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# Analysis of the SaintekMu Website Quality on User Satisfaction Using the Modified System Usability Scale and Webqual 4.0 Method

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***Abstract***

*At present, websites are a major means of finding or providing information. The Saintekmu website was created to offer top-notch service to students. One way to ensure that the website's services are appropriate and that information technology is being used to its fullest potential is to evaluate the level of service provided and improve its quality. This study aims to compare the results of two methods - the System Usability Scale (SUS) and Webqual - used to determine the quality and expectations of website users. The study distributed questionnaires online using Google Forms and had a sample size of 20 students. The data collected were analyzed using the SPSS program. Results from the SUS method indicated that the website's acceptability range was in the Marginal category, with a score of 69.9 and a classification rating of OK. The Webqual method yielded an R Square of 0.948, indicating that the website's usability, quality, and interaction variables had a significant effect on user satisfaction. All WebQual 4.0 dimensions had a positive and significant effect on user satisfaction, both partially and simultaneously. This study provides Muhammadiyah Saintek University with reference material for evaluating their website in the future.*

*Keywords:* *website; SaintekMu; usability; system usability scale; webqual*

## 1. Introduction

Websites have developed rapidly and are very important for human needs in the current era. A website is one of the primary needs for schools from elementary school to high school to tertiary level to introduce the campus to students and the broader community through digital literacy[1]. Apart from making work in academic management easier, websites can also help with storage security and increase efficiency and effectiveness [2] Academic business every day by integrating business processes in higher education. Muhammadiyah Saintek University is a university that has utilized information systems in the academic field by integrating them into a website.This utilization can be seen by developing a website called SaintekMu. The SaintekMu website of Saintek Muhammadiyah University is an online academic service (http://saintekmu.ac.id) which has facilities including university profiles, education, research, student affairs, PMB, lecturers, LPM and study tracer. The SaintekMu website is a development of the previous campus called STMIK Muhammadiyah Jakarta, where Saintek Muhammadiyah University is a tertiary institution resulting from a change in the form of a merger between STMIK Muhammadiyah Jakarta and the Jayakarta Sehat Midwifery Academy. Muhammadiyah Saintek University was founded in June 2022 based on the Decree of the Minister of Education, Culture, Research and Technology Number 384/E/O/2022. Muhammadiyah Saintek University has 2 Faculties (Faculty of Computer Science and Faculty of Communication Science) with 7 study programs (Information Engineering, Information Systems, Communication Science, Data Science, Entrepreneurship, Film and Television, and Midwifery).

The results of observations and interviews of researchers with website users, especially students, show that the website at Muhammadiyah Science and Technology University still has shortcomings in its usability; namely, website users assess that the appearance of the website is still less attractive (not up to date), unresponsive (cannot adjust the appearance when accessed from various sources ), devices, especially mobile devices), another complaint is that when users open a website page from page 1 to the next, loading is slow. Several service menus on other SaintekMu websites are not fully functional, so the administration process is not effective and efficient. Students and website users hope the SaintekMu website

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looks more attractive, up-to-date and easy to use. Other features that still need to be active can function well, and loading is not slow. Apart from that, the website at Muhammadiyah Saintek University has never been evaluated as to whether the development of the website at SaintekMu can be said to be successful, especially from the user's perspective. Moreover, is it appropriate and on target to develop the website? Therefore, based on the lack of observation results and to support regular improvements in services for students and the wider community, it is necessary to evaluate the quality of implementation of the SaintekMu website on user satisfaction.

The quality of a website has a positive impact on user satisfaction [3]. The satisfaction of students and the wider community is one of the successes [4] of each development and implementation. Websites in universities must know how much the website's service has on user satisfaction; therefore, the quality of service on customer satisfaction must be paid attention to and improved because service quality can significantly contribute to its users[5]. Several factors influence user satisfaction with the quality of a website, including usability, information quality, and service interaction[6]. A quality information system can simplify the process of academic activities. Therefore, information and service quality factors will influence the information system[7]. Previous research used many methods to measure user satisfaction with websites such as Delone Mclean, Usability Testing, e-Servqual, Technology Readiness Index (TRI), End-User Computing Satisfaction (EUCS) and others. However, this research chose to use the System Usability Scale and Webqual 4.0 methods because this method is the most appropriate and effective method for evaluating the quality of a website.

System Usability Scale (SUS) is a simple method of testing the usability of a system with ten scales that provide a comprehensive view of the evaluation of usability objectives according to[8]. *T*he System Usability Scale (SUS) was first introduced by Brooke in 1996 [9], the usability scale developed by Brooke is a method used to measure usability. SUS can also be called an off-the-shelf method, meaning it can be studied and used by researchers and practitioners with little or no human factors or usability engineering training [10]. SUS contains ten fundamental and simple questions[11]. This question instrument is one of the most widely used in usability assessment. Calculating SUS scores has proven to be one of the instrument's difficulties. Although excellent calculation spreadsheets are available, many researchers still calculate the scores by hand or using custom spreadsheets. The SUS questionnaire uses a five-point Linkert scale. In this case, respondents were asked to provide answers, namely: "Strongly Disagree", "Disagree", "Neutral", "Agree", and Strongly Agree" to the ten questions[12]. After data from respondents is collected, the data is processed. The score is then adjusted to the SUS assessment. The results are then analyzed to obtain the assessment results given by the respondents, while Webqual 4.0 is a method used to measure the quality of a website based on end-user ratings. The Webqual 4.0 method is based on four dimensions (areas): Quality of use, quality of information, quality of service interactions, and overall impression[13].

The Webqual 4.0 method has undergone several developments and reached version 4.0. Researchers have widely used this method to determine the service quality of a website to serve as a measuring tool that the website has succeeded in meeting user expectations[14]. The webqual carried out in this research is a modified webqual 4.0, namely webqual 4.0 with four dimensions, with the modification of adding one dimension developed by Frandika Septa (2020), the user interface quality dimension. Previous research was conducted by Fajar Pradana, Fitra A. Bachtiar, and Bayu Priyambadha[15] Testing using the TAM method discusses what factors can influence current or new technology. On the other hand, Niken Ayu Larasati's writing, Sri Andayani[16] Measuring the level of user satisfaction in using e-learning on the Musi Charitas Catholic University campus has never been carried out using the Delone and McLean method. According to Arif Saputra, the object carried out by Denny Kurniadi at IAIN Bukittinggi is that the E-Campus information system is used to evaluate the system's Integration Method (EUCS) [17]. Another measurement method used by Dede Wira Trise Putra, Hasanul Bulkis, Putri Mandarani, and Anna Syahrani[18] Using the discount method to measure the level of satisfaction of academic portal users. Another method used by Arif Rinaldi Dikananda, Fidya Arie Pratama, and Ade Rizki Rinaldi in evaluating e-learning statistics is an auto model, which has advantages in solving problems in the various models produced[19].

The two SUS and Webqual methods are very suitable to be comitsbined in this research because of the relationship between the SUS and Webqual methods. In the WebQual method, several indicators can be used to assess website performance and the level of interest of website users. This method uses These indicators to analyze which indicators are priorities for improvement. This research aims to analyze the level of service quality of the SaintekMu website using the System Usability Scale and Webqual 4.0 modification approach, namely measuring the quality of a website, whether it is high quality or not in terms of user satisfaction based on user perceptions and expectations. Measurements were carried out by distributing questionnaires to 20 respondents online so that the results of this research contributed to Muhammadiyah Saintek University to be used as reference or evaluation

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material for further development and also this research as a reference for other researchers in conducting research related to information systems academic future.

