



Logbook Quality Analysis at PT. Pertamina Patra Niaga Ships Using Sus and Webqual 4.0 Methods

Muhamad Fitra Saputra*, Budi Setiawan, Sartika Rini

Universitas Bina Nusantara, Indonesia

Email: muhamad.saputra006@binus.ac.id*, budi.setiawan005@binus.ac.id,
sartika.rini@binus.ac.id

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Abstract

The APLUSAN website is a website-based application used by PT. Pertamina Patra Niaga - SHIPS workers are responsible for reporting shift handover logbooks. User satisfaction and usability testing has not occurred since the APLUSAN website was implemented. The aim of this research is analyzing the website using the Webqual 4.0 method to assess the quality of the website and the System Usability Scale (SUS) method to measure website usability at a superficial level. Researchers collected data through literature studies, observations, and questionnaires using the Saturated Sampling technique. The subjects of this study were 30 respondents from PT. Pertamina Patra Niaga - SHIPS Refueling and Operational Head division (N = 30). This study adapts quantitative analysis, including validity and reliability tests, with SPSS calculation tools. The results of the APLUSAN website increased quality, cost, delivery, safety, and morale, and also the satisfaction measurement of Webqual 4.0 indicates good quality and the System Usability Scale (SUS) method, with a score of 75.1, indicates could be accepted by PT. Pertamina Patra Niaga- SHIPS workers. Using SPSS 22 the validity & reliability test results show that all questionnaire items are valid and reliable. The APLUSAN Website has the potential for replication and could be applied in all PT. Pertamina Patra Niaga work locations. Sustainable use requires enhancing service quality based on the company's demands. Data protection against data theft must be improved, servers should be added to accommodate growing user numbers, and this website must stay current on technological advances to be relevant.

INTRODUCTION

With an information system, various operational processes can be facilitated so that technological development plays an important role as a solution for streamlining activities in multiple fields, such as the shift handover process, which is also moving toward digital implementation (Browning et al., 2025; Fenwick et al., 2024; Rosário & Dias, 2022). One of the work locations of PT. Pertamina Patra Niaga SHIPS that has implemented the digitalization of shift handover logbooks is the Aviation Fuel Terminal Soekarno-Hatta Aircraft Services, where the system is named the APLUSAN Website.

Before the implementation of digital shift handover logbooks, supervisors manually recorded all shift activities and information in a logbook to be handed over to the incoming team (Nasiri et al., 2021). This manual process is straightforward; no internet connection or device (laptop, tablet, mobile phone, or PC) is required to access or complete the logbook (Chaudary et al., 2022). Aviation Fuel Terminal Soekarno-Hatta Aircraft Services workers only need a physical logbook and a pen to fill it out (Li et al., 2022). However, this manual process

may lead to misinformation during shift handovers (Alanazi et al., 2024; Loveday et al., 2022; Kholifah et al., 2024).

Based on observations conducted by researchers regarding the use of logbooks at the Aviation Fuel Terminal Soekarno-Hatta Aircraft Services, several weaknesses were identified in the use of physical logbooks. TABLE 1 below explains the inadequacies of using physical logbooks at the Aviation Fuel Terminal Soekarno-Hatta Aircraft Services.

TABLE 1. Condition of logbook before digitalization

No.	Aspect	Conditions Before Logbook Digitalization
1.	<i>Quality</i>	1. Logbook recording still uses books with the problem of messy writing & challenging to read. 2. Still need a paper or a book to write shift handover reports. 3. The information in the logbook between supervisors must be standardized.
2.	<i>Cost</i>	Fees are required to purchase logbooks and office stationery (IDR. 499,500/year)
3.	<i>Delivery</i>	1. Manual logbook creation takes a long time (7 minutes 14 seconds) 2. Report tracking becomes constrained if the book's placement is moved or lost. (31 seconds)
4.	<i>Safety</i>	1. No data security 2. Replacement supervisors need to sign previous shift reports. 3. Logbooks are at risk of being damaged and lost.
5.	<i>Morale</i>	The report is not submitted to management; the information is solely shared among supervisors.

