320	77%
	IQ4	283	328	78%
	IQ5	232	330	85%
Service Interaction Quality	SI1	278	334	70%
	SI2	243	320	86%
	SI3	221	328	85%
	SI4	268	328	80%
	SI5	290	328	82%
Affect of Service	AS1	287	320	81%
	AS2	249	325	74%
	AS3	274	324	84%
	AS4	294	322	85%
	AS5	265	325	82%
Information Control Acces	IC1	261	333	83%
	IC2	238	330	81%
	IC3	279	321	84%
	IC4	285	327	78%
	IC5	229	324	76%
Library as Place	LP1	248	322	80%
	LP2	259	326	78%
	LP3	239	336	79%
	LP4	231	331	78%

LP5	257	339	82%
Average Value	**259**	**326**	**78%**

Based on Table 7, it is clear that nothing has yet reached 100% or the level of conformity 100% with an average value of 78% for each indicator's degree of conformity. This demonstrates that the quality of the offered digital library is inappropriate or does not live up to its users' expectations. The Service Interaction Quality variable, particularly in the SI1 indicator with a suitability value of 70% regarding up-to-date information, is where the indicator value has the lowest suitability value.

3.5. GAP Analysis

Table 8 displays the performance and expectation gaps in the Pahlawan Tuanku Tabuasai University library system.

Table 8. Gap Value Results

Variable	Statement Points	Average Performance (X)	Average Expectations (Importance) (Y)	Gap Value
Usability Quality	UQ1	2,48	3,35	-0,87
	UQ2	2,82	3,44	-0,62
	UQ3	2,67	3,42	-0,75
	UQ4	3,01	3,38	-0,37
	UQ5	2,69	3,43	-0,74
Information Quality	IQ1	2,81	3,40	-0,59
	IQ2	2,56	3,32	-0,76
	IQ3	2,97	3,34	-0,37
	IQ4	2,87	3,41	-0,54
	IQ5	2,95	3,43	-0,48
Service Interaction Quality	SI1	2,43	3,47	-1,04
	SI2	2,83	3,32	-0,49
	SI3	2,90	3,43	-0,53
	SI4	2,71	3,41	-0,7
	SI5	2,79	3,38	-0,59
Affect of Service	AS1	2,78	3,37	-0,59
	AS2	2,50	3,34	-0,84
	AS3	2,83	3,31	-0,48
	AS4	2,81	3,35	-0,54
	AS5	2,73	3,47	-0,74
Information Control Acces	IC1	2,87	3,33	-0,46
	IC2	2,77	3,37	-0,6
	IC3	2,48	3,45	-0,97
	IC4	2,94	3,36	-0,42
	IC5	2,78	3,32	-0,54
Library as Place	LP1	2,87	3,32	-0,45
	LP2	2,58	3,43	-0,85
	LP3	2,48	3,41	-0,93
	LP4	2,80	3,34	-0,54
	LP5	2,66	3,31	-0,65
Average Value		**2.74**	**3.38**	**-0.63**

Based on Table 8, it is possible to draw the conclusion that there is a negative overall result for the level of gap between the performance of the digital library system and user expectations, with an average value of -0.63. This indicates that the library system does not meet user expectations for the digital library system. Users are unsatisfied with the functioning of the digital library system because it continues to fall short of their expectations. The Service Interaction Quality variable, particularly in

the SI1 indicator with a gap value of -1.04 regarding up-to-date information, is where the indicator value has the lowest gap value.

3.6. IPA Quadrant Analysis

The results of calculating the average value of performance scores and expectations in this study can be seen in Table 9.

Table 9. IPA Quadrant Analysis

Variable	Statement Points	Average Performance (X)	Average Expectations (Importance) (Y)
Usability Quality	UQ1	2,48	3,35
	UQ2	2,82	3,44
	UQ3	2,67	3,42
	UQ4	3,01	3,38
	UQ5	2,69	3,43
Information Quality	IQ1	2,81	3,40
	IQ2	2,56	3,32
	IQ3	2,97	3,34
	IQ4	2,87	3,41
	IQ5	2,95	3,43
Service Interaction Quality	SI1	2,43	3,47
	SI2	2,83	3,32
	SI3	2,90	3,43
	SI4	2,71	3,41
	SI5	2,79	3,38
Affect of Service	AS1	2,78	3,37
	AS2	2,50	3,34
	AS3	2,83	3,31
	AS4	2,81	3,35
	AS5	2,73	3,47
Information Control Acces	IC1	2,87	3,33
	IC2	2,77	3,37
	IC3	2,48	3,45
	IC4	2,94	3,36
	IC5	2,78	3,32
Library as Place	LP1	2,87	3,32
	LP2	2,58	3,43
	LP3	2,48	3,41
	LP4	2,80	3,34
	LP5	2,66	3,31
Total		**82,37**	**101,41**
Cut Point		**2,75**	**3,38**

The results of the X and Y axes, which are utilized as the intersection between the two lines to build a diagram into four parts, are shown in Table 9 along with the average value for each statement of performance and expectations. Figure 4 shows the Cartesian diagram used in this investigation.
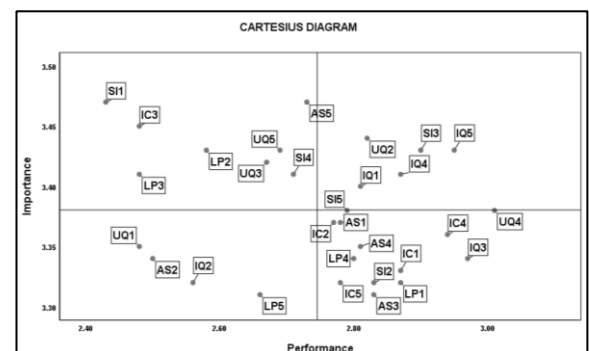

Image 4. Cartesian diagram

Data processing with IPA, obtained as follows:

(1) In general, the most important improvement indicators that require attention are shown in Table 10.