## 2. Research Methods

The research object used in this study is the Saintekmu website. A sampling of this research was carried out by students and the academic community as well as alums from Saintek Muhammadiyah University.The technique used to collect data is distributing questionnaires to students using Whatsaap Groups and literature studies by collecting, reading, and studying data from various media such as books, journals, papers, or articles related to research. The SUS and Webqual methods are applied in testing from end users, which can be used to make various types of products, including websites and application tools. To find out the comparison of the two methods in ranking. The differences in the stages of the two methods of ranking are presented in Figure 1.

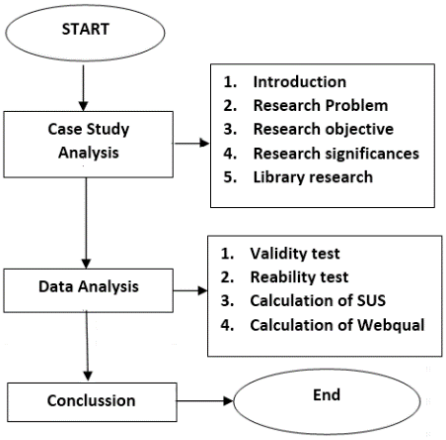


Figure 1. Research stage

### 2.1 System Usability Scale

In 1996, Brooke first introduced the System Usability Scale (SUS) method[20], In his development, Brooke used a usability scale in his evaluation technique.[21]. SUS can also be called an off-the-shelf method, meaning that researchers and practitioners can learn and use it with minimal to no training. SUS contains ten fundamental and simple questions [22]. This question instrument is one of the most widely used in usability assessments [23]. The questionnaire in SUS uses a five-point Linkert scale [24]. In this stage, to provide answers, respondents were asked to choose "Strongly Disagree", "Disagree", "Neutral", "Agree", and Strongly Agree "to the ten questions [25]. To calculate the score of the SUS questionnaire is using Formula 1.

$$\big((Q1-1)+(Q3-1)+(Q5-1)+(Q7-1)+(Q9-1)+(5-Q2)+(5-Q4)+(5-Q6)+(5-Q8)+(5-Q10)\big) \quad (1)$$

The rules for calculating SUS points apply to each odd question, and the answer score is obtained from each respondent's score minus the value of 1[26]. While each question has an even number, the final score is calculated by subtracting the response score obtained from the respondent from the value of five[27].

In determining the grade, the results of the assessment are used in 2 ways that can be used [28], Namely: The first determination is based on the level of user acceptance, with 3 (three) categories: not acceptable, marginal, and acceptable. At the same time, the grade scale level has a value of 5, namely A, B, C, D, and F [29]. The rating adjective scale ranges from worst imaginable to best imaginable, with poor, ok, good, excellent in between. Refer to Figure 2 for visualization.

### 2.2 Webqual

Webqual is a method or way to measure the quality of a website that relies on end user perceptions[30]. Webqual is a development component of Servqual that has been tested extensively for quality[31]. Webqual was first created in 1998, and until now, it has undergone several improvements in creating dimensions and questions.[32].

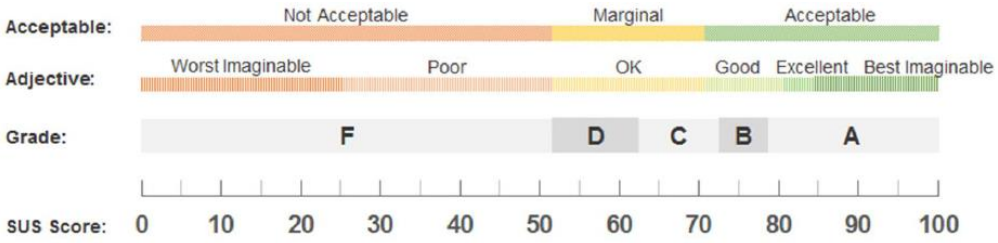


Figure 2. SUS Score Result Interpretation Scale

The first version of the webqual 1.0 instrument was developed with the involvement of students as part of the workshops' results [33]. WebQual 2.0 applied to B2C (Business to Consumer) websites indicates that the quality aspect of website interaction could be better represented [34]. Webqual 3.0 is categorized into three focus areas [35]: Site quality, information, and interaction. The WebQual 4.0 version changed the first dimension, namely site quality, to the Usability dimension[36]These tests can be found on the auction

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domain online. In webqual 4.0 it is categorized into 3 dimensions[37] Namely: usability, quality of information (information quality), and quality of interaction (interaction quality).

2.3 Quesioner

The tool in this research uses a questionnaire that is distributed online using Google Forms provided by Google. The questionnaire was created based on the Sus method and modified WebQual. The questionnaire provided is closed, so respondents only choose the answers provided by the author. This stage of research on the SaintekMu website uses the SUS evaluation instrument using ten questions as shown in Table 1.

Table 1. Question item

| Code | Question |
|---|---|
| Q1 | I think I will use this website again |
| Q2 | I find this website complicated to use |
| Q3 | I find this Website easy to use |
| Q4 | I need help from other people or technicians in using this Website |
| Q5 | I feel that the features of this Website work as they should |
| Q6 | I feel there are many things that are inconsistent (not harmonious on this website) |
| Q7 | I feel like others will understand how to use this Website quickly |
| Q8 | I find this Website confusing |
| Q9 | I feel there are no obstacles in using this website |
| Q10 | I need to get used to it first before using this website |

Meanwhile, the measurement of respondents' scores consists of five Likert type answer scales which show the questionnaire measurement scale by respondents as shown in Table 2.

Table 2. Likert scale

| Mark | Interpretation |
|---|---|
| 1 | Very Dissatisfied |
| 2 | Not satisfied |
| 3 | Neutral |
| 4 | Satisfied |
| 5 | Very satisfied |

2.4 Questionnaire

Questionnaire collection is carried out after the questionnaire distribution is complete and closed. The results of filling out the questionnaire were collected by downloading from Google Forms as a .csv file, and then data processing and data analysis were carried out. This questionnaire has each question with a different questionnaire question, namely the SUS method and the Webqual method.

## 3. Results and Discussions

3.1 Calculation results of the System Usability Scale

In Table 3, it is known that twenty respondents' scores from the Google form will be used to calculate the System Usability Scale and produce a final score. These scores will then be imported into Microsoft Excel.