Source: Researcher's Observation (2024)

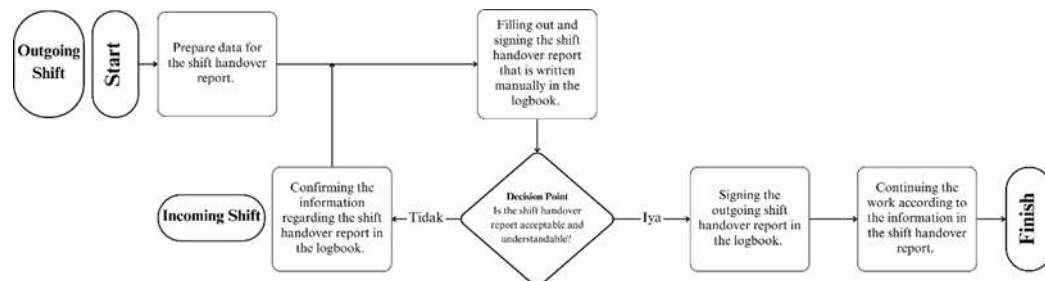


FIGURE 1. Block diagram of the work process before the digitalization of the logbook.

Source: Developed by the researcher based on field observation (2024)

FIGURE-1 shows the block diagram of the shift exchange report process between the incoming and outgoing shifts. **FIGURE-2** explains the condition of the logbook before digitalization. Manual logbooks still use books and pens to write. The logbook report format still needs to be standardized. In addition, each person's writing is different, making it difficult for the report recipient to read the logbook report. **FIGURE-2** shows the block diagram of the shift exchange report process between the incoming and outgoing shifts.

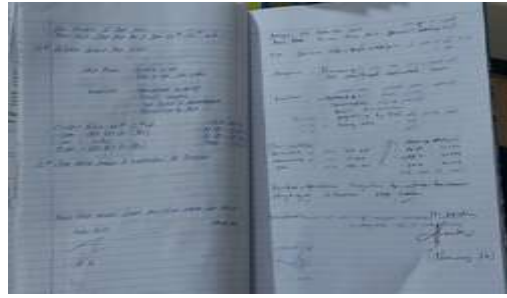


FIGURE 2. Condition of logbook before digitalization

Source: Research Documentation (2024)

September 2021 saw the implementation of the APLUSAN website in Corporate Operation Services Regional West Java & Integrated Terminal Jakarta. Logbooks were replaced by the APLUSAN website. The APLUSAN digital shift handover logbook allows users to create and export reports via email, live chat, and image and video uploads. Users benefit from paperless operation, data security, logbook tracking, and management reports on the APLUSAN website. On-site workers can access each team's daily shift logbook through the APLUSAN website. Thus, it can be used to assess ongoing operations. The website is an online service containing information that anyone can access anytime and anywhere. A quality website is one that provides reliable information and meets user needs. A website can attract users' attention if its appearance is good and users feel comfortable when accessing it (Roz, 2020). A website is a collection of web pages under a domain that contains information intended to enable people to interconnect (Wati & Erkamim, 2023).

To determine the quality and usability of an information system, it is necessary to measure user satisfaction with the system. User quality measurement is conducted to determine the extent to which the success of an information system is related to users' goals and expectations. The APLUSAN website, as reviewed by its users, has never been formally evaluated for system quality. Service quality is an effort to satisfy customers' needs and desires while balancing customer expectations. The assessment of service quality should be based on users' perceptions because they are the ones who experience the service (Ari & Hanum, 2021).

One important aspect of creating an application is usability. Usability can be interpreted as an application's ability to help users complete assigned tasks (Kabar et al., 2020). The higher the usability value of an application, the more it encourages users to continue using it. Conversely, the lower the usability value, the more likely users are to stop using the application. One method that can be used to measure website usability is the SUS (System Usability Scale). This method consists of 10 items with a 5-point rating scale, serving as a testing tool for respondents, and does not require a large sample size, making it time- and cost-efficient (Wahyuningrum, 2021). The goal of using the System Usability Scale (SUS), as outlined by Brooke (1996) and empirically supported by Bangor et al. (2008), is to provide a reliable, quick, and easy-to-administer tool for evaluating the usability of a wide range of products and services (Suria, 2024). In addition to usability measurement, website quality assessment is also necessary to determine factors that may influence the quality of website use. One method used to measure website quality is WebQual 4.0. WebQual is a method for measuring website quality. This study uses the WebQual 4.0 method initiated by Barnes and Vidgen (Haider, 2019). WebQual 4.0 consists of three dimensions: usability, information quality, and service

interaction quality. Through this study, the APLUSAN website can be improved to better meet user needs and expectations.