Table 10. Indicators Not According to User Expectations

Statement	Indicator
UQ3	Easy to navigate
UQ5	Interesting view
SI1	The latest available information (up to date)
SI4	Provide detailed information (details)
IC3	Provides up to date information
LP2	Cleanliness and beauty
LP3	Lighting and temperature settings
AS5	Guidance from the librarian

(2) the quality can be seen in Table 11.

Table 11. Indicators that Must be Maintained

Statement	Indicator
UQ2	Easily interact with the website
IQ1	Website design according to its type
IQ4	The information provided is accurate
IQ5	The website provides reliable information
SI3	Website information is easy to understand
SI5	Provide information in an appropriate format

3.7. Recommendation

Many suggestions for improvement were made and given to the Pahlawan Tuanku Tambusai University management of the digital library in order to enhance the quality of the digital library and optimize user happiness. As shown in Table 12, the following suggestion is made for enhancing the Pahlawan Tuanku Tambusai University's digital library system.

Table 12. Recommendations for Improvement

Method	Dimensions	Problem	Improvement Recommendations
WebQual	*Usability Quality* / *Information Quality* / *Service Interaction Quality*	• Unattractive website appearance in terms of colors, menus, pages, and system backgrounds that are inconsistent with the library • The information provided on the library system page is still lacking in detail and does not match the menu • The lack of service interaction quality from the library system so that the use of the library system is still underused.	• The use of the appearance of the library system is adjusted to the function and background of the library • Provide appropriate, up-to-date and relevant information in the use of the library system in accordance with the existing menu. • the library provides more education in the use of the system to support services in the library. • Information in the system is presented in an

attractive and appropriate design format. • Improve a system that provides a sense of security when making transactions, has a good reputation, facilitates communication and creates a sense of trust in storing users' personal information.

| LibQual | *Affect of Service* / *Information Control Acces* / *Library as Place* | • Lack of concern for librarians in directing users to be more able to access SLiMS which is inadequate so that visitors have to queue and make access to information hampered. • The collection of books is not available so it does not meet what is needed by the user. • The incompatibility of information on the location of the book collection in the SliMS system with the collection rack, so that users find it difficult to find the required collection. | • Evaluate the information system used. • Tidy up categorizing collections so that they are easier to access. • Maintain the condition of the building so that it continues to function properly. • Adding facilities to increase visitor comfort. • Maintain and improve the condition of the library to remain conducive. • Adding to the collection and increasing the number of existing samplers. |

4. DISCUSSION

Several reference sources and supporting data are needed in conducting this research, to be used as material for development and comparison between previous research. The references to previous research related are as follows.

Based on previous research conducted by Mardalena & Andryani [15] with the title "Analysis of Website Service Quality at the Open University of Palembang Using the Webqual 4.0 Method and Importance Performance Analysis (IPA)", found that the level of user satisfaction is far from 100% and of each variable at the level of performance (performance) has a percentage value of 92.66% and the total percentage value of each variable at the level of expectation (importance) is 92.68%. So it can be concluded that the quality of website services at the Open University of Palembang as perceived by current users is considered good. Then research

conducted by Sihombing & Sihotang [16] with the title "Analysis of UNAI Module Quality on User Satisfaction with WebQual 4.0 and Importance Performance Analysis (IPA)", indicates Need to update, modify, and upgrade the online system. The results of the IPA matrix analysis show that there are items U5, IntQ19, Int21, and OI22 which are in quadrant A which really need to be fixed and improved by adding several features such as chat forums, chat boxes and live chat in the online system.

Based on the descriptions of several previous studies, the WebQual, LibQual and IPA methods are suitable for use in analyzing library websites. So that the three methods are used in this study to measure the quality of SLiMS services from the user's perspective. This research has several stages using the Is Research Framework, which is divided into three main sections namely, Environment, IS Research and Knowledge Base. The results of this study are expected to provide solutions and recommendations to the Universitas Pahlawan Tuanku Tambusai in providing library website services to users.

5. KESIMPULAN

Based on the analysis and discussion from the preceding chapters, it can be said that the conformance analysis's processing of IPA still falls short of user expectations and yields outcomes that are less than 100%. Second, for the overall gap analysis, both (performance) and (importance) have negative values, with an average of -0.63 indicating a negative value or (Qi 0), which indicates that the actual quality perceived at this time has not been able to meet the ideal quality. desired by the user, then the quality level is stated to be poor. The junction of the X and Y axes at 2.75 and 3.38, respectively, represents the level of performance and importance analysis.

Six characteristics can be maintained based on the IPA quadrant results: UQ2 (Easy to interact with the website), IQ1 (Website design appropriate to its type), IQ4 (Accurate available information), IQ4, IQ5 (Website provides reliable information), S13 (Website information is easy to understand), and SI5 (Provide information in an appropriate format). Along with five qualities for which suggestions are made for improvement, namely UQ3 (Easy to navigate), UQ5 (Attractive appearance), SI1 (Up to date available information), SI4 (Provides detailed information (details)), IC3 (Provides up to date information), LP2 (Cleanliness and beauty), LP3 (Lighting and temperature settings), and AS5 (Attractive appearance) (Guidance from the librarian).

the outcomes of data processing from every indicator in every variable in the WebQual and LibQual approaches. comparing the expectations and reality of an information system, where all variables in the WebQual and LibQual techniques are included in the "GOOD" category, to determine the level of satisfaction of application system users. can be observed in the table of descriptive statistics.

THANK-YOU NOTE

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