Table 3.Respondent’s result

| Name | NIM | Study Program | Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RIZKY SAPUTRI | 17100029 | Information Systems | 5 | 3 | 5 | 3 | 5 | 2 | 5 | 1 | 4 | 2 |
| NINDA EVANI | 17100070 | Information Systems | 5 | 3 | 5 | 3 | 5 | 3 | 5 | 3 | 3 | 5 |
| EKO YULIARDI | 17300020 | Informatics Engineering | 4 | 3 | 4 | 2 | 3 | 4 | 3 | 2 | 4 | 2 |
| ADE RESTU SETIAWAN | 17100007 | Information Systems | 5 | 3 | 5 | 3 | 5 | 2 | 5 | 3 | 4 | 3 |
| ISMAIL | 1630087 | Informatics Engineering | 4 | 2 | 4 | 2 | 4 | 2 | 4 | 2 | 3 | 3 |
| HAFIF SETIAJI | 17300008 | Informatics Engineering | 4 | 3 | 4 | 2 | 5 | 3 | 5 | 2 | 5 | 3 |
| ALWI SUJANA | 17300071 | Informatics Engineering | 4 | 3 | 4 | 2 | 4 | 3 | 4 | 2 | 3 | 3 |
| DHEA RESKIYANTI | 17300099 | Informatics Engineering | 5 | 3 | 5 | 3 | 5 | 3 | 5 | 2 | 3 | 3 |
| NAJLA RIDA BAYRA | 17100052 | Information Systems | 4 | 3 | 4 | 2 | 5 | 3 | 5 | 2 | 4 | 4 |
| ARIF RAHMAN HAKIM | 17300035 | Informatics Engineering | 5 | 3 | 5 | 3 | 5 | 2 | 5 | 3 | 4 | 3 |
| YOPI SETIAWAN | 17300003 | Informatics Engineering | 5 | 3 | 5 | 3 | 5 | 3 | 5 | 2 | 3 | 3 |
| MUHAMMAD HAFIZH | 17100035 | Information Systems | 5 | 5 | 4 | 3 | 3 | 3 | 4 | 3 | 4 | 2 |
| INDAH MUS ETY | 17100032 | Information Systems | 5 | 3 | 5 | 3 | 5 | 3 | 5 | 3 | 3 | 5 |
| HASAN | 17300147 | Informatics Engineering | 5 | 3 | 5 | 3 | 5 | 2 | 5 | 1 | 4 | 2 |
| FITRAH FAJAR BUANA | 17100055 | Information Systems | 5 | 5 | 4 | 2 | 4 | 3 | 3 | 2 | 5 | 2 |
| MOHAMMAD KHOIRU | 17100048 | Information Systems | 5 | 5 | 4 | 3 | 3 | 3 | 4 | 3 | 4 | 2 |
| FIKRI MAHESA SATRIA | 18330022 | Informatics Engineering | 5 | 3 | 5 | 3 | 5 | 2 | 5 | 3 | 4 | 3 |
| EGGIEANANDA TIAS | 17300031 | Informatics Engineering | 4 | 5 | 4 | 1 | 4 | 2 | 4 | 1 | 5 | 2 |
| SRI NURAENI | 17100028 | Information Systems | 4 | 3 | 4 | 2 | 5 | 3 | 5 | 2 | 5 | 3 |
| FAZRY PRATAMA PUTRA | 17100061 | Information Systems | 4 | 3 | 4 | 3 | 3 | 4 | 3 | 3 | 4 | 4 |

After collecting the data from the survey participants,The System Usability Scale method is calculated by Table 4 after the answers' results are sorted into tables based on the characteristics of the respondents. The next stage is the test calculation using the System Usability Scale method, where the System Usability Scale is different from the others, following several rules that apply to this method. Therefore, the rules for calculating points from questionnaire respondents can be seen in Table 4. For each odd numbered question, 1 point is deducted from the respondent's answer. As seen in Table 5.

The next stage is to calculate the even numbered respondent scores where, for each even numbered statement, 5 is reduced by the statement value scale obtained by the respondent, as shown in Table 6 .

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Table 4. Respondent value

| R | Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 |
|---|---|---|---|---|---|---|---|---|---|---|
| R1 | 5 | 3 | 5 | 3 | 5 | 2 | 5 | 1 | 4 | 2 |
| R2 | 5 | 3 | 5 | 3 | 5 | 3 | 5 | 3 | 3 | 5 |
| R3 | 4 | 3 | 4 | 2 | 3 | 4 | 3 | 2 | 4 | 2 |
| R4 | 5 | 3 | 5 | 3 | 5 | 2 | 5 | 3 | 4 | 3 |
| R5 | 4 | 2 | 4 | 2 | 4 | 2 | 4 | 2 | 3 | 3 |
| R6 | 4 | 3 | 4 | 2 | 5 | 3 | 5 | 2 | 5 | 3 |
| R7 | 4 | 3 | 4 | 2 | 4 | 3 | 4 | 2 | 3 | 3 |
| R8 | 5 | 3 | 5 | 3 | 5 | 3 | 5 | 2 | 3 | 3 |
| R9 | 4 | 3 | 4 | 2 | 5 | 3 | 5 | 2 | 4 | 4 |
| R10 | 5 | 3 | 5 | 3 | 5 | 2 | 5 | 3 | 4 | 3 |
| R11 | 5 | 3 | 5 | 3 | 5 | 3 | 5 | 2 | 3 | 3 |
| R12 | 5 | 5 | 4 | 3 | 3 | 3 | 4 | 3 | 4 | 2 |
| R13 | 5 | 3 | 5 | 3 | 5 | 3 | 5 | 3 | 3 | 5 |
| R14 | 5 | 3 | 5 | 3 | 5 | 2 | 5 | 1 | 4 | 2 |
| R15 | 5 | 5 | 4 | 2 | 4 | 3 | 3 | 2 | 5 | 2 |
| R16 | 5 | 5 | 4 | 3 | 3 | 3 | 4 | 3 | 4 | 2 |
| R17 | 5 | 3 | 5 | 3 | 5 | 2 | 5 | 3 | 4 | 3 |
| R18 | 4 | 5 | 4 | 1 | 4 | 2 | 4 | 1 | 5 | 2 |
| R19 | 4 | 3 | 4 | 2 | 5 | 3 | 5 | 2 | 5 | 3 |
| R20 | 4 | 3 | 4 | 3 | 3 | 4 | 3 | 3 | 4 | 4 |

Table 5. Calculation of provisions 1

| Respondent | Score Responden | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| R | Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 |
| R1 | 5-1 | 3 | 5-1 | 3 | 5-1 | 2 | 5-1 | 1 | 4-1 | 2 |
| R2 | 5-1 | 3 | 5-1 | 3 | 5-1 | 3 | 5-1 | 3 | 3-1 | 5 |
| R3 | 4-1 | 3 | 4-1 | 2 | 3-1 | 4 | 3-1 | 2 | 4-1 | 2 |
| R4 | 5-1 | 3 | 5-1 | 3 | 5-1 | 2 | 5-1 | 3 | 4-1 | 3 |
| R5 | 4-1 | 2 | 4-1 | 2 | 4-1 | 2 | 4-1 | 2 | 3-1 | 3 |
| R6 | 4-1 | 3 | 4-1 | 2 | 5-1 | 3 | 5-1 | 2 | 5-1 | 3 |
| R7 | 4-1 | 3 | 4-1 | 2 | 4-1 | 3 | 4-1 | 2 | 3-1 | 3 |
| R8 | 5-1 | 3 | 5-1 | 3 | 5-1 | 3 | 5-1 | 2 | 3-1 | 3 |
| R9 | 4-1 | 3 | 4-1 | 2 | 5-1 | 3 | 5-1 | 2 | 4-1 | 4 |
| R10 | 5-1 | 3 | 5-1 | 3 | 5-1 | 2 | 5-1 | 3 | 4-1 | 3 |
| R11 | 5-1 | 3 | 5-1 | 3 | 5-1 | 3 | 5-1 | 2 | 3-1 | 3 |
| R12 | 5-1 | 5 | 4-1 | 3 | 3-1 | 3 | 4-1 | 3 | 4-1 | 2 |
| R13 | 5-1 | 3 | 5-1 | 3 | 5-1 | 3 | 5-1 | 3 | 3-1 | 5 |
| R14 | 5-1 | 3 | 5-1 | 3 | 5-1 | 2 | 5-1 | 1 | 4-1 | 2 |
| R15 | 5-1 | 5 | 4-1 | 2 | 4-1 | 3 | 3-1 | 2 | 5-1 | 2 |
| R16 | 5-1 | 5 | 4-1 | 3 | 3-1 | 3 | 4-1 | 3 | 4-1 | 2 |
| R17 | 5-1 | 3 | 5-1 | 3 | 5-1 | 2 | 5-1 | 3 | 4-1 | 3 |
| R18 | 4-1 | 5 | 4-1 | 1 | 4-1 | 2 | 4-1 | 1 | 5-1 | 2 |
| R19 | 4-1 | 3 | 4-1 | 2 | 5-1 | 3 | 5-1 | 2 | 5-1 | 3 |
| R20 | 4-1 | 3 | 4-1 | 3 | 3-1 | 4 | 3-1 | 3 | 4-1 | 4 |