Despite the growing body of research on website quality and usability evaluation, a notable research gap exists regarding the application of integrated WebQual 4.0 and SUS methods to evaluate digital logbook systems in the oil and gas industry, particularly in shift handover operations. Most existing studies have focused on e-commerce platforms, educational websites, or public service applications, while industrial operational systems like the APLUSAN Website remain underexplored. The novelty of this research lies in the focused application of combined WebQual 4.0 and SUS methodologies to evaluate a specialized digital logbook system used in aviation fuel operations, a context that has not been previously examined in the literature. This study provides a unique contribution by simultaneously assessing usability, information quality, and service interaction quality alongside an overall usability score, thereby offering a comprehensive evaluation framework for similar industrial applications.

The urgency of this research is underscored by the critical nature of shift handover processes in high-risk industries such as aviation fuel services, where effective communication and accurate information transfer directly impact operational safety and efficiency. The APLUSAN website has been operational since September 2021 without formal evaluation, making it essential to assess whether the system meets user expectations and organizational requirements. The objectives of this study are to analyze the quality of the APLUSAN website using the WebQual 4.0 method across its three dimensions, to measure its usability level using the System Usability Scale (SUS), and to provide evidence-based recommendations for system improvement. The benefits and implications of this research extend to both theoretical and practical domains. Theoretically, this study enriches knowledge on information system evaluation by demonstrating the applicability of WebQual 4.0 and SUS in an industrial operational context. Practically, the findings provide actionable insights for PT Pertamina Patra Niaga management to improve the APLUSAN website's quality and usability, potentially serving as a model for replication across all company work locations implementing shift handover logbook digitalization. Furthermore, this research contributes to ensuring that digital transformation initiatives deliver intended benefits such as improved quality, reduced costs, enhanced delivery efficiency, strengthened safety protocols, and improved employee morale.

RESEARCH METHODS

The research could be completed in several stages. The flowchart of the research stage on Logbook Quality Analysis at PT. Pertamina Patra Niaga SHIPS Using the SUS and WebQual 4.0 Methods could be seen in **FIGURE-4**.

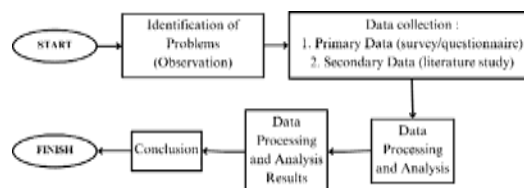


FIGURE 4. Research flow diagram

Source: Developed by the researcher (2024)

Problem identification was carried out to determine the problem formulation, research limitations, scope, objectives, and benefits. The researchers identified the problems through direct observation and literature studies at PT Pertamina Patra Niaga SHIPS (Soekarno-Hatta Into Plane Services). This study used a saturated sampling method, in which all members of the population were selected as research samples because the population size was relatively small (Putri et al., 2024). Based on these considerations, 30 respondents were selected, consisting of 29 Refueling function workers and 1 Operation Head function worker.

This research used both primary and secondary data. Primary data were collected through questionnaires distributed to respondents (Nurwanda & Badriah, 2020). The questionnaire measured three WebQual 4.0 variables: usability, information quality, and service interaction quality, as well as one System Usability Scale (SUS) variable. A 5-point Likert scale was used, ranging from 1 (strongly disagree) to 5 (strongly agree). The questionnaire was distributed online through the WhatsApp application using Microsoft Forms from May 30, 2024, to June 3, 2024. All questionnaire data were processed and classified using SPSS 22 and Microsoft® Excel for Microsoft 365 MSO. Secondary data were obtained from journals, books, articles, and other references related to WebQual 4.0 and the System Usability Scale (SUS). In addition, researchers gathered information regarding the suitability of the APLUSAN website features with the company's operational needs.

The researchers processed and analyzed the questionnaire data collected from respondents. The analysis stage consisted of demographic analysis and inferential statistical analysis. Demographic analysis was conducted using Microsoft® Excel for Microsoft 365 MSO to classify respondents based on age, gender, and frequency of website use. Inferential statistical analysis was then conducted to describe and interpret the results, as well as to test the validity and reliability of the data.

The results of the data processing and analysis were presented in the form of tables and diagrams to explain the findings clearly.

