

INTEGRATION OF THE USER SATISFACTION MODEL METHOD IN MEASURING WEBSITE QUALITY

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Abstrak

Seiring dengan semakin wajibnya kehadiran digital bagi lembaga pendidikan, memastikan kualitas situs web melalui pengukuran sistematis sangatlah penting. Studi ini meneliti situs web Fakultas Sains dan Teknologi (FSAINTEK) di UIN Datokarama Palu, yang belum pernah menjalani penilaian kualitas formal sejak pengelolaan aktifnya dimulai pada tahun 2025. Tujuan penelitian ini adalah untuk mengevaluasi kepuasan pengguna dan mengidentifikasi area perbaikan kritis menggunakan kerangka pengukuran terintegrasi. Penelitian ini mengusulkan integrasi variabel dari tiga model yang telah mapan: Kepuasan Pengguna, Kepuasan Komputasi Pengguna Akhir (EUCS), dan *Webqual 4.0*, yang mencakup Kemudahan Penggunaan, Kustomisasi, Penundaan Unduhan, Konten, dan Kualitas Interaksi Layanan. Dengan menggunakan metode kuantitatif deskriptif dengan 53 responden yang beragam, data tersebut menjalani analisis validitas, reliabilitas, dan interpretasi skor. Temuan menunjukkan indeks kepuasan global sebesar 79,53%, yang diklasifikasikan sebagai "Kuat". Namun, ditemukan "paradoks retensi" yang signifikan: sementara aksesibilitas mencetak skor 84,91%, frekuensi kunjungan tetap rendah yaitu 67,17%. Kontribusi utama penelitian ini adalah perspektif holistik 360 derajat yang ditawarkannya, yang menyoroti bahwa keunggulan teknis saja tidak cukup tanpa pembaruan konten yang dinamis. Tidak seperti evaluasi model tunggal tradisional, pendekatan terintegrasi ini berhasil mengidentifikasi kesenjangan antara fungsionalitas teknis dan keterlibatan pengguna. Studi ini menyimpulkan bahwa untuk mencapai tingkat kepuasan yang lebih tinggi, fakultas harus beralih dari pemeliharaan yang berorientasi teknis ke strategi konten yang berorientasi nilai, menekankan perlunya audit konten berkala dan optimasi file untuk menjembatani kesenjangan keterlibatan.

Kata kunci: *User Satisfaction Model, WebQual 4.0, Availability, Website Quality, UIN Datokarama Palu.*

Abstract

As digital presence becomes mandatory for educational institutions, ensuring website quality through systematic measurement is vital. This study investigates the Website of the Faculty of Science and Technology (FSAINTEK) at UIN Datokarama Palu, which had not undergone any formal quality assessment since its active management began in 2025. The research objective is to evaluate user satisfaction and identify critical improvement areas using an integrated measurement framework. This research proposes the integration of variables from three established models: User Satisfaction, End-User Computing Satisfaction (EUCS), and Webqual 4.0, covering Ease of Use, Customization, Download Delay, Content, and Service Interaction Quality. Utilizing a descriptive quantitative method with 53 diverse respondents, the data underwent validity, reliability, and score interpretation analysis. The findings reveal a global satisfaction index of 79.53%, classified as "Strong." However, a significant "retention paradox" was discovered: while accessibility scored 84.91%, the frequency of visits remained low at 67.17%. The primary contribution of this research is the holistic 360-degree perspective it offers, highlighting that technical excellence alone is insufficient without dynamic content updates. Unlike traditional single-model evaluations, this integrated approach successfully identifies the disconnect between technical functionality and user engagement. The study concludes that to reach higher satisfaction levels, the faculty must transition from technical-oriented maintenance to a value-driven content strategy, emphasizing the necessity of periodic content audits and file optimization to bridge the engagement gap.