Table 6. Calculation of provisions 2

| Respondent | Respondent's Score | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| R | Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 |
| R1 | 5-1 | 5-3 | 5-1 | 5-3 | 5-1 | 5-2 | 5-1 | 5-1 | 4-1 | 5-2 |
| R2 | 5-1 | 5-3 | 5-1 | 5-3 | 5-1 | 5-3 | 5-1 | 5-3 | 3-1 | 5-5 |
| R3 | 4-1 | 5-3 | 4-1 | 5-2 | 3-1 | 5-4 | 3-1 | 5-2 | 4-1 | 5-2 |
| R4 | 5-1 | 5-3 | 5-1 | 5-3 | 5-1 | 5-2 | 5-1 | 5-3 | 4-1 | 5-3 |
| R5 | 4-1 | 5-2 | 4-1 | 5-2 | 4-1 | 5-2 | 4-1 | 5-2 | 3-1 | 5-3 |
| R6 | 4-1 | 5-3 | 4-1 | 5-2 | 5-1 | 5-3 | 5-1 | 5-2 | 5-1 | 5-3 |
| R7 | 4-1 | 5-3 | 4-1 | 5-2 | 4-1 | 5-3 | 4-1 | 5-2 | 3-1 | 5-3 |
| R8 | 5-1 | 5-3 | 5-1 | 5-3 | 5-1 | 5-3 | 5-1 | 5-2 | 3-1 | 5-3 |
| R9 | 4-1 | 5-3 | 4-1 | 5-2 | 5-1 | 5-3 | 5-1 | 5-2 | 4-1 | 5-4 |
| R10 | 5-1 | 5-3 | 5-1 | 5-3 | 5-1 | 5-2 | 5-1 | 5-3 | 4-1 | 5-3 |
| R11 | 5-1 | 5-3 | 5-1 | 5-3 | 5-1 | 5-3 | 5-1 | 5-2 | 3-1 | 5-3 |
| R12 | 5-1 | 5-5 | 4-1 | 5-3 | 3-1 | 5-3 | 4-1 | 5-3 | 4-1 | 5-2 |
| R13 | 5-1 | 5-3 | 5-1 | 5-3 | 5-1 | 5-3 | 5-1 | 5-3 | 3-1 | 5-5 |
| R14 | 5-1 | 5-3 | 5-1 | 5-3 | 5-1 | 5-2 | 5-1 | 5-1 | 4-1 | 5-2 |
| R15 | 5-1 | 5-5 | 4-1 | 5-2 | 4-1 | 5-3 | 3-1 | 5-2 | 5-1 | 5-2 |
| R16 | 5-1 | 5-5 | 4-1 | 5-3 | 3-1 | 5-3 | 4-1 | 5-3 | 4-1 | 5-2 |
| R17 | 5-1 | 5-3 | 5-1 | 5-3 | 5-1 | 5-2 | 5-1 | 5-3 | 4-1 | 5-3 |
| R18 | 4-1 | 5-5 | 4-1 | 5-1 | 4-1 | 5-2 | 4-1 | 5-1 | 5-1 | 5-2 |
| R19 | 4-1 | 5-3 | 4-1 | 5-2 | 5-1 | 5-3 | 5-1 | 5-2 | 5-1 | 5-3 |
| R20 | 4-1 | 5-3 | 4-1 | 5-3 | 3-1 | 5-4 | 3-1 | 5-3 | 4-1 | 5-4 |

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After completing the calculation by applying the provisions of the two SUS, the next step is to calculate the results of calculating the odd and even values, then add them up from questions 1 to 10, then multiply by 2.5 or (sum * 2.5) as presented in Table 7.

The results of assessing respondents' answers using the SUS Score obtained an average score of 69.9. Based on the average score, the Acceptable aspect of the Saintekmu website is in the Marginal category, the Adjective aspect is in the OK category, and the Grade aspect is in the C category so that the Saintekmu website can be accepted by users/students in general and can still be further developed so that can get better grades than before.

Table 7. Calculation of provisions 3

| R | Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Amount | Score x 2.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R1 | 4 | 2 | 4 | 2 | 4 | 3 | 4 | 4 | 3 | 3 | 33 | 82.5 |
| R2 | 4 | 2 | 4 | 2 | 4 | 2 | 4 | 2 | 2 | 0 | 26 | 65 |
| R3 | 3 | 2 | 3 | 3 | 2 | 1 | 2 | 3 | 3 | 3 | 25 | 62.5 |
| R4 | 4 | 2 | 4 | 2 | 4 | 3 | 4 | 2 | 3 | 2 | 30 | 75 |
| R5 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 28 | 70 |
| R6 | 3 | 2 | 3 | 3 | 4 | 2 | 4 | 3 | 4 | 2 | 30 | 75 |
| R7 | 3 | 2 | 3 | 3 | 3 | 2 | 3 | 3 | 2 | 2 | 26 | 65 |
| R8 | 4 | 2 | 4 | 2 | 4 | 2 | 4 | 3 | 2 | 2 | 29 | 72.5 |
| R9 | 3 | 2 | 3 | 3 | 4 | 2 | 4 | 3 | 3 | 1 | 28 | 70 |
| R10 | 4 | 2 | 4 | 2 | 4 | 3 | 4 | 2 | 3 | 2 | 30 | 75 |
| R11 | 4 | 2 | 4 | 2 | 4 | 2 | 4 | 3 | 2 | 2 | 29 | 72.5 |
| R12 | 4 | 0 | 3 | 2 | 2 | 2 | 3 | 2 | 3 | 3 | 24 | 60 |
| R13 | 4 | 2 | 4 | 2 | 4 | 2 | 4 | 2 | 2 | 0 | 26 | 65 |
| R14 | 4 | 2 | 4 | 2 | 4 | 3 | 4 | 4 | 3 | 3 | 33 | 82.5 |
| R15 | 4 | 0 | 3 | 3 | 3 | 2 | 2 | 3 | 4 | 3 | 27 | 67.5 |
| R16 | 4 | 0 | 3 | 2 | 2 | 2 | 3 | 2 | 3 | 3 | 24 | 60 |
| R17 | 4 | 2 | 4 | 2 | 4 | 3 | 4 | 2 | 3 | 2 | 30 | 75 |
| R18 | 3 | 0 | 3 | 4 | 3 | 3 | 3 | 4 | 4 | 3 | 30 | 75 |
| R19 | 3 | 2 | 3 | 3 | 4 | 2 | 4 | 3 | 4 | 2 | 30 | 75 |
| R20 | 3 | 2 | 3 | 2 | 2 | 1 | 2 | 2 | 3 | 1 | 21 | 52.5 |
| Final average score | | | | | | | | | | | | 69.9 |

3.2 Calculation results of Webqual

In this section, we will explain the recapitulation of primary website rating data based on user expectations regarding usability, quality, interaction and user satisfaction using the webqual method as shown in Table 8.

