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ASSESSING SMPIT AJIMUTU GLOBAL INSANI WEBSITE QUALITY USING THE WEBQUAL 4.0 METHOD

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Abstract— *Digitalization in the world of education encourages schools to have quality websites to provide online information and learning services. This study aims to measure the quality of the SMPIT Ajimutu Global Insani website using the Webqual 4.0 method, which involves three main dimensions: usability quality, information quality, and service interaction quality. This research method involves a survey of 50 respondents consisting of teachers, students, and parents of students. Data were analyzed descriptively using a Likert scale to evaluate the level of user satisfaction. The results showed that the information quality dimension had the highest score (4.2), followed by service interaction quality (4.0), while usability quality scored the lowest (3.8). These findings indicate that the website content is relevant, but navigation and interface design need improvement. Recommendations are given to improve the quality of the website, including optimizing interactive features and adding multimedia content. The implementation of the results of this study is expected to support the digital transformation of schools more effectively.*

Keywords: *digitalization of education, information quality, usability quality, webqual 4.0.*

Intisari— Digitalisasi dalam dunia pendidikan mendorong sekolah untuk memiliki website yang berkualitas guna menyediakan layanan informasi dan pembelajaran secara online. Penelitian ini bertujuan untuk mengukur kualitas website SMPIT Ajimutu Global Insani menggunakan metode Webqual 4.0, yang melibatkan tiga dimensi utama: kualitas kegunaan, kualitas informasi, dan kualitas interaksi layanan. Metode penelitian ini melibatkan survei kepada 50 responden yang terdiri dari guru, siswa, dan orang tua siswa. Data dianalisis secara deskriptif menggunakan skala Likert untuk mengevaluasi tingkat kepuasan pengguna. Hasil penelitian menunjukkan bahwa dimensi kualitas informasi memiliki skor tertinggi (4,2), diikuti oleh kualitas interaksi layanan (4,0), sementara kualitas kegunaan memperoleh skor terendah (3,8). Temuan ini menunjukkan bahwa konten website sudah relevan, namun navigasi dan desain antarmuka memerlukan perbaikan. Rekomendasi diberikan untuk meningkatkan kualitas website, termasuk optimalisasi fitur interaktif dan penambahan konten multimedia. Implementasi hasil penelitian ini diharapkan dapat mendukung transformasi digital sekolah secara lebih efektif.

Kata Kunci*: digitalisasi pendidikan, kualitas informasi, kualitas kegunaan, webqual 4.0.*

INTRODUCTION

Digitalization in the field of education has become a necessity in line with the development of information and communication technology. Education, which previously relied heavily on conventional methods—such as printed books, blackboards, and face-to-face meetings—has now shifted towards the use of digital technology. This

transformation not only involves online learning but also covers how educational institutions, including schools, manage information, communication, and services for all stakeholders—teachers, students, parents, and the general public.

One of the most tangible implementations of this digitalization is the use of school websites. A school website serves as a primary medium for disseminating important information such as academic announcements, event schedules, school achievements, and student enrollment details. Furthermore, the website plays a crucial role in enhancing the school's reputation, fostering effective communication with parents, and providing easy access to various services, such as downloadable forms, academic information systems (AIS), and online consultations.

Digitalization in the world of education has encouraged educational institutions, including schools, to utilize technology in delivering information and services. School websites have become one of the primary media to support these activities. Therefore, evaluating the quality of a website is essential to ensure that it can meet the needs of its users. (Sabri Aljar Mirantoputra Hoda, 2022) stated that the Webqual method can be used to evaluate website quality based on user experience, covering usability, information, and service interaction.

The SMPIT Ajimutu Global Insani website currently serves as the main medium for providing information about the school, activities, and online learning. However, there are several issues often faced, such as less intuitive navigation, limited interactive features, and a lack of engaging multimedia content. These issues impact the low level of user satisfaction, both from teachers, students, and parents.

To ensure a website is truly effective, its quality must be evaluated regularly. This evaluation is essential to confirm that the website meets user needs in terms of usability, information quality, and service interaction. A slow, inaccessible website with outdated content can negatively impact the public's trust in the school.