Finally, the researchers compared and summarized the research findings with relevant literature and theoretical studies to draw conclusions. The researchers also provided suggestions that could serve as a reference for future studies.

RESULTS AND DISCUSSION

The results of observations conducted by observing the use of the APLUSAN Website logbook at the PT. Pertamina Patra Niaga - SHIPS work location on two workers consisting of outcoming shift workers and incoming shift workers are intended to make the data obtained in this study more valid. Based on observations that have been made, the conditions after digitalization the logbook could be seen in **TABLE-2**.

TABLE 2. Comparison of conditions before and after logbook digitalization

No.	Aspect	Conditions Before Logbook Digitalization	Condition After Logbook Digitalization
1.	<i>Quality</i>	1. Logbook recording still uses books with the problem of messy writing & difficult to read. 2. Still need paper for writing shift handover reports.	1. Digital logbook report using the APLUSAN Website. 2. No need for books/paper and office stationery.

No.	Aspect	Conditions Before Logbook Digitalization	Condition After Logbook Digitalization
		3. The information written in the logbook between supervisors needs to be uniform.	3. The logbook format is standardized.
2.	Cost	Fees are required to purchase logbooks and office stationery (IDR. 499,500/year)	Costs are required to create the APLUSAN Website (IDR. 15,000,000/lifetime)
3.	Delivery	1. Manual logbook creation takes a long time (7 minutes 14 seconds). 2. Report Tracking becomes constrained if the placement of the book is moved or lost (31 seconds)	1. Report Search Time (18 seconds). It could be accessed anytime and anywhere. 2. Logbook creation time is 3 minutes and 15 seconds.
4.	Safety	1. No data security 2. Replacement supervisors need to sign previous shift reports. 3. Logbooks are at risk of being damaged and lost.	1. Data security uses the intra-pertamina network & pertamina server. 2. The supervisor signs the previous logbook shift report. 3. The logbook is not lost or damaged.
5.	Morale	There is no report to management; the information in the report is only shared by supervisors.	Report directly to management.

Source: Researcher's Observation (2024)

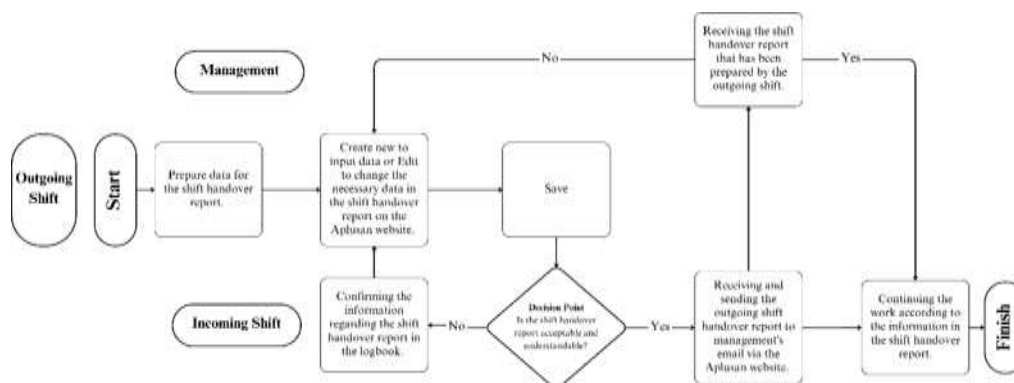


FIGURE 5. Block diagram of the work process before the digitalization of the logbook.

Source: Developed by the researcher based on field observation (2024)

FIGURE-5 shows the block diagram of the shift exchange report process between the incoming and outgoing shifts. Based on the results of the questionnaire, the characteristics of the respondents who participated in measuring the quality and usability of the Aplusan website can be seen in **FIGURE-6**.