Table 8. Responden's result webqual

| Respon den | u 1 | u 2 | u 3 | u 4 | u 5 | u 6 | u 7 | Tot al | q 1 | q 2 | q 3 | q 4 | q 1 | q 2 | q 3 | Tot al | i 1 | i 2 | i 3 | i 4 | i 5 | i 6 | Tot al | s 1 | s 2 | s 3 | Tot al |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 5 | 5 | 5 | 4 | 5 | 5 | 5 | 34 | 5 | 5 | 5 | 4 | 5 | 5 | 5 | 34 | 5 | 4 | 4 | 5 | 5 | 5 | 28 | 5 | 4 | 4 | 13 |
| 2 | 5 | 4 | 5 | 4 | 4 | 5 | 5 | 32 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 35 | 4 | 4 | 4 | 4 | 4 | 4 | 24 | 4 | 5 | 4 | 13 |
| 3 | 3 | 4 | 3 | 4 | 4 | 3 | 5 | 26 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 28 | 3 | 3 | 3 | 4 | 3 | 3 | 19 | 4 | 4 | 3 | 11 |
| 4 | 3 | 3 | 3 | 2 | 3 | 3 | 2 | 19 | 3 | 4 | 3 | 3 | 4 | 3 | 3 | 23 | 3 | 3 | 3 | 3 | 3 | 3 | 18 | 3 | 3 | 3 | 9 |
| 5 | 2 | 2 | 3 | 3 | 2 | 2 | 2 | 16 | 4 | 4 | 4 | 4 | 4 | 3 | 4 | 27 | 3 | 3 | 3 | 3 | 3 | 3 | 18 | 3 | 4 | 3 | 10 |
| 6 | 1 | 1 | 2 | 2 | 1 | 1 | 2 | 10 | 3 | 3 | 2 | 2 | 3 | 3 | 2 | 18 | 1 | 2 | 3 | 3 | 2 | 3 | 14 | 3 | 2 | 2 | 7 |
| 7 | 4 | 4 | 4 | 3 | 4 | 4 | 5 | 28 | 5 | 4 | 3 | 3 | 3 | 5 | 4 | 27 | 4 | 4 | 4 | 4 | 4 | 4 | 24 | 5 | 3 | 4 | 12 |
| 8 | 3 | 4 | 4 | 3 | 4 | 3 | 4 | 25 | 4 | 5 | 4 | 4 | 4 | 4 | 4 | 29 | 4 | 3 | 4 | 4 | 3 | 4 | 22 | 4 | 4 | 3 | 11 |
| 9 | 4 | 3 | 4 | 4 | 3 | 4 | 4 | 26 | 3 | 5 | 4 | 4 | 4 | 3 | 4 | 27 | 4 | 4 | 4 | 4 | 4 | 4 | 24 | 3 | 4 | 4 | 11 |
| 10 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 35 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 34 | 5 | 5 | 5 | 5 | 4 | 5 | 29 | 5 | 5 | 5 | 15 |
| 11 | 3 | 4 | 3 | 4 | 4 | 3 | 4 | 25 | 3 | 4 | 4 | 4 | 4 | 3 | 4 | 26 | 3 | 3 | 3 | 3 | 4 | 3 | 19 | 3 | 4 | 3 | 10 |
| 12 | 3 | 3 | 5 | 5 | 3 | 3 | 4 | 26 | 5 | 4 | 4 | 4 | 5 | 5 | 4 | 31 | 4 | 4 | 4 | 4 | 4 | 4 | 24 | 5 | 4 | 4 | 13 |
| 13 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | 29 | 4 | 4 | 5 | 5 | 5 | 4 | 4 | 31 | 4 | 4 | 4 | 4 | 4 | 4 | 24 | 4 | 5 | 4 | 13 |
| 14 | 3 | 4 | 3 | 3 | 4 | 3 | 3 | 23 | 3 | 3 | 3 | 3 | 4 | 3 | 4 | 23 | 4 | 4 | 4 | 4 | 4 | 4 | 24 | 3 | 3 | 4 | 10 |
| 15 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 35 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 35 | 5 | 5 | 5 | 5 | 5 | 5 | 30 | 5 | 5 | 5 | 15 |
| 16 | 3 | 4 | 3 | 4 | 4 | 3 | 4 | 25 | 4 | 4 | 4 | 3 | 4 | 4 | 4 | 27 | 4 | 4 | 4 | 4 | 4 | 4 | 24 | 4 | 3 | 4 | 11 |
| 17 | 3 | 4 | 3 | 4 | 4 | 3 | 4 | 25 | 3 | 4 | 3 | 3 | 4 | 3 | 4 | 24 | 3 | 4 | 4 | 3 | 3 | 3 | 20 | 3 | 3 | 4 | 10 |
| 18 | 3 | 4 | 4 | 4 | 4 | 3 | 4 | 26 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 28 | 4 | 4 | 4 | 4 | 3 | 4 | 23 | 4 | 4 | 4 | 12 |
| 19 | 3 | 2 | 2 | 3 | 2 | 3 | 4 | 19 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 22 | 3 | 3 | 3 | 3 | 3 | 3 | 18 | 3 | 3 | 3 | 9 |
| 20 | 3 | 5 | 5 | 4 | 5 | 3 | 4 | 29 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 34 | 4 | 4 | 4 | 4 | 4 | 4 | 24 | 4 | 5 | 4 | 13 |

Testing the instrument's validity was conducted using the SPPS statistical application, which analyzed the relationship between the r-table and r-count values. If the r-count value is greater than the t-table value, as

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shown in Table 9, it can be said that the instrument is valid. In determining the r-table value, the step that must be taken is to look at the references from the r-table value distribution.

After collecting the survey data, the accuracy of the survey results is verified by the Validity test, as shown in Table 10.

Table 9. Table r-count

| N | The Level Significance 5% | 1% |
|---|---|---|
| 3 | 0.997 | 0999 |
| 4 | 0.950 | 0.990 |
| 5 | 0.878 | 0.959 |
| 6 | 0.811 | 0.917 |
| 7 | 0.754 | 0.874 |
| 8 | 0.707 | 0.834 |
| 9 | 0.666 | 0.798 |
| 10 | 0.632 | 0.765 |
| 11 | 0.602 | 0.735 |
| 12 | 0.576 | 0.708 |
| 13 | 0.553 | 0.684 |
| 14 | 0.532 | 0.661 |
| 15 | 0.514 | 0.641 |
| 16 | 0.497 | 0.623 |
| 17 | 0.482 | 0.606 |
| 18 | 0.468 | 0.590 |
| 19 | 0.456 | 0.575 |
| 20 | 0.444 | 0561 |
| 21 | 0.433 | 0.549 |

Table 10.Validity test

| Validity test No | Variabel | r count | r table | Information |
|---|---|---|---|---|
| 1 | U1 | 0.912 | 0.444 | Valid |
| 2 | U2 | 0.899 | 0.444 | Valid |
| 3 | U3 | 0.841 | 0.444 | Valid |
| 4 | U4 | 0.785 | 0.444 | Valid |
| 5 | U5 | 0.899 | 0.444 | Valid |
| 6 | U6 | 0.912 | 0.444 | Valid |
| 7 | U7 | 0.866 | 0.444 | Valid |
| 8 | Q1 | 0.859 | 0.444 | Valid |
| 9 | Q2 | 0.829 | 0.444 | Valid |
| 10 | Q3 | 0945 | 0.444 | Valid |
| 11 | Q4 | 0.899 | 0.444 | Valid |
| 12 | Q5 | 0.860 | 0.444 | Valid |
| 13 | Q6 | 0.846 | 0.444 | Valid |
| 14 | Q7 | 0.763 | 0.444 | Valid |
| 15 | I1 | 0.958 | 0.444 | Valid |
| 16 | I2 | 0.923 | 0.444 | Valid |
| 17 | I3 | 0.909 | 0.444 | Valid |
| 18 | I4 | 0.921 | 0.444 | Valid |
| 19 | I5 | 0.846 | 0.444 | Valid |
| 20 | I6 | 0.953 | 0.444 | Valid |
| 21 | S1 | 0.833 | 0.444 | Valid |
| 22 | S2 | 0.833 | 0.444 | Valid |
| 23 | S3 | 0.861 | 0.444 | Valid |