Keywords: *User Satisfaction Model, WebQual 4.0, Availability, Website Quality, UIN Datokarama Palu.*

INTRODUCTION

Websites are a necessity for institutions such as governments or universities. A website, or "web" for short, is a web page that can be accessed anywhere using a web browser like Google Chrome (Fikri, 2025a). Although there are two types of websites: static and dynamic, dynamic websites are currently more widely available.

Dynamic websites that keep the information up-to-date are popular. For example, the Faculty of Science and Technology of UIN Datokarama Palu has a dynamic website at <https://fsaintek.uindatokarama.ac.id>. As an educational institution, the Faculty of Science and Technology (FSAINTEK) of UIN Datokarama Palu must provide information publicly, quickly, and easily accessible. Information about available educational services is a key focus, especially for prospective new students and their parents.

The need for information about education, such as a Bachelor of Informatics, is a primary concern for prospective new students and their parents. When searching on search engines like Google, they will naturally use keywords like "informatics lectures." The availability of these keywords on the FSAINTEK UIN Datokarama Palu website is a must. This ensures prospective new students receive information about the education offered at FSAINTEK UIN Datokarama Palu. These keywords are not simply keywords written once on a web page. Instead, the website must create a web page containing comprehensive information related to those keywords.

Having the same keywords used by prospective new students on a university website is crucial. Research (Fudholi & Fikri, 2020) shows that frequently used keywords by users in Google search engines indicate a real and high level of need for information about those keywords. Therefore, website owners must ensure that they include or write comprehensive information on every page.

The Faculty of Science and Technology at UIN Datokarama Palu is relatively young, having only been established in 2023, meaning it has only been operating for three years. The faculty website was only actively managed in 2025. As of February 2026, there had been no measurement activities, particularly regarding user satisfaction with the faculty website.

Recent studies further clarify which website quality factors matter most for user satisfaction. For example, (Ashiq & Hussain, 2024) found that in Pakistani online shoppers, both e-service quality and e-trust significantly increase e-satisfaction and e-loyalty (Ashiq & Hussain, 2024). Likewise, (Mamakou, Zaharias, & Milesi, 2023) showed in a Greek e-commerce setting that e-service quality and user experience strongly predict customer satisfaction (Mamakou et al., 2023). In online banking, (Ighomereho, Afolabi, & Oluwakoya, 2022) reported that multiple quality dimensions (functional quality, recovery quality, security quality) significantly affect customer satisfaction, with functional quality having the highest impact (Ighomereho et al., 2022). These findings align with the view that beyond basic usability and content, service interaction, trust, and UX are critical determinants of satisfaction.

In academic and public-sector websites, the pattern is similar. (Anwarudin, Fadlil, & Yudhana, 2024) compared e-ServQual and WebQual 4.0 on a university information system (Universitas Muhammadiyah Gombong, N=100) and found both methods significantly predicted user satisfaction, but WebQual explained a higher variance (85.1% vs 66.1%) (Anwarudin et al., 2024). (Bela Damanik, Putri, & Harahap, 2024) evaluated the UIN Sumatera Utara portal and reported an overall WebQual 4.0 score of 88.09% (very good quality). Falencia et al. (2024) studied the SMKN 2 Kota Jambi school site (N=312) and confirmed all WebQual dimensions (information quality, usability, and service interaction quality) positively and significantly affected satisfaction, with interaction quality strongest. Similarly, (Putra & Muryani, 2023) examined the Bekasi Social Service website (N=280) and found usability, information quality, and service interaction quality each had positive effects on satisfaction; they recommended specific improvements in content and design (especially the design display indicator X1.6) to boost engagement. (Khamdani & Setiawan, 2023) analyzed a study-program site using WebQual and IPA (N=85) and identified 13 underperforming attributes; one usability item (UQ8) was flagged as the top priority for improvement (Khamdani & Setiawan, 2023).