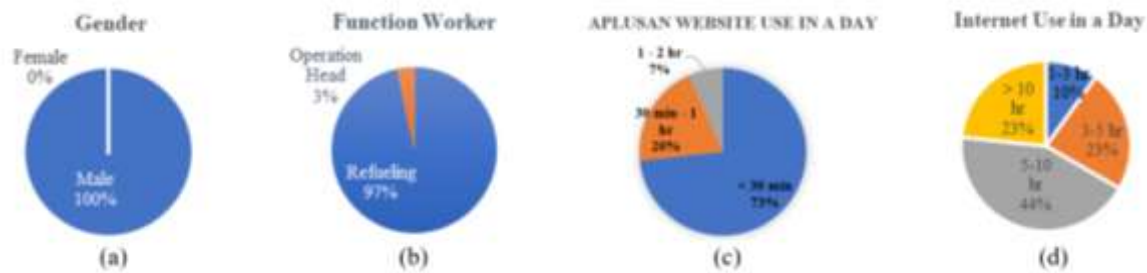


FIGURE 6. (a) Percentage of Respondents Based on Gender (b) Percentage of Respondents Based on Function Worker (c) Percentage of Respondents Based on aplusan website use in a day (b) Percentage of Respondents Based on Internet use in a day

Source: Primary data processed by the researcher (2024)

Based on the results of the processing of the Webqual 4.0 questionnaire data that has been carried out. The researcher would explain each piece of data including the average value (mean), standard deviation value (Std. Deviation), and the percentage of respondent assessments. **TABLE-3** The following are the results of descriptive data analysis for each WebQual 4.0 questionnaire item variable:

TABLE 3. Results of Descriptive Analysis of Service Information Quality Variables of Webqual 4.0 Questionnaire

Questionnaire code	Indicator	Mean	Std. Deviation
SIQ1	Has a good reputation	4,3667	0,66868
SIQ2	Provides a sense of security when writing a logbook	4,3667	0,55605
SIQ3	My personal information feels secure	4,1667	0,74664
SIQ4	Creates a personal impression	4,0667	0,86834
SIQ5	Conveys a sense of community	4,1000	0,88474
SIQ6	Makes it easy to communicate with the organization	4,3000	0,74971
SIQ7	I feel confident that the service is as promised	4,3667	0,66868
System Information Quality (SIQ)		4,2476	0,73469

Source: Primary data processed using SPSS 22 (2024)

In **TABLE-3**, the descriptive test results for the System Information Quality (SIQ) variable show an average (mean) value of 4.2476 and a standard deviation of 0.73469 for each questionnaire item related to the SIQ variable on the APLUSAN Website.

TABLE 4. Results of Descriptive Analysis of Information Quality Variables of Webqual 4.0 Questionnaire

Questionnaire code	Indicator	Mean	Std. Deviation
IFQ1	Provides accurate information	4,4000	0,62146
IFQ2	Provides reliable information	4,3667	0,61495
IFQ3	Provides up-to-date information	4,3667	0,61495
IFQ4	Provides relevant information	4,4000	0,56324
IFQ5	Provides easy-to-understand information	4,3333	0,54667

Questionnaire code	Indicator	Mean	Std. Deviation
IFQ6	Provides detailed information	4,3000	0,59596
IFQ7	Provides information in an appropriate form	4,3667	0,55605
Information Quality (IFQ)		4,3722	0,58761

Source: Primary data processed using SPSS 22 (2024)

In **TABLE-4**, the results of the descriptive test of the Information Quality (IFQ) variable describe the value of the average (mean) of 4,3722 and the standard deviation based on the questionnaire items of 0,58761 for each questionnaire item of the Information Quality (IFQ) variable on the APLUSAN Website.

TABLE 5. Results of Descriptive Analysis of Usability Variables of Webqual 4.0 Questionnaire

Questionnaire code	Indicator	Mean	Std. Deviation
USA1	This Aplusan website is easy to learn and operate	4,4667	0,57135
USA2	Interaction with the Aplusan website is clear and easy to understand	4,4667	0,57135
USA3	The Aplusan website has clear instructions	4,4000	0,56324
USA4	The Aplusan website is easy to use	4,4667	0,57135
USA5	The Aplusan website has an attractive appearance	4,0667	0,78492
USA6	The design matches the type of website	4,3000	0,65126
USA7	This Aplusan website increases competence/competition	3,7000	1,17884
USA8	This Aplusan website provides a positive experience for me	4,4000	0,56324
Usability (USA)		4,2833	0,68194

Source: Primary data processed using SPSS 22 (2024)

In **TABLE-5**, the results of the descriptive test of the Usability (USA) variable describe the value of the average (mean) of 4,2833 and the standard deviation based on the questionnaire items of 0,68194 for each questionnaire item of the Usability (USA) variable on the APLUSAN Website.