Table 11. Usability validity test

| | | U1 | U2 | U3 | U4 | U5 | U6 | U7 | Usability |
|---|---|---|---|---|---|---|---|---|---|
| U1 | Pearson Correlation | 1 | .717** | .740** | .605** | .717** | 1.000** | .784** | .912** |
| | Sig. (2-tailed) | | .000 | .000 | .005 | .000 | .000 | .000 | .000 |
| | N | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| U2 | Pearson Correlation | .717** | 1 | .692** | .631** | 1.000** | .717** | .712** | .899** |
| | Sig. (2-tailed) | .000 | | .001 | .003 | .000 | .000 | .000 | .000 |
| | N | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| U3 | Pearson Correlation | .740** | .692** | 1 | .687** | .692** | .740** | .604** | .841** |
| | Sig. (2-tailed) | .000 | .001 | | .001 | .001 | .000 | .005 | .000 |
| | N | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| U4 | Pearson Correlation | .605** | .631** | .687** | 1 | .631** | .605** | .712** | .785** |
| | Sig. (2-tailed) | .005 | .003 | .001 | | .003 | .005 | .000 | .000 |
| | N | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| U5 | Pearson Correlation | .717** | 1.000** | .692** | .631** | 1 | .717** | .712** | .899** |
| | Sig. (2-tailed) | .000 | .000 | .001 | .003 | | .000 | .000 | .000 |
| | N | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| U6 | Pearson Correlation | 1.000** | .717** | .740** | .605** | .717** | 1 | .784** | .912** |
| | Sig. (2-tailed) | .000 | .000 | .000 | .005 | .000 | | .000 | .000 |
| | N | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| U7 | Pearson Correlation | .784** | .712** | .604** | .712** | .712** | .784** | 1 | .866** |
| | Sig. (2-tailed) | .000 | .000 | .005 | .000 | .000 | .000 | | .000 |
| | N | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Usability | Pearson Correlation | .912** | .899** | .841** | .785** | .899** | .912** | .866** | 1 |
| | Sig. (2-tailed) | .000 | .000 | .000 | .000 | .000 | .000 | .000 | |
| | N | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |

The results of the user perception validity tests for the dimensions of usability questions, quality, interaction, and user satisfaction are presented in Tables 11, 12, 13 and 14. The sig (2-tailed) values in the four tables are less than 0.05, indicating that the user perception validity test results for each question dimension are valid.

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Table 12. Quality validity test

| | | Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Quality |
|---|---|---|---|---|---|---|---|---|---|
| Q1 | Pearson Correlation | 1 | .617** | .691** | .631** | .617** | .968** | .567** | .859** |
| | Sig. (2-tailed) | | .004 | .001 | .003 | .004 | .000 | .009 | .000 |
| | N | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Q2 | Pearson Correlation | .617** | 1 | .784** | .743** | .674** | .614** | .583** | .829** |
| | Sig. (2-tailed) | .004 | | .000 | .000 | .001 | .004 | .007 | .000 |
| | N | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Q3 | Pearson Correlation | .691** | .784** | 1 | .939** | .870** | .666** | .732** | .945** |
| | Sig. (2-tailed) | .001 | .000 | | .000 | .000 | .001 | .000 | .000 |
| | N | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Q4 | Pearson Correlation | .631** | .743** | .939** | 1 | .830** | .600** | .649** | .899** |
| | Sig. (2-tailed) | .003 | .000 | .000 | | .000 | .005 | .002 | .000 |
| | N | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Q5 | Pearson Correlation | .617** | .674** | .870** | .830** | 1 | .614** | .583** | .860** |
| | Sig. (2-tailed) | .004 | .001 | .000 | .000 | | .004 | .007 | .000 |
| | N | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Q6 | Pearson Correlation | .968** | .614** | .666** | .600** | .614** | 1 | .549* | .846** |
| | Sig. (2-tailed) | .000 | .004 | .001 | .005 | .004 | | .012 | .000 |
| | N | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Q7 | Pearson Correlation | .567** | .583** | .732** | .649** | .583** | .549* | 1 | .763** |
| | Sig. (2-tailed) | .009 | .007 | .000 | .002 | .007 | .012 | | .000 |
| | N | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Quality | Pearson Correlation | .859** | .829** | .945** | .899** | .860** | .846** | .763** | 1 |
| | Sig. (2-tailed) | .000 | .000 | .000 | .000 | .000 | .000 | .000 | |
| | N | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |

Table 13. Testing the validity of the interaction

| | | I1 | I2 | I3 | I4 | I5 | I6 | Interaction |
|---|---|---|---|---|---|---|---|---|
| I1 | Pearson Correlation | 1 | .871** | .815** | .858** | .834** | .885** | .958** |
| | Sig. (2-tailed) | | .000 | .000 | .000 | .000 | .000 | .000 |
| | N | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| I2 | Pearson Correlation | .871** | 1 | .910** | .760** | .762** | .805** | .923** |
| | Sig. (2-tailed) | .000 | | .000 | .000 | .000 | .000 | .000 |
| | N | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| I3 | Pearson Correlation | .815** | .910** | 1 | .816** | .643** | .885** | .909** |
| | Sig. (2-tailed) | .000 | .000 | | .000 | .002 | .000 | .000 |
| | N | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| I4 | Pearson Correlation | .858** | .760** | .816** | 1 | .732** | .947** | .921** |
| | Sig. (2-tailed) | .000 | .000 | .000 | | .000 | .000 | .000 |
| | N | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| I5 | Pearson Correlation | .834** | .762** | .643** | .732** | 1 | .771** | .864** |
| | Sig. (2-tailed) | .000 | .000 | .002 | .000 | | .000 | .000 |
| | N | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| I6 | Pearson Correlation | .885** | .805** | .885** | .947** | .771** | 1 | .953** |
| | Sig. (2-tailed) | .000 | .000 | .000 | .000 | .000 | | .000 |
| | N | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Interaction | Pearson Correlation | .958** | .923** | .909** | .921** | .864** | .953** | 1 |
| | Sig. (2-tailed) | .000 | .000 | .000 | .000 | .000 | .000 | |
| | N | 20 | 20 | 20 | 20 | 20 | 20 | 20 |

Table 14. Satisfaction validity test

| Satisfaction Correlations | | | | | |
|---|---|---|---|---|---|
| | | S1 | S2 | S3 | Satisfaction |
| S1 | Pearson Correlation | 1 | .485* | .628** | .833** |
| | Sig. (2-tailed) | | .030 | .003 | .000 |
| | N | 20 | 20 | 20 | 20 |

| Satisfaction Correlations | | | | | |
|---|---|---|---|---|---|
| | | S1 | S2 | S3 | Satisfaction |
| S2 | Pearson Correlation | .485* | 1 | .583** | .833** |
| | Sig. (2-tailed) | .030 | | .007 | .000 |
| | N | 20 | 20 | 20 | 20 |

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Satisfaction Correlations

| | | S1 | S2 | S3 | Satisfaction |
|---|---|---|---|---|---|
| S3 | Pearson Correlation | .628** | .583** | 1 | .861** |
| | Sig. (2-tailed) | .003 | .007 | | .000 |
| | N | 20 | 20 | 20 | 20 |
| Satisfaction | Pearson Correlation | .833** | .833** | .861** | 1 |
| | Sig. (2-tailed) | .000 | .000 | .000 | |
| | N | 20 | 20 | 20 | 20 |

3.3 Reliability Test Instrument

Table 15 displays the outcomes of the 20 respondents' reliability testing. Following the compilation of the instrument and the validity test, the instrument reliability test aims to evaluate the instrument's consistency to arrive at roughly the same conclusions regarding the study's viability.

Analyzing the relationship between Cronbach's alpha value and the coefficient of determination, which was "0.60," was how the instrument reliability test was carried out. The Cronbach's Alpha value must be greater than 0.60 for the variable construct to be considered very good or reliable[38].