From an integrated-model perspective, (Pramudito, Arijanti, Yanto RUKmana, Oetomo, & Kraugusteeliana, 2023) applied EUCS and the DeLone–McLean framework to an online ticketing app (M.TIX, N=175) and found six significant predictors of satisfaction: accuracy, ease of use, timeliness, system quality, information quality, and service quality (Pramudito et al., 2023). In a similar vein, (Mardiana, 2023) proposed an integrated WebQual 4.0–SERVQUAL model and identified seven key dimensions (usability, design, information, empathy, responsiveness, assurance, reliability) for assessing website quality. Finally, (Rahman & Hossain, 2022) examined a Bangladesh e-commerce site (N=350) and found that higher website quality increased credit-card usage and impulsive buying, which in turn elevated compulsive buying behavior (Rahman & Hossain, 2022). Together, these studies consistently show that technical accessibility alone is not enough: content richness, updated information, design/usability, interactive features, and trust/security all contribute to user satisfaction and loyalty in website contexts.

Compared to research (Falencia, Purnama, & Mulyono, 2024), the evaluation results (Destiarini, Rahman, & Sumartayasa, 2023) were more prominent in the service gap, especially the reliability dimension, which had the largest gap (-12.49), so that improvement priorities were more urgent. Meanwhile, on the SMKN 2 Jambi City

website, all dimensions had a positive and significant effect on user satisfaction, with interaction quality being the most dominant factor. This means that the SMKN 2 Jambi City website is already at a more stable level of influence, while the BPJS Kesehatan website still needs to improve its service quality to meet user expectations.

Website satisfaction is largely determined by the quality of information, ease of use, and interface appearance; in the study of library catalog systems, users require complete, valid, easily searchable information, as well as relevant service displays and integration to ensure a comfortable use of the system (Fikri, 2021). Modern websites should be built with responsive design, clear structure, and a good visual experience through HTML, CSS, JavaScript, and supporting frameworks (Fikri, 2025b).

Compared to research on website quality and customer satisfaction in e-commerce (Hosseini, Bakhshandeh, & Darvishi, 2024), which found that website quality had the strongest relationship with user satisfaction and trust, studies on Explainable AI and ChatGPT in higher education (Hoffman, Mueller, Klein, & Litman, 2023; Yu, Yan, & Cai, 2024) emphasized that user satisfaction is also influenced by explanation quality, perceived usefulness, trust, and continued use intention. Meanwhile, research on political website services (Mochla & Tsourvakas, 2020) highlighted that useful content and aesthetic design were the most important dimensions affecting user perception and satisfaction. This indicates that modern website satisfaction measurement has shifted from focusing only on technical quality and usability toward a more holistic perspective involving trust, interaction experience, explanation clarity, and long-term engagement.

Research (Mi Alnaser, Rahi, Alghizzawi, & Ngah, 2023) shows that digital banking user satisfaction is jointly formed by expectation confirmation, perceived performance, visual attractiveness, problem solving, customization, communication quality, and corporate reputation, with a fairly strong model explanatory power, namely R^2 51.1% for user satisfaction and R^2 48.3% for acceptance of AI-enabled banking; interestingly, trendiness and customization do not have a significant effect on satisfaction in the model.

Software and system engineering activities show that measuring a system or application is important because measurement helps produce structured development and improvement (Mardiana, 2020). Researchers (Nurhaeda & Hasbi, 2021) used the End User Computing Satisfaction (EUCS) method in analyzing user satisfaction with BSI Mobile, using five variables: content, accuracy, format, ease of use, and timeliness; the results showed that content, format, and ease of use had significant effects, while accuracy and timeliness did not. Meanwhile, researchers (Ernawati, 2024; Maulidiya, 2021) also used the EUCS approach to measure student satisfaction with the Saku Mahasiswa application, using the same five variables and finding that most users were satisfied, although the coefficient of determination showed that other factors also influenced satisfaction. In addition, researchers (Rifaldi, 2022) developed a website-based medicine ordering application and tested it with black-box testing, white-box testing, and User Acceptance Testing (UAT), obtaining an overall satisfaction index of 80%, which shows that website-based applications should not only be functional but also convenient and satisfying for users.