After gathering data from respondents, the processing steps are as follows: First, for odd-numbered questions, the user's score is decreased by 1. Second, for even-numbered questions, the final score is obtained by subtracting the user's score from 5. Third, the SUS score is calculated by summing the scores from all questions and then multiplying the total by 2.5. This yields a SUS score ranging from 0 to 100. The System Usability Scale (SUS) scores for 30 respondents from PT. Pertamina Patra Niaga – SHIPS employees regarding their experience with the APLUSAN Website are shown in **TABLE-6**.

TABLE 6. System Usability Scale (SUS) Test Results

(SUS COUNT RESULT SCORE)										AMOUNT	SCORE
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10		(AMOUNT X 2,5)
4	4	4	3	3	3	4	3	4	1	33	82,5
3	2	3	1	3	2	3	2	3	1	23	57,5
3	2	3	1	3	2	3	2	3	1	23	57,5
4	3	3	3	4	2	4	4	3	1	31	77,5

(SUS COUNT RESULT SCORE)										AMOUNT	SCORE
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10		(AMOUNT X 2,5)
4	4	4	4	4	4	4	4	4	4	40	100
4	4	4	4	4	4	4	4	4	3	39	97,5
4	2	3	2	3	2	3	2	3	1	25	62,5
4	3	3	1	3	2	4	2	3	0	25	62,5
3	3	3	3	3	4	3	4	3	3	32	80
3	0	4	0	4	0	4	0	4	0	19	47,5
4	0	4	4	4	4	4	4	4	4	36	90
4	4	4	4	4	4	4	4	4	4	40	100
4	3	4	4	4	3	4	4	4	1	35	87,5
3	3	3	2	3	3	3	3	3	2	28	70
4	3	3	3	3	3	3	3	2	1	28	70
3	4	4	4	3	3	3	3	4	4	35	87,5
3	1	1	3	3	2	3	3	3	3	25	62,5
3	3	3	3	3	3	3	3	3	3	30	75
3	3	3	3	3	3	3	3	2	1	27	67,5
4	2	3	0	4	2	4	2	4	2	27	67,5
3	3	3	3	2	3	3	3	3	1	27	67,5
4	4	4	4	4	4	4	4	4	0	36	90
3	3	3	3	3	3	3	3	3	2	29	72,5
4	3	3	3	3	3	3	4	4	2	32	80
3	3	3	2	3	3	3	3	3	2	28	70
4	1	2	1	2	1	2	1	4	1	19	47,5
4	3	3	2	3	2	3	3	3	2	28	70
3	2	3	3	2	2	3	3	3	1	25	62,5
4	4	4	4	4	4	4	4	4	4	40	100
4	3	3	4	4	3	4	4	3	4	36	90
Total :											2252,5
Average Score :											75,1

Source: Primary data processed using Microsoft Excel (2024)

Based on **TABLE-6**, the System Usability Scale (SUS) calculation results for 30 respondents of PT. Pertamina Patra Niaga – SHIPS employees on the use of the APLUSAN Website obtained an average score of 75.1.



FIGURE 7. SUS score interpretation scale

Source: Adapted from Bangor, Kortum, and Miller (2008) in "An Empirical Evaluation of the System Usability Scale

Based on **FIGURE-7** APLUSAN website got a score of 75.1. Which means it got a B rating, the category of “Good” Adjectives, with an “Acceptable” acceptance level, the level of user satisfaction and loyalty got an NPS class of “Passive”.

