



## Analysis of the Quality of the Website Ready for the Admission of New Students (PPDB) Online to User Satisfaction with Using the Webquel 4.0 Method Case Study at SMKN 1 Sangatta Utara

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### ABSTRACT

Vocational High School (SMK) has been admitting new students for the last 3 years using the SIAP PPDB Online Web provided by the East Kalimantan Provincial Office. The purpose of the research was to determine the ease of website operation and the quality of interaction of the Siap PPDB Online website service at SMKN1 North Sangatta. The benefits can provide an overview of website user satisfaction, knowing the quality of the SIAP PPDB Online website, and become a policy consideration in improving website quality. This research method uses a descriptive quantitative approach, which describes user perception of website quality based on the WebQual 4.0 dimension. The research time is July 2025. The results of the analysis of the quality of the SIAP PPDB website as a whole, the three dimensions, namely the dimensions of convenience, data quality, and the quality-of-service interaction, show that they are included in the good category, which is 3.57.

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## **INTRODUCTION**

The use of data technology in learning zones has faced rapid growth, one of which is the implementation of an online system in the New Student Admission (PPDB) process. The SIAP PPDB Online website provided by the East Kalimantan Education Office in collaboration with Telkom Indonesia is one of the digital platforms used by Senior High Schools (SMA)/Vocational High Schools (SMK) in the city to facilitate the registration process and registration of online students, one of which is at SMKN 1 Sangatta Utara. The quality of the SIAP PPDB online web is very much needed, especially at SMKN 1 North Sangatta because it is one of the vocational schools that is in great demand by students in East Kutai Regency.

The use of this online PPDB system is expected to increase transparency, efficiency, and ease of access for residents. However, there are still many obstacles in the field, such as face-to-face that is not user-friendly, unclear data, and sluggish system response, which in conclusion affects user satisfaction, both from parents, prospective students, or school operators. Therefore, a systematic assessment of the quality of the online PPDB web is needed to recognize how well the service has met the needs and expectations of its users.

One of the appropriate procedures used in the assessment of web quality analysis is Webqual 4.0, which was raised by Barnes and Vidge (2003). This procedure takes into account web quality sourced from 3 main measures, namely usability (ease of use), information quality (data quality), and service interaction quality (quality of service interaction). These three measures are relevant for evaluating the user experience of public service websites. Webqual-based evaluations share an objective reflection of the advantages and disadvantages of the web, and their relationship to user satisfaction.

Based on the explanation above, it can be concluded that the quality of the online SIAP PPDB web is very necessary, especially at SMKN 1 North Sangatta because it is one of the vocational schools that is in great demand by students in East Kutai Regency. The results of the analysis are expected to share concrete input for schools, system operators, and local governments in improving the quality of digital learning services based on user satisfaction.

The purpose of the research was to determine the ease of website operation, and the quality of interaction of the Siap PPDB Online website service at SMKN1 North Sangatta. The benefits can provide an overview of website user satisfaction, knowing the quality of the SIAP PPDB Online website and become a policy consideration in improving website quality.

## **LITERATURE REVIEW**

The success of the implementation of the online PPDB system is not only determined by the quality of the web, but also by the readiness of the Data Management System (SIM) in schools. SIM is an integrated system designed to help manage school information as effectively as possible, including information on prospective students. For Rahardjo (2018), the implementation of a good SIM can support the process of planning, implementing, and assessing information-based learning. In this context, SIM can function as a

support for the smooth running of online PPDB as well as the integration of information from external systems such as SIAP.

Some research has previously examined the quality of public service websites using Webqual procedures. For example, Andini and Prasetyo (2022) studied the quality of the online PPDB web in some junior high schools in Central Java and created that the size of usability and data quality are still aspects that need to be improved. Meanwhile, Ramadan et navy (Navy). (2020) in his research at SMPN 3 Makassar formulated that users still find it difficult to master the flow of the system due to unintuitive design and little service interaction. Another research by Kurniawan and Haryanto (2021) also reported that the Webqual assessment was able to clearly recognize aspects that affect user satisfaction in school website-based services.

Jundulillah L, Suseno E, and Surarso B (2019) stated that the results of the calculation of the webqual questionnaire and the calculation with the important analysis-performance method of science at Stikubank University showed that the average student was satisfied with the quality of the e-learning website by 86.75%. Although there are still some parts that can be improved on an e-learning website such as clear instructions, accurate information, and ease of communication.