Researchers (Mardiana, 2020; M. P. Putri, 2017), used the User Satisfaction model in measuring the level of user satisfaction using four variables: Content, Customization, Download Delay and Ease of Use. Meanwhile, researchers (Marwati & Krisbiantoro, 2023) used the End User Computing Satisfaction (EUCS) method in analyzing the level of user satisfaction of Web Students at Amikom University Purwokerto. There are five variables used: Ease of Use, Timeliness, Format, Accuracy and Content. Website quality measurement can also use the Webqual 4.0 approach with four variables: Information Quality, Usability, Service Interaction Quality and Availability.

Research using User Satisfaction and End User Computing Satisfaction (EUCS) indicates that Content is the variable that most strongly influences user satisfaction with a website. Meanwhile, research using Webqual 4.0 indicates that Availability and Service Interaction Quality have a high level of influence on user satisfaction and website quality assessments.

Unlike previous studies that generally relied on a single evaluation framework such as EUCS, WebQual 4.0, or User Satisfaction Model independently, this study integrates variables from all three approaches into a unified measurement framework. The advantage of this integration lies in its ability to simultaneously evaluate technical functionality, interaction quality, content relevance, and user engagement behavior in a more comprehensive manner. Previous studies primarily focused on usability or information quality separately, whereas this study successfully identifies the “retention paradox,” where users perceive the website as highly accessible but still demonstrate low revisit frequency. Therefore, the novelty of this research is not only reflected in the integration of three established models, but also in the discovery of the gap between technical accessibility and long-term engagement behavior in educational websites. This integrated approach provides a more holistic 360-degree evaluation compared to conventional single-model website assessments.

METHODOLOGY

This research method refers to the following steps (Mardiana, 2020):

1. Collect data related to the use of the SAINTEK Faculty website at UIN Datokarama Palu through observation, interviews, and documentation.

2. Collect previous research related to measuring tools for user satisfaction on a website.
3. Formulate a new satisfaction measurement tool or develop a new or modified questionnaire based on previous research. This measurement tool will result in a new or modified questionnaire.
4. Distribute the questionnaire to users of the SAINTEK Faculty website at UIN Datokarama Palu and collect the results.
5. Conduct validity and reliability tests.
6. Interpret the measurement results taken during the research.
7. Summarize the research findings and make suggestions for improvement.

The researcher used a descriptive quantitative approach in this study, so that the facts and phenomena that occurred could be described in detail (R. A. G. S. Putri & Nuraniwati, 2025). The types of data used were primary and secondary data obtained from the Faculty of Science and Technology, UIN Datokarama Palu.

The questionnaire questions are grouped into six groups, variables, or criteria: Ease of Use, Customization, Download Delay, Content, Service Interaction Quality, and Availability. Ease of Use describes how information is presented in a structured way for easy access and understanding. Customization refers to materials and displays designed for easy recognition and customization. Download Delay refers to the speed of application access, including information retrieval and page transitions. Meanwhile, Content encompasses the amount of information available, the variety of information types, the number of words used, and the quality of the material displayed on a website. Service Interaction Quality measures how good the service quality is perceived by users when using the website. Availability measures the level of website availability and accessibility for users (Hafiz, 2017; Mardiana, 2020; Marwati & Krisbiantoro, 2023; M. P. Putri, 2017).