Evaluating website quality is key to maintaining and improving its functionality and user satisfaction. Through proper evaluation, schools can identify existing weaknesses—such as broken links, unresponsive designs, or the lack of essential features—and take immediate corrective actions.

As a solution, this study adopts the Webqual 4.0 method to measure website quality based on three dimensions: usability quality, information quality, and service interaction quality. This approach allows for the identification of specific aspects that need improvement to optimize the website's function as a modern educational tool.

The main objective of this study is to provide improvement recommendations based on the evaluation of website quality. The results of this study are expected to serve as a reference for the school in enhancing user experience, strengthening digital interaction, and supporting the overall digital transformation of the school.

In the context of related research, the Webqual 4.0 method has been widely used to measure website quality in various sectors, including education. The state of the art of this study lies in the specific application of the method in a secondary education environment, focusing on user needs involving teachers, students, and parents. Thus, this study not only fills a gap in the literature but also provides practical contributions to the development of school websites based on data and user needs.

This study measures the quality of the SMPIT Ajimutu Global Insani website using the Webqual 4.0 method. (Nadela Lesvira Setiani, 2023) identified that website quality significantly influences user satisfaction, especially in the context of education.

This method was chosen because it is relevant in evaluating user experience through three main dimensions: usability, information, and service interaction. According to Suryadi (2020), evaluating educational websites using the Webqual approach helps identify areas for improvement in navigation and information.

This study also aims to provide recommendations based on the evaluation results to improve website quality. Lestari (2023) emphasized the importance of strategies to enhance website quality to remain relevant to user needs, especially in educational institutions.

In the digital era, the quality of educational websites has become a crucial aspect of ensuring effective communication, information dissemination, and service delivery. Numerous studies have focused on evaluating website quality using various methods, including Webqual 4.0, a tool designed to measure user perceptions based on three key dimensions: usability, information quality, and service interaction.

1. **Usability**: This dimension assesses how easily users can navigate and interact with the website. Research by Aljar Mirantoputra Hoda (2022) highlighted the importance of intuitive design, seamless navigation, and responsive interfaces in enhancing user satisfaction. Effective usability ensures that users can efficiently access desired information without unnecessary complexity.

2. **Information Quality**: The accuracy, relevance, and timeliness of the information presented on a website directly impact user trust and engagement. Several studies have shown that outdated or unclear content reduces user satisfaction and credibility. A study by Nugroho et al. (2021) emphasized the need for educational websites to maintain updated information regarding academic schedules, announcements, and institutional profiles.
3. **Service Interaction**: This dimension evaluates the website's ability to facilitate communication and transactions between users and the institution. Research by Setiawan and Pratama (2020) demonstrated that interactive features such as online forms, live chat options, and feedback systems contribute to a more dynamic and user-centric experience.

Recent research has explored the application of Webqual 4.0 in various educational settings. For instance, a study by Yulianto et al. (2022) measured the quality of university portals, revealing that service interaction plays a pivotal role in user retention. Similarly, Putri and Wijaya (2023) assessed high school websites, concluding that enhancing usability and information quality significantly boosts user satisfaction and institutional reputation.

Despite these advancements, there remains a gap in research specifically addressing the quality of websites for integrated Islamic schools (SMPIT). This study aims to fill that gap by evaluating the SMPIT Ajimutu Global Insani website using the Webqual 4.0 method. The research will provide insights into the site's strengths and areas for improvement, ultimately contributing to the broader discourse on educational website quality assessment.