Table 15. Usability reability value

| Cronbach's Alpha | N of Items |
|---|---|
| .949 | 7 |

Variable usability has a Cronbach's alpha of greater than 0,06, which means that it can be described as having a reliability greater than 0,949, as shown in Table 15. As a result, it can be seen that at least one variable (X1) or U1, as well as U7, is reliable in this analysis.

Table 16.Value of quality reability

| Cronbach's Alpha | N of Items |
|---|---|
| .961 | 6 |

Meanwhile, from the results of the reliability test, as shown in Table 16, the variable interaction results were 0.961, so it can be said that the quality variable for Cronbach's alpha is> 0.06. so that all variable instruments (X3) or I1 to I7 in this study are reliable.

Table 17. Reability value of user satisfaction

| Cronbach's Alpha | N of Items |
|---|---|
| .790 | 3 |

The reliability test results shown in Table 17 showed that the user satisfaction variable was 0.790. The user satisfaction variable for Cronbach's alpha was > 0.06. so that it can be concluded that all variable instruments (Y) or S1 to S3 in this study were reliable.

3.4 Normaly Testing

The first step after survey data from 20 respondents is the normality test which aims to assess data distribution on a dimension or variable. The normality test process uses the probability plot (P-plot) method or approach, specifically, testing the dependent variable against each dimension or independent variable.

Using the probability plot (P-plot) to make fundamental decisions, such as: If the data and points surround the diagonal line and move in the same direction, the data are said to be normally distributed; On the other hand, if the data or points are dispersed far from the diagonal line, they are said to be abnormal or not distributed.

Figure 3 depicts the normality test results for the usability variable (X1) and user satisfaction (Y). Because the points spread in the opposite direction of the diagonal line, it is typically distributed.

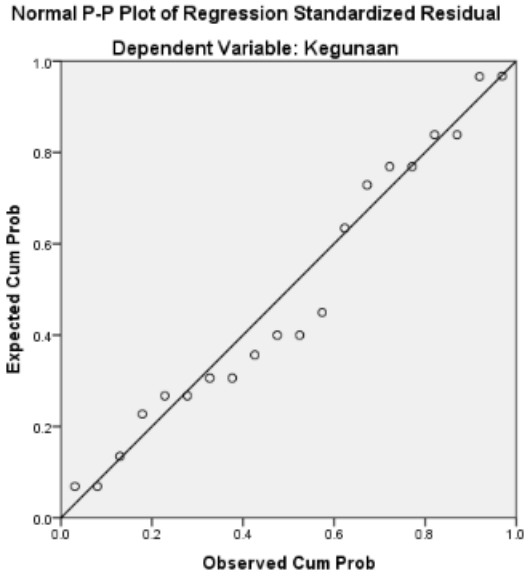


Figure 3. P-Plot Normality Test Results for variables X1 and Y

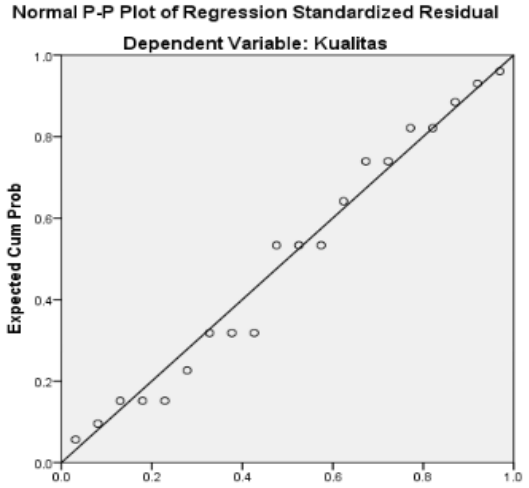


Figure 4. P-Plot Normality Test Results for variables X2 and Y

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Figure 4 depicts the normality test results for the quality variable (X2) and user satisfaction (Y). It can be said that it is usually distributed because the points that spread follow the direction of the diagonal line.

The results of the quality variable's normality test (X3) on user satisfaction (Y) can be seen in Figure 5. It can be said that it is usually distributed because the points that spread follow the direction of the diagonal line

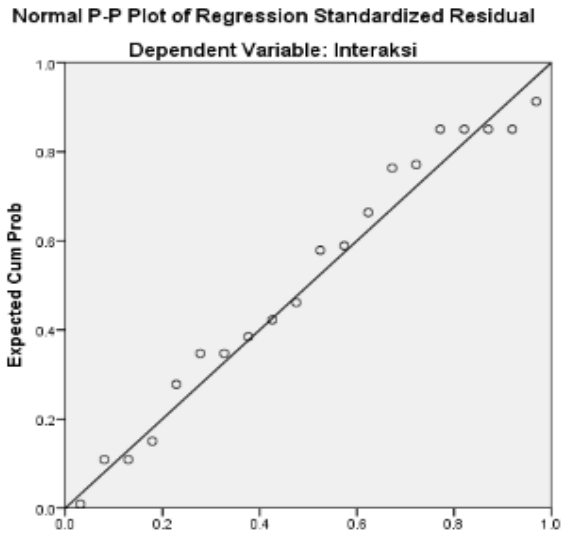


Figure 5. P-Plot Normality Test Results for variables X3 and Y

3.5 Correlation Test

Table 18 is the outcomes of the correlation test for each variable.

Table 18. The result of usability and satisfaction test vakue

| | | Utility | Satisfaction |
|---|---|---|---|
| Utility | Pearson Correlation | 1 | .921** |
| | Sig. (2-tailed) | | 0 |
| | N | 20 | 20 |
| Satisfaction | Pearson Correlation | .921** | 1 |
| | Sig. (2-tailed) | 0 | |
| | N | 20 | 20 |

The outcome of testing the connection between the usability variable (X1) and client fulfilment (Y) has a significance esteem more prominent than 0.05 or identical to 0.000, so the two factors have no relationship or connection. Given the degree rules, the Pearson Connection worth of "0.921" likewise shows that the two factors have an ideal level of relationship, as displayed in Table 19.

The connection between's the coefficient of variety (X2) and the likelihood of accomplishment (Y) is altogether more prominent than 0.05 or more than 0.000, so there is no relationship or relationship between's the two factors. The Pearson Correlation value of "0.939" also indicates that the two variables have a perfect degree of relationship in accordance with the degree guidelines, as shown in Table 20.

Table 18. Result of quality and satisfaction reability test value

| | | Quality | Satisfaction |
|---|---|---|---|
| Quality | Pearson Correlation | 1 | .939** |
| | Sig. (2-tailed) | | 0 |
| | N | 20 | 20 |
| Satisfaction | Pearson Correlation | .939** | 1 |
| | Sig. (2-tailed) | 0 | |
| | N | 20 | 20 |

Table 19. Result of quality and satisfaction reability test value

| | Interaction | Satisfaction |
|---|---|---|
| Pearson Correlation | 1 | .907** |
| Sig. (2-tailed) | | 0 |
| N | 20 | 20 |
| Pearson Correlation | .907** | 1 |
| Sig. (2-tailed) | 0 | |
| N | 20 | 20 |

The consequences of the connection trial of the convenience variable (X3) on client fulfilment (Y) have an importance level lower than 0.05 or 0.000, with the goal that the two factors have a relationship or connection. In view of the degree rules, the Pearson Connection worth of "0.907" likewise shows that the two factors have an ideal level of relationship.

The next step is to test the multiple correlations between the satisfaction variable (Y) and the usability variable (X1), quality variable (X2), and interaction variable (X3), as shown in Table 21. This is done after the correlation test results for each variable have been determined.