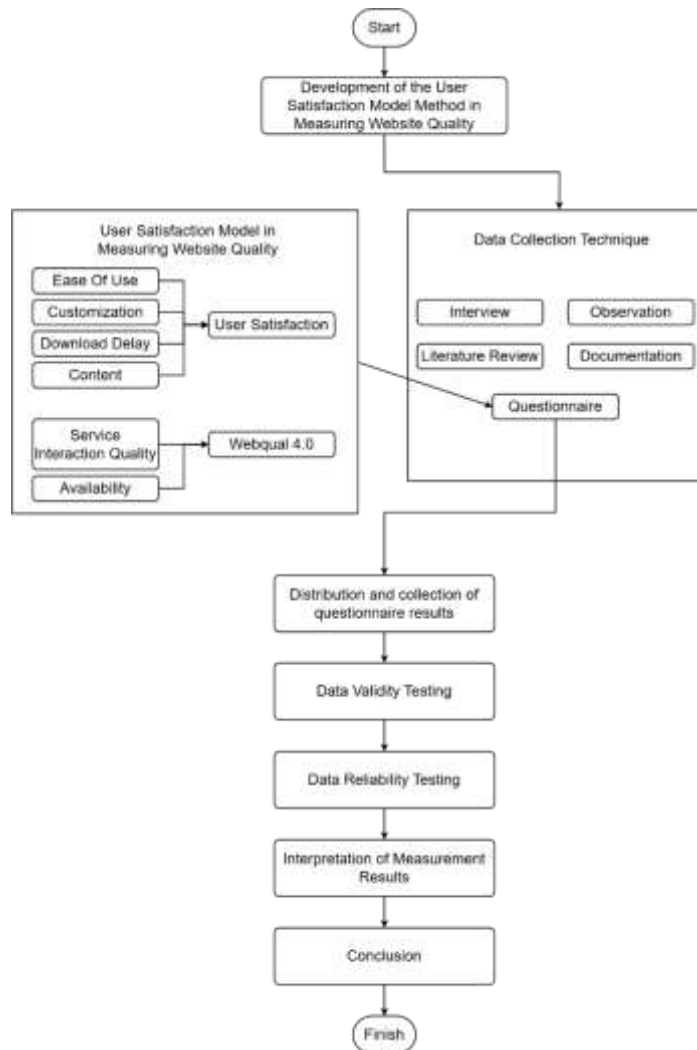


Figure 1. Research methodology.

Each question from the four measurement criteria will contain answers with a five-point Likert scale, namely Strongly Disagree (STS) / 1, Disagree (TS) / 2, Neutral (N) / 3, Agree (S) / 4, and Strongly Agree (SS) / 5. Some general questions will not use answers with this scale. Researchers divided respondents into nine groups, namely:

- a. General public
- b. Parents of prospective new students
- c. Prospective new students
- d. Parents of UIN Datokarama Palu students
- e. UIN Datokarama Palu students
- f. UIN Datokarama Palu lecturers
- g. UIN Datokarama Palu educational staff
- h. Stakeholders who have collaborated with UIN Datokarama Palu
- i. Businesspeople/agencies/institutions/entrepreneurs

The testing method used is validity and reliability testing, so that the final calculated value can be interpreted.

RESULTS AND DISCUSSIONS

The Faculty of Science and Technology (SAINTEK) at UIN Datokarama Palu has a website address of <https://fsainstek.uindatokarama.ac.id>. When visitors first access the website, they will be presented with a main page containing a menu/navigation, a slider with the latest information, statistical information about the faculty, news about faculty activities, and contact information. Figure 2 is a snippet of the initial page when visitors access the website.



Figure 2. Main Page of the Website.

Respondent Characteristics

Respondents were identified by gender and position/profession. Figure 3 shows that, based on gender, the largest distribution was "female" ("Perempuan") Meanwhile, based on profession/position, only four respondent groups were reached by the questionnaire: "UIN Datokarama Palu Education Staff" ("Tenaga Kependidikan UIN Datokarama Palu"), "General Public" ("Masyarakat umum"), "UIN Datokarama Palu Lecturers" ("Dosen UIN Datokarama Palu"), and "UIN Datokarama Palu Students" ("Mahasiswa UIN Datokarama Palu").