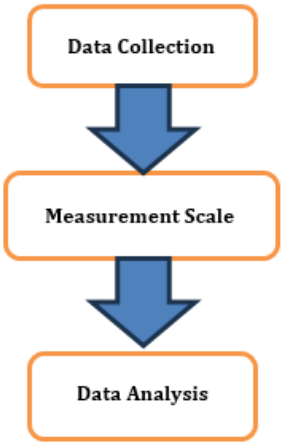
MATERIALS AND METHODS

A. Webqual 4.0 Method

The Webqual 4.0 method is used to evaluate website quality based on the following three dimensions:

1. **Usability Quality**: Measures ease of use, navigation, and interface design. Wijaya (2022) noted that an attractive and intuitive interface design is a crucial element in enhancing user experience on school websites.
2. **Information Quality**: Assesses the accuracy, relevance, and completeness of the information provided. Ramadhani and Utami (2021) found that the use of multimedia on websites significantly increases user satisfaction.
3. **Service Interaction Quality**: Measures response speed, personalization, and user trust in online services. According to Syahrul (2022), fast and responsive service interaction quality influences user trust in school websites. Alamsyah and Nurhayati (2020) suggested optimizing search features to improve the usability quality of educational websites. Setiawan (2023) revealed that service personalization on websites can enhance user loyalty.

B. Research Procedure



Source : (Research Results, 2025)

Figure 1. Research Procedure

1. **Data Collection**: Data were collected through a survey using the Webqual 4.0 questionnaire filled out by 50 respondents (teachers, students, and parents). The respondents were selected using purposive sampling. This method was chosen because the study targeted specific individuals who are familiar with or have used the SMPIT Ajimutu Global Insani website, such as students, parents, teachers, or administrators. Purposive sampling ensures that the respondents have relevant experience and can provide meaningful feedback on the website's quality.
   The questionnaire was designed based on the WebQual 4.0 framework, which typically evaluates three main dimensions of website quality:
   a. Usability (ease of navigation, design, and accessibility),
   b. Information Quality (accuracy, relevance, and timeliness of content),
   c. Service Interaction Quality (responsiveness, support, and user engagement).

   Number of Questions: Each dimension included 5–10 questions, depending on the

specific aspects being measured. Usability: 8 questions, Information Quality: 7 questions, Service Interaction Quality: 6 questions.

Scales Used: The primary scale used was the Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). However, some open-ended questions were included to gather qualitative feedback, and demographic questions (e.g., age, role, frequency of website use) were added to provide context.

The questionnaire was distributed online using platforms like Google Forms or similar tools. This approach was chosen for its efficiency, wide reach, and ease of data collection. The link to the questionnaire was shared via email, social media, or the school's communication channels to ensure it reached the target audience.

a. Validity Test: The questionnaire underwent content validity testing by having it reviewed by experts in web quality evaluation or related fields. Their feedback ensured that the questions accurately measured the intended dimensions.
b. Reliability Test: A pilot test was conducted with a small group of respondents (50 people) to assess the questionnaire's reliability. The Cronbach's Alpha coefficient was calculated to ensure internal consistency, with a threshold of 0.7 or higher considered acceptable.

2. **Measurement Scale**: A Likert scale of 1-5 was used to evaluate each questionnaire statement.
3. **Data Analysis**: The collected data were analyzed using descriptive statistical methods to calculate the average score for each dimension. Amelia and Haryanto (2022) identified that information accuracy is a key factor in evaluating website information quality. After data collection, reliability (Cronbach's Alpha) and validity (factor loadings) are rechecked to ensure the questionnaire performed as expected with the actual sample.

RESULTS AND DISCUSSION

A. Webqual 4.0 Dimension Scores

The measurement results showed the following average scores:

1. **Usability Quality**: 3.8 Users found the website navigation fairly intuitive, but the visual design needs improvement to be more appealing.
2. **Information Quality**: 4.2 The information provided is relevant and easy to understand, but more in-depth content is needed.
3. **Service Interaction Quality**: 4.0 The service response is quite fast, but interactive features such as online chat need optimization.