According to Jundulillah L., Ramdiani and Respati L. (2025) Academic Integrated System (AIS) of Mulawarman University as an academic information service. Information systems are integrally organizing to collect, enter, process, and store data, and to store, manage, control, and report information. The results of the analysis showed that the average SUS score obtained was 62,536, categorizing this system in Grade D. Based on the adjective ranking, it was categorized as Ok, and acceptance was included in the marginal category. The development of this research needs to be carried out and further evaluation to improve usability, operational efficiency, and user satisfaction.

## **METHODOLOGY**

This research method uses a descriptive quantitative approach, namely describing user perception of the quality of the SIAP PPDB Online application website at SMKN 1 Sangatta Utara based on the WebQual 4.0 dimension. The instrument used to measure website quality based on user perception consists of 3 dimensions, namely usability dimensions, information quality, and service interaction quality. The usability dimension measures how easy a website is to use, easy to learn, and attractive. The information quality dimension measures the accuracy, relevance, completeness, and clarity of the information presented on the website. The service interaction quality dimension measures the extent to which users feel confident, safe, and satisfied in interacting through the website.

The population is an active user of the SIAP PPDB Online application at SMKN 1 Sangatta Utara (students/parents, and the PPDB committee). Samples were taken using those who had used the website at least once in the registration process for selecting samples with simple random sampling. The number of new students at SMKN 1 Sangatta Utara for the 2025/2026 school

year is 366 students. The number of respondents 261 was determined based on the Slovin formula with an error rate of 5%. Data collection technique with a questionnaire in the form of google gormulir which is compiled based on The WebQual 4.0 indicator uses a likert scale of 1-5 (strongly disagree - strongly agree). The research instrument consists of 4 parts, namely respondent data (age, status, frequency of access), usability statement, information quality statement, and service interaction quality statement. Quantitative Descriptive Analysis The average value of each dimension is interpreted on a quality scale.

## RESULT AND DISCUSSION

Respondents are filled by new students/parents of new students who have used the SIAP PPDB website at least 1 time during student registration for the 2025/2026 school year. The number of samples was 261 respondents, with a population of 366 people. Analysis of the quality of the SIAP PPDB Online application website at SMKN 1 Sangatta Utara based on the WebQual 4.0 dimension. The instrument used to measure the quality of the website based on user perception consists of 3 dimensions, namely the dimension of usability, information quality and service interaction quality. The usability dimension consists of 5 questions that are asked in a row, namely how easy it is for users to understand the features on the website, how much ease of use it is to operate the features on the website, how much interest it is for users about the website design, how much the display shows consistently, and how much the website provides a positive experience for users. The question points for the information quality dimension are how much the user assesses the accuracy of the information on the website, how much information on the website is relevant, how much the website is always updated with the latest information, how much benefit is the information that appears on the website, how detailed the website provides detailed information for users. The question questions of the service interaction quality dimension are how much trust in the website, how much responsiveness/responsiveness of website users, how much users feel safe interacting through the website, how much as website users feel satisfied and how much users feel safe by providing personal data through the website. The results of the SIAP PPDB website quality analysis on the quality dimension are as follows:

Table 1. Data Processing Results of Website Quality Analysis SIAP PPDB

Usability Dimension	
Grain	Average score
1	3,10
2	3,11
3	3,61
4	3,44
5	3,83
Average	<b>3,42</b>

Question items 1 to 5 in a row are the level of ease of understanding, operation, interest in design, consistency and positive experience of website features. The results of the quality analysis of the SIAP PPDB Website on the information quality dimension are as follows:

Table 2. Data Processing Results of Website Quality Analysis SIAP PPDB  
 Informatin Quality Dimension

Grain	Average score
1	3,69
2	3,61
3	3,63
4	3,86
5	3,84
Average	<b>3,73</b>

Question items 1 to 5 in a row are the level of accuracy of information, relevance to use, updating information, usefulness, and level of detail of the information provided. The results of the SIAP PPDB Website quality analysis on the service interaction quality dimension are as follows:

Table 3. Table of Data Processing Results Website Quality Analysis SIAP  
 PPDB Service Interaction Quality Dimension

Grain	Average score
1	3,57
2	3,85
3	3,52
4	3,74
5	3,09
Average	<b>3,56</b>

Question items 1 to 5 in a row are the level of responsiveness of the user, the sense of security for the user, the level of trust, user satisfaction, and the level of the user's feeling safe when sending personal data to the website. The results of the analysis of the quality of the SIAP PPDB website as a whole showed that the three dimensions were included in the good category, which was 3.57. The website still needs improvement so that it can be achieved in the very good category.