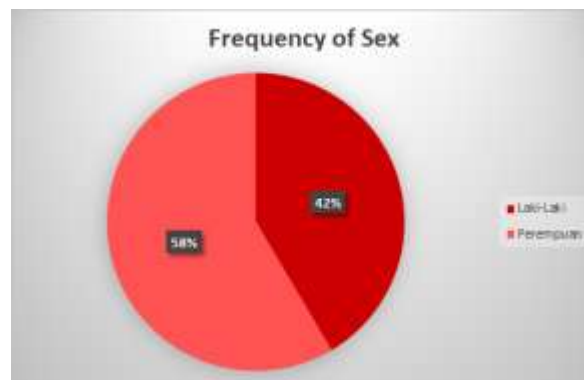


Figure 3. Frequency of sex.

Figure 4 shows that the respondents were dominated by students from UIN Datokarama Palu, representing 77% (41 respondents).

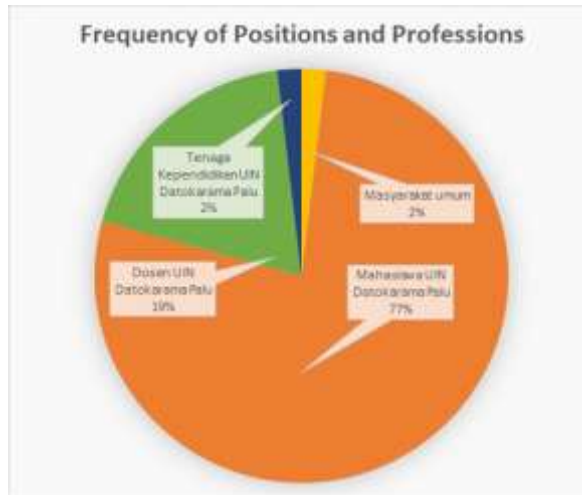


Figure 4. Frequency of positions and professions.

Based on the respondent characteristics above, it shows that the respondents are the primary visitors to the website, namely students, and are certainly already capable of using the website to search for information or data. This also aligns with one of the objectives of the faculty website: to serve as an information resource for students in the faculty.

Data Validity Testing

Data validity test is conducted to determine whether the questions in the questionnaire are considered valid or invalid. The questionnaire is considered invalid if the calculated r value is smaller than the r table. Conversely, if the calculated r value is greater than the r table value then the questionnaire is considered valid. Data processing uses the Microsoft Office Excel application by utilizing the function " $=CORREL(array1;array2)$ " to obtain the r value of all questions in the questionnaire. The number of data (n) of existing respondents is 53 people so that $df = (N-2)$ becomes 51. The researcher takes r Table for the "significance level for two-way tests" section 0.05 with the order $df = 51$, namely 0.2706 (Junaidi, 2010).

Table 1 shows that all questionnaire questions are valid. This is evident from the calculated r values from Q1 to Q22, which are greater than the table r value of 0.2706.

Tabel 1. Data validity test results.

| No. | Question | r Count | Conclusion |
|-----|----------|---------|------------|
| 1 | Q1 | 0.6728 | Valid |
| 2 | Q2 | 0.5335 | Valid |
| 3 | Q3 | 0.7190 | Valid |
| 4 | Q4 | 0.7798 | Valid |
| 5 | Q5 | 0.6544 | Valid |
| 6 | Q6 | 0.7591 | Valid |
| 7 | Q7 | 0.5462 | Valid |
| 8 | Q8 | 0.8154 | Valid |
| 9 | Q9 | 0.7592 | Valid |
| 10 | Q10 | 0.7909 | Valid |
| 11 | Q11 | 0.8257 | Valid |

| No. | Question | r Count | Conclusion |
|-----|----------|---------|------------|
| 12 | Q12 | 0.8971 | Valid |
| 13 | Q13 | 0.7292 | Valid |
| 14 | Q14 | 0.7918 | Valid |
| 15 | Q15 | 0.7381 | Valid |
| 16 | Q16 | 0.7575 | Valid |
| 17 | Q17 | 0.7155 | Valid |
| 18 | Q18 | 0.6958 | Valid |
| 19 | Q19 | 0.7389 | Valid |
| 20 | Q20 | 0.7486 | Valid |
| 21 | Q21 | 0.7305 | Valid |
| 22 | Q22 | 0.7501 | Valid |