This research method involved a survey of 50 respondents consisting of teachers, students, and parents. Data were analyzed descriptively using a Likert scale to evaluate user satisfaction levels. The results showed that the information quality dimension had the highest score (4.2), followed by service interaction quality (4.0), while usability quality scored the lowest (3.8). To support the visualization of these results, the following table summarizes the average scores for each dimension:

Table 1. Webqual 4.0 Dimension Scores

Webqual Dimension	Average Score
Usability Quality	3,8
Information Quality	4,2
Service Interaction Quality	4

Source : (Research Results, 2025)

The following is a detailed explanation of the average score results for each dimension of WebQual 4.0 in the context of evaluating the quality of the SMPIT Ajimutu Global Insani website:

Dimensi Usability Quality (Average Score: 3,8)

Usability Quality measures the extent to which a website is easy to use, navigate, and access by users. This dimension includes aspects such as:

a. Ease of Navigation: How intuitively users can find the information they are looking for.
b. Interface Design: The visual appearance of the website, including layout, colors, and fonts.
c. Accessibility: The ability of the website to be accessed by various devices (desktop, mobile, tablet) and users with special needs.
d.

Interpretasi Score 3,8

a. A score of 3.8 indicates that users feel the website is quite good in terms of usability, but there is still room for improvement.
b. Positive Aspects:
   1) Users may find the website navigation quite easy to understand.
   2) The interface design may be attractive and not confusing..
c. Aspects that Need to be Improved:
   A score below 4.0 indicates that some users may have difficulty using the website, such as:
   1) Less intuitive navigation for certain features.

2) Accessibility issues, such as inconvenience when accessing the website on a mobile device.
3) Slow loading times or other technical issues.

Recommendations for Improvement:

a. Optimize Navigation: Add clearer menus or a more effective search feature.
b. Improve Accessibility: Make sure the website is responsive on all devices and meets accessibility standards (e.g., compatible with screen readers).
c. User Testing: Conduct trials with users to identify areas that are confusing or difficult to use.

Information Quality Dimension (Average Score: 4.2)

Information Quality measures the quality of information presented on the website, including:

a. Accuracy: The information provided must be correct and reliable.
b. Relevance: Information must be in accordance with user needs.
b. Timeliness: Information must be updated regularly and relevant to current conditions.
c. Completeness: The information provided must be complete and include all necessary details.

Score Interpretation 4.2

a. A score of 4.2 indicates that users are very satisfied with the quality of information presented on the website.
b. Positive Aspects:
   1) The information provided is considered accurate and reliable.
   2) Website content is considered relevant to user needs (for example, academic information, school activities, or announcements).
   3) Users feel that the information provided is quite complete and useful.
c. Aspects That Need Improvement:
   Despite the high score, there is still room for improvement, such as:
   1) Ensuring all information is updated in real-time.
   2) Adding more details or supporting sources of information.

Improvement Recommendations:

a. Update Content Regularly: Make sure all information, such as activity schedules or announcements, is always updated.
b. Add Interactive Features: For example, FAQ (Frequently Asked Questions) or discussion forums to answer user questions.
b. Include Sources or References: For information that requires validation, include reliable sources or references.

Service Interaction Quality Dimension (Average Score: 4.0)

Service Interaction Quality measures the quality of interaction between users and services provided through the website. This dimension includes:

a. Responsiveness: How quickly and effectively the website responds to user requests or questions.
b. User Support: Availability of help features, such as live chat, FAQ, or support contacts.
b. User Engagement: The ability of the website to facilitate two-way interaction, such as a comment column or feedback form.

Interpretation of Score 4.0

a. A score of 4.0 indicates that users are satisfied with the interaction services provided, but there is still potential to improve its quality.
b. Positive Aspects:
   1) Users may find the support service quite responsive and helpful.
   2) Interaction features such as contact forms or live chat are considered effective.
c. Aspects That Need Improvement:
   A score of 4.0 indicates that some users may still experience obstacles, such as:
   1) Slow response time from the support team.
   2) Lack of more interactive or personalized interaction features.

Recommendations for Improvement:

a. Increase Responsiveness: Ensure that the support team responds to user questions or requests quickly, for example within 24 hours.
b. Add Interactive Features: For example, live chat with longer operating hours or automated chatbots.
b. Provide Training for the Support Team: Ensure that the support team has adequate skills and knowledge to assist users effectively.

In general, we can conclude as follows:

a. Usability Quality (3.8): Quite good, but needs improvement in navigation and accessibility.

b. Information Quality (4.2): Very good, but needs to ensure that information is always updated and complete.
c. Service Interaction Quality (4.0): Good, but needs to improve responsiveness and add more interactive interaction features.