Table 20. Result of quality and satisfaction reability test value

| | | Quality | Satisfaction |
|---|---|---|---|
| Quality | Pearson Correlation | 1 | .939** |

Table 22 provides the guidelines for calculating the multiple correlation test: If Sig. If F Change <0.05, there is a critical relationship and if Sig. If F Change is greater than > 0.05, there is no significant correlation. Sig. Value F Change of 0.000 or <0.05. So the utility variable (X1), quality variable (X2), and interaction variable (X3) have a significant correlation with the satisfaction variable (Y) simultaneously at 0.000. The R-value (correlation coefficient) is 0.973, so it can be concluded that the level of relationship between the quality (X1), (X2), and (X3) of the variable (Y) simultaneously has a strong relationship.

The R Square value is 0.948, and it can be interpreted that the usability variable (X1), quality variable (X2), and interaction variable (X3) affect the variable (Y) by 0.948 or 94.8%, the remaining 5.2% is influenced by factors other factors not examined.

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Table 21.6 Multiple correlation test result

| Model Summary | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Change Statistics | | | | |
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | R Square Change | F Change | df1 | df2 | Sig. F Change |
| 1 | .973[a] | .948 | .938 | .508 | .948 | 96.465 | 3 | 16 | .000 |

3.6 Hypothesis Testing (t-test and f-test)

The last trial of the speculation is to utilize the T-test and F-test. The T-test expects to decide the fractional (single) impact of the free factor (X) on the reliant variable (Y). what's more, in testing, the F-Test plans to decide the effect of a synchronous (single) and autonomous variable (X) on the reliant variable (Y).

The formulation taken from testing this hypothesis is:

H1 = There is an effect of usefulness (X1) on satisfaction (Y)
H2 = There is an effect of quality (X2) on satisfaction (Y)
H3 = There is an interaction effect (X3) on satisfaction (Y)
H4 = There is an influence of usability (X1), quality (X2), and usability (X3) simultaneously on satisfaction (Y).

The results of testing the hypothesis for each variable are presented as Table 23.

Table 22. T-test result

| Model | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | t | Sig. |
| 1 (Constant) | 3.731 | 0.783 | | 0.4764 | 0 |
| X1 Utility | 0.299 | 0.03 | 0.921 | 10.065 | 0 |
| X2 Quality | 0.4 | 0.034 | 0.939 | 11.607 | 0 |
| X3 Interaction | 0.457 | 0.05 | 0.907 | 9.142 | 0 |

The factors that can be used to determine the outcomes of decision-making: There is an effect of variable X on variable Y if the sig value is less than 0.05 or the t-count is greater than the t-table; Variable X has no effect on Y if the significance level is greater than 0.05 or the t-count is less than the t-table. Formula 2 is for t table.

$$(= t(a/2 : n - k - 1) \quad (2)$$

it can be concluded that:

$$\begin{pmatrix} = t(0{,}05/2) : 30 - 3 - 1) \\ = t(0{,}025) : 26 \\ t = 2{,}055 \end{pmatrix}$$

First Hypothesis Testing (X1 Usability): The test was carried out as shown in Table 23, it was obtained for the variable X1 (usefulness) that the t value was 10.065 with a significance value of 0.000. From the test results H0 is rejected and H1 can be accepted because t count is 10.065 > t table is 2.055, and the significance value is 0.000 <0.05.Soit can be concluded that variable X1 has a significant and positive effect on variable Y.

First Hypothesis Testing (X2 Quality): The test was carried out as shown in Table 23, it was obtained for the variable X2 (quality) that the t value was 11.607 with a significance value of 0.000. From the test results H0 is rejected and H1 can be accepted because t count is 11.607 > t-table of 2.055 and a significance value of 0.000 <0.05. Soit can be concluded that variable X2 has a significant and positive effect on variable Y.

First Hypothesis Testing (X3 Interaction): The test was carried out as shown in Table 23, it was obtained for the variable X3 (interaction) that the t-value is 9.142 with a significance value of 0.000. From the test results H0 is rejected, and H1 can be accepted because t-count is 9.142 > t-table of 2.055 and the significance value of 0.000 <0.05. So it can be concluded that variable X2 has a significant and positive effect on variable Y.

Table 23. F-Test result

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 34.862 | 3 | 11.621 | 5.174 | .011[b] |
| | Residual | 35.938 | 16 | 2.246 | | |
| | Total | 70.8 | 19 | | | |

Decision making based on Table 24, explained that to get the value from the F-table can be seen in Formula 3 and 4.

$$(df\ (N1) = k - 1 = 4 - 1 = 3) \quad (3)$$

$$(df\ (N2) = n - k = 20 - 4 = 16) \quad (4)$$

Is known :

$$\begin{pmatrix} n = 20 \\ k = 4 \\ a = 5\%\ (0.05) \end{pmatrix}$$

then the results obtained F-Table = 3.11 and F-Count = 5.174.

Because the F-count is greater than the F-Table, it can be deduced that the variables X1 and X2 significantly impact variable Y.

## 4. Conclusion

The System Usability Scale (SUS) and Webqual have advantages and disadvantages in the implementation process. However, the testing process's advantages and disadvantages must be looked at in-depth so that there are no significant obstacles when carrying out the testing. The following shows the advantages and disadvantages of the System Usability Scale:
Excess: The test scale is easy for respondents to understand, SUS has a high Cronbach's Alpha. Validity

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has been tested multiple times for SUS and is consistent with other usability measures, Canbe performed with a small number of samples with reliable results, It Can be done effectively because it can distinguish between usable and unusable software, and what's more, the questions never change from system to system. Lack : Only used to classify software, Calculations from the results of respondents using other media applications, One of the weaknesses of SUS is that it is unable to provide accurate information regarding the weaknesss of a product On the other hand, the advantages and disadvantages of Webqual are: Excess : WebQual is a method used for website quality measurement techniques based on end-user perceptions, Webqual requires three dimensions, namely Usability, Information Quality, and Service Interaction Quality, in its calculations, Using the validity test at the beginning of giving the questionnaire and continuing with the reliability test so that all values become variables and have a value greater than 0.6, all variables are reliable. Lack: Using too many questions so that the respondents feel bored and bored, In testing using various types of tests, starting from validity, reliability, multiple regression tests, correlation tests, p-plot value tests, T and F tests, Calculations are complicated and long.

The results showed that using the SUS method, the result was 69.9. They get the Marginal category based on the scores obtained for the assessment of acceptability ranges. The score calculated using the grade scale is in category D, while the adjective rating classification is included in the OK category. Score on the other. those >=68 and <=74. according to the second evaluation, it is classified as category C based on (score percentile rank). Whereas with the Webqual method, allof the question items given by respondents were declared valid, where the validity test was carried out by looking if the count was greater than rtable (with a significance of 5%), namely with a value of 0.444, the value of R Square was obtained at 0.948. It can be concluded that the usability variable (X1), the quality variable (X2), and the interaction variable (X3) affect the variable (Y) by 0.948 or 94.8%, and the remaining 5.2% is influenced by other factors not examined. All dimensions of WebQual 4.0 have a positive and significant effect on user satisfaction partially and simultaneously.

Based on the research that has been done using 20 respondents as a sample, the researcher can conclude that the results of the analysis of the quality of your Saintekmu website using the WebQual method are better than using the System Usability Scale because WebQual is compiled based on research in three areas, namely: Information Quality where in this area What is seen is the quality of the content contained on the site, the appropriateness of the information for user purposes such as accuracy, format and relevance. Service Interaction Quality, this area examines the quality of service interactions experienced by users when they delve deeper into the site, manifested by trust and empathy, for example, transaction and information security issues, product delivery, personalization and communication with site owners. Usability while in this area being reviewed is quality related to site design, for example, appearance, ease of use, navigation and the description conveyed to users, coupled with user satisfaction as a complement to what respondents feel about the quality of a website. The results of this analysis are expected to be used as material for developing the SaintekMu website in a better direction so that user satisfaction on the SaintekMu website increases and can provide the information needed by students and the wider community.

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