Data Reliability Testing

After determining that all questionnaire statements are valid, the data is then tested for reliability. This is done to determine whether the data is consistent. The Cronbach's Alpha method is used to test reliability, and a variable is considered reliable if it has a Cronbach's Alpha coefficient > 0.70. The following formula is used to calculate the Cronbach's Alpha coefficient :

$$\alpha = \frac{k}{k - 1} * (1 - \frac{\sum var(item)}{var(total)})$$

Information:

k : number of questions in one variable.

var(item) : the sum of all questions that each variable has.

var(total) : the total of all questions that belong to each variable.

The "Ease of Use" variable has questions Q1, Q2, Q3, Q4, and Q5. The researcher used the "=VAR,P(number1;number2...)" function in the Microsoft Office Excel application to obtain the variance values for Q1-Q5. Next, the variance values were totaled (SUM). The questionnaire results for Q1-Q5 were totaled and entered into the "=VAR,P)" function to obtain the "var(total)" value for the "Ease of Use" variable. The final step was to find the Cronbach coefficient value using the Cronbach formula with the data obtained previously. All these steps were carried out the same for other variables except "Availability" to obtain the results as in Table 2. The "Availability" variable was not subjected to Cronbach's test because it is a "Single Indicator" or only has one questionnaire question.

Tabel 2. Data reability test results.

| No. | Variable | Cronbach's Alpha | Conclusion |
|-----|-----------------------------|------------------|------------|
| 1 | Ease of Use | 0,8174 | Reliable |
| 2 | Customization | 0,7427 | Reliable |
| 3 | Download Delay | 0,8948 | Reliable |
| 4 | Content | 0,8668 | Reliable |
| 5 | Service Interaction Quality | 0,8878 | Reliable |

Interpretation of Measurement Results

The questionnaire variables will then be interpreted. Five will be calculated, as the "Availability" variable is unreliable and therefore not interpreted. Table 3 shows the results of data processing for all variables, along with the main findings:

1. Highest Score (Main Strength): Indicators Q1 (Accessibility) and Q18 (Text Readability) achieved the highest scores of 84.91%. This demonstrates that, technically speaking, the SAINTEK Faculty website is highly inclusive and user-friendly. Text readability is crucial for web pages, but when creating website-based advertisements like Facebook Ads, text tends to negatively impact image ads. Therefore, it's best to use minimal text in these image ads (Fikri, 2018).
2. Lowest Score (Weak Point): The Q2 indicator (Access Frequency) was the lowest (67.17%). There's an anomaly here: the website is considered highly accessible (Q1), but users rarely visit (Q2). This indicates the website is "transactional"—people visit only when they need it, not because they're looking for new content regularly.
3. Speed vs Download Process: Interestingly, in the Download Delay dimension, page transition speed (Q11: 81.13%) was rated excellent, but file download speed (Q10: 76.23%) was the lowest in its category. This means the web server is fast, but document file management may need optimization.

Tabel 3. Interpretation Calculation Results.