SMKN 1 Sangatta Utara is located on Jl Majay Sangatta Utara, East Kutai Regency, East Kalimantan Province. New Student Admissions in North Sangatta District, both high school and vocational school, are required to use the PPDB SIAP website because the enthusiasm of students to enter is very high so that the website as an effort to transparency the school provides data on the applicants, capacity, and nominations of students who are accepted in real time So that prospective new students can monitor and can determine school choices and concentration of expertise according to the conditions of their respective grades. Parents or prospective new students are expected to be able to easily facilitate registration, get the latest information about the progress of the nomination that will be received anytime and anywhere because it can be monitored with a mobile phone.

Based on the results of data processing seen in table 1. shows that the value for the usability dimension (usability) is 3.42 so it is included in the good category. The lowest score in the first question item is 3.10, which is in the assessment item Ease of understanding website features. Meanwhile, the highest in the fifth question item was 3.83 in the assessment item of how much the SIAP PPDB website provides a positive experience. This dimension

measures how easy the website is to be used by the user, including the appearance of the interface, navigation, and clarity of the information displayed to facilitate the user's understanding of the features on the website

Based on table 2. The results of the analysis of the SIAP PPDB website mentioned above show that the value of the information quality dimension is 3.73 so it is included in the good category. With a score of 3.73, this dimension obtained the highest score among the three dimensions. This indicates that the user feels that the information presented is accurate, complete, and trustworthy. The SIAP PPDB website is considered to be able to provide data that meets the needs of users, especially related to the registration flow, schedule, and selection results. The lowest score of 3.61 is for the assessment item of how much the level of accuracy of information on the website is. Meanwhile, the highest score on the assessment item about how much the website benefits users is 3.86. This shows that the SIAP PPDB website is very useful for users for the selection process for entering Senior High School/Vocational High School.

Based on the results of the SIAP PPDB website quality analysis of the service interaction quality dimension in table 3. of 3.56 so that it is in the good category. A value of 3.56 indicates a good quality of service interaction, but still requires improvement in some technical aspects. Possible improvements can be focused on responsiveness and the availability of help or customer service features to facilitate user complaints. The highest score is 3.85 on the assessment of how much the website is always updated with the latest information. The lowest score was 3.09 on the assessment item of how safe users feel by providing personal data through the website. The level of security about personal data uploaded through the website has not shown that it is very safe to be felt by users. The results of the analysis of the quality of the SIAP PPDB website as a whole showed that the three dimensions were included in the good category, which was 3.57. The website still needs improvement so that it can be achieved in the very good category.

## **CONCLUSIONS AND RECOMMENDATIONS**

The results of the quality analysis of the SIAP PPDB website used at SMKN 1 Sangatta Utara for the 2025/2026 school year The average of the three dimensions assessed shows that they are in the good category, which is 3.57. The value of each dimension is 3.44 in terms of usability, 3.75 in terms of data/information quality and 3.56 in terms of service interaction quality. Overall, the SIAP PPDB website has provided good service to users. This value reflects that the majority of users are satisfied with their experience in accessing and using the website. However, the website still needs improvement so that it can be achieved in the very good category. The highest value of this quality analysis is 5 so it still needs to be improved. Based on the value of each question item, it can be concluded that efforts to improve need to be made, especially in terms of ease of understanding features, the level of accuracy of information and the level of feeling safe when users send personal data on the website.

## FURTHER STUDY

Recommendations for improvement based on the value of each question item that is still low, namely the level of ease of understanding the features of the website, the level of accuracy of the data presented, and the sense of security of use by providing personal data through the website. Some of the changes that can be made are using general and non-technical terms so that all levels of society can understand the content of the site, providing registration simulation features or guides in the form of infographics or videos to guide ordinary users, making sure all information, such as schedules, procedures, and announcements, for online help services it is necessary to add a live chat feature or a responsive contact number to help users convey problems or suggestions directly.

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