TABLE 7. Results of Questionnaire Item Validity Test

Variable	Item	Correlation		Test
		r-value	r-table	Results
Usability (USA)	USA1	0,747	0,361	<i>Valid</i>
	USA2	0,792	0,361	<i>Valid</i>
	USA3	0,811	0,361	<i>Valid</i>
	USA4	0,777	0,361	<i>Valid</i>
	USA5	0,752	0,361	<i>Valid</i>
	USA6	0,79	0,361	<i>Valid</i>
	USA7	0,63	0,361	<i>Valid</i>
	USA8	0,766	0,361	<i>Valid</i>
Information Quality (IFQ)	IFQ1	0,895	0,361	<i>Valid</i>
	IFQ2	0,957	0,361	<i>Valid</i>
	IFQ3	0,912	0,361	<i>Valid</i>
	IFQ4	0,955	0,361	<i>Valid</i>
	IFQ5	0,918	0,361	<i>Valid</i>
	IFQ6	0,865	0,361	<i>Valid</i>
	IFQ7	0,893	0,361	<i>Valid</i>
Service Information Quality (SIQ)	SIQ1	0,869	0,361	<i>Valid</i>
	SIQ2	0,877	0,361	<i>Valid</i>
	SIQ3	0,886	0,361	<i>Valid</i>
	SIQ4	0,817	0,361	<i>Valid</i>
	SIQ5	0,892	0,361	<i>Valid</i>
	SIQ6	0,852	0,361	<i>Valid</i>
	SIQ7	0,869	0,361	<i>Valid</i>
System Usability Scale (SUS)	SUS1	0,45	0,361	<i>Valid</i>
	SUS2	0,659	0,361	<i>Valid</i>
	SUS3	0,625	0,361	<i>Valid</i>
	SUS4	0,84	0,361	<i>Valid</i>
	SUS5	0,609	0,361	<i>Valid</i>
	SUS6	0,866	0,361	<i>Valid</i>
	SUS7	0,589	0,361	<i>Valid</i>
	SUS8	0,858	0,361	<i>Valid</i>
	SUS9	0,427	0,361	<i>Valid</i>
	SUS10	0,669	0,361	<i>Valid</i>

Source: Primary data processed using SPSS 22 (2024)

Questionnaire items are considered valid if the calculated r-value exceeds the r-table value ^[23]. The r-table value is determined based on the number of respondents (n). As shown in **TABLE-7** above, the validity test results indicate that all questionnaire items have a consistency level greater than 0.3610, confirming their validity. This means the questionnaire items in this study are capable of accurately measuring the Website's quality and can be utilized in the research.

TABLE 8. Results of Questionnaire Item Reliability Test

Variable	Reliability Coefficient	Test Results
<i>Usability (USA)</i>	0,862	<i>Reliable</i>
<i>Information Quality (IFQ)</i>	0,966	<i>Reliable</i>

Variable	Reliability Coefficient	Test Results
<i>Service Interaction Quality (SIQ)</i>	0,939	<i>Reliable</i>
<i>System Usability Scale (SUS)</i>	0,855	<i>Reliable</i>

Source: Primary data processed using SPSS 22 (2024)

A questionnaire is reliable if Cronbach's alpha exceeds 0.6 ^[24]. SPSS 22 shows that the Cronbach's alpha values in TABLE-8 are 0.862 for Usability (USA), 0.966 for Information Quality (IFQ), 0.939 for Service Interaction Quality (SIQ), and 0.855 for System Usability Scale (SUS). The questionnaire used in this study is reliable, as the items consistently measure what they are supposed to.



FIGURE 8. (a) One Point Lesson Improvement APLUSAN Website Quality aspects (b) One Point Lesson Improvement APLUSAN Website Delivery aspects

Source: Developed by the researcher based on analysis results (2024)

FIGURE-8 (a) explains that the results of the implementation of the APLUSAN Website from the quality aspect include changes in the materials used in the logbook report. Initially, the logbook report used a handwritten book and manual, but now uses the APLUSAN Website with a standardized logbook report format. **FIGURE-6 (b)** explained that the results of implementing the APLUSAN Website from the delivery aspect only required 18 seconds of report browsing time and 3 minutes 15 seconds of logbook creation. Previously, tracking reports was hampered if the books were moved or lost, and workers wrote reports manually and could not copy previous reports. Overall, the features of the Aplusan website currently accommodate the company's needs.

CONCLUSION

Things that need to be considered for the aplusan website to be used sustainably include improving service quality based on the company's needs in line with technological advancements and big data analysis. Additionally, data security against potential data theft must be enhanced, servers should be added to anticipate the increasing number of users, and it is essential to stay updated on technological developments so that this website does not fall behind the times. Further research is needed regarding the causes of the System Usability Scale (SUS) score obtained in the study of the APLUSAN Website for PT. Pertamina Patra Niaga - SHIPS workers, which got a score of 75.1. Also, further research is needed with more varied respondents, for example, from each Aviation Fuel Terminal Location in the Corporate Operation Services III area that has implemented the APLUSAN Website in shift handover

activities. The case study conducted by the researcher could be continued with Structural Equation Modelling (SEM) analysis, which is used to predict and test the relationship between variables and determine causality between variables. The APLUSAN website has the potential for replication and could be applied in all work locations of PT. Pertamina Patra Niaga.

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