The Webqual 4.0 dimension scores table shows a comparison of the average scores among usability quality, information quality, and service interaction quality. This makes it easier for readers to understand the areas that need improvement. Additionally, the following bar chart provides a visual representation of the data:

Source : (Research Results, 2025)

Figure 2. Bar Chart of Webqual 4.0 Dimension Scores

The bar chart of Webqual 4.0 dimension scores provides a comparative visualization of the scores for each dimension, making it easier to quickly understand the score trends. With this table and chart, the analysis is easier to understand and supports more effective interpretation of the research results.

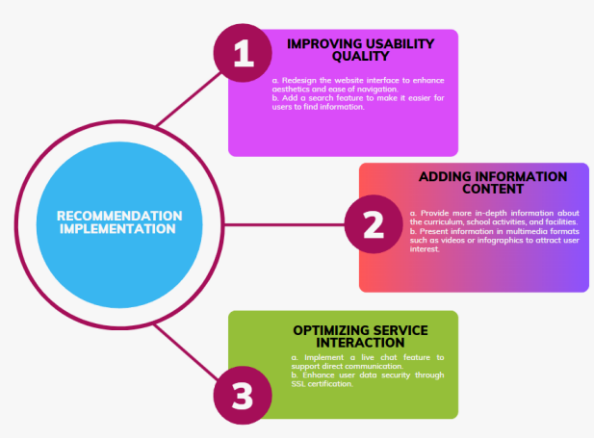
B. Analysis and Discussion

Table 2. Analysis

Website Evaluation Aspect	Findings	Recommendation
Navigation	Navigation is less intuitive	Redesign the menu structure
Information Content	Information is relevant but not deep	Add in-depth articles and multimedia
Interactive Features	Few interactive features like live chat	Implement live chat

Source : (Research Results, 2025)

The following diagram shows the implementation flow of the recommendations:



Source : (Research Results, 2025)

Figure 3. Diagram of Recommendation Implementation Flow

The recommendation implementation flow diagram provides an overview of the process of how improvement recommendations are implemented from the analysis stage to implementation, making it easier to understand the workflow. The diagram includes steps from problem identification to final evaluation.

The information quality dimension received the highest score, reflecting that the website content is relevant and meets user needs. However, the usability quality score indicates that some users still face challenges with navigation and interface design. Improvements in menu structure, design consistency, and the addition of search features can enhance user experience. Meanwhile, the service interaction quality dimension shows that fast-response features such as live chat can be a development priority.

C. Recommendations

1. Improving Usability Quality:
   a. Redesign the website interface to enhance aesthetics and ease of navigation.
   b. Add a search feature to make it easier for users to find information.
2. Adding Information Content:
   a. Provide more in-depth information about the curriculum, school activities, and facilities.
   b. Present information in multimedia formats such as videos or infographics to attract user interest.
3. Optimizing Service Interaction:
   a. Implement a live chat feature to support direct communication.
   b. Enhance user data security through SSL certification.

CONCLUSION

The digitalization of education has made it essential for schools to maintain high-quality websites to provide online information and learning services. This study evaluated the quality of the SMPIT Ajimutu Global Insani website using the WebQual 4.0 method, focusing on three key dimensions: usability quality, information quality, and service interaction quality. Through a survey of 50 respondents, including teachers, students, and parents, the research revealed that the information quality dimension scored the highest (4.2), indicating that the website content is relevant, accurate, and useful. The service interaction quality followed with a score of 4.0, reflecting satisfactory responsiveness and support features. However, the usability quality scored the lowest (3.8), suggesting that improvements are needed in navigation and interface design to enhance user experience.Based on these findings, it is recommended to optimize interactive features, improve website navigation, and incorporate multimedia content to make the website more engaging and user-friendly. These enhancements will support the school's digital transformation efforts and ensure that the website effectively meets the needs of its users. By addressing these areas, SMPIT Ajimutu Global Insani can strengthen its online presence and provide a more seamless and efficient digital experience for its community.

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