| Question | Code | Value | Interpretation |
|---|------|--------|----------------|
| Ease of Use | | | |
| Website fakultas SAINTEK mudah diakses. (The SAINTEK faculty website is easy to access) | Q1 | 84,91% | Very strong |
| Saya cukup sering mengakses website fakultas SAINTEK. (I quite often access the SAINTEK faculty website) | Q2 | 67,17% | Strong |
| Saya mudah mengakses menu & link dalam web fakultas SAINTEK. (I can easily access the menus and links on the SAINTEK faculty website.) | Q3 | 82,26% | Very strong |
| Saya mudah melakukan pencarian informasi yang dibutuhkan dalam web fakultas SAINTEK. (I can easily search for the information I need on the SAINTEK faculty website) | Q4 | 80,00% | Very strong |
| Tampilan website fakultas SAINTEK ini dapat menyesuaikan saat diakses melalui mobile phone maupun komputer/personal computer. (The appearance of the SAINTEK faculty website can be adjusted when accessed via mobile phone or computer/personal computer.) | Q5 | 82,64% | Very strong |
| Customization | | | |
| Tampilan Web fakultas SAINTEK mudah dikenali. (The SAINTEK faculty web display is easily recognizable) | Q6 | 81,13% | Very strong |
| Teknik pewarnaan dalam web fakultas SAINTEK cukup menarik dan tidak membosankan. (The coloring technique on the SAINTEK faculty website is quite interesting and not boring.) | Q7 | 78,11% | Strong |
| Pembagian posisi informasi yang disajikan di dalam web fakultas SAINTEK mudah dikenali. (The division of information positions presented on the SAINTEK faculty website is easy to recognize.) | Q8 | 80,38% | Very strong |
| Download Delay | | | |
| Informasi yang dibutuhkan dari web fakultas SAINTEK mudah untuk diunduh (download). (The information needed from the SAINTEK faculty website is easy to download.) | Q9 | 77,36% | Strong |
| Saya tidak membutuhkan waktu lama saat mengunduh (download) informasi yang ada pada web fakultas SAINTEK. (It didn't take me long to download the information on the SAINTEK faculty website.) | Q10 | 76,23% | Strong |
| Setiap halaman dalam web fakultas SAINTEK ditampilkan dengan cepat setelah mengeklik link yang ada. (Each page on the SAINTEK faculty website is displayed quickly after clicking on the existing link.) | Q11 | 81,13% | Very strong |

| Question | Code | Value | Interpretation |
|---|------|--------|----------------|
| Saya mudah untuk mengakses informasi pada setiap halaman yang ada dalam web fakultas SAINTEK. (It is easy for me to access information on every page on the SAINTEK faculty website.) | Q12 | 80,75% | Very strong |
| Secara keseluruhan komponen web ini tidak mengalami eror. (Overall this web component did not experience any errors). | Q13 | 80,38% | Very strong |
| Content | | | |
| Informasi yang disajikan dalam web fakultas SAINTEK sesuai dengan kebutuhan saya. (The information presented on the SAINTEK faculty website suits my needs) | Q14 | 80,75% | Very strong |
| Keberagaman informasi yang disajikan dalam web fakultas SAINTEK cukup menarik. (The diversity of information presented on the SAINTEK faculty website is quite interesting) | Q15 | 78,49% | Strong |
| Gambar yang ditampilkan dalam web fakultas SAINTEK dapat dilihat dengan jelas. (The images displayed on the SAINTEK faculty website can be seen clearly) | Q16 | 82,26% | Very strong |
| Informasi yang disajikan tepat pada waktunya (up to date). (Information presented in a timely manner (up to date)) | Q17 | 76,60% | Strong |
| Teks yang ditampilkan dalam web fakultas SAINTEK mudah dibaca dengan jelas. (The text displayed on the SAINTEK faculty website is easy to read clearly) | Q18 | 84,91% | Very strong |
| Service Interaction Quality | | | |
| Saya menjadi mudah untuk berkomunikasi dengan fakultas SAINTEK karena web tersebut. (It became easy for me to communicate with the SAINTEK faculty because of the website.) | Q19 | 75,85% | Strong |
| Saya merasakan kebersamaan secara tidak langsung dengan fakultas SAINTEK karena web memiliki fitur komentar. (I feel an indirect sense of togetherness with the SAINTEK faculty because the website has a comment feature.) | Q20 | 78,49% | Strong |
| Saya merasa puas karena web fakultas SAINTEK menyediakan kontak yang bisa dihubungi. (I am satisfied because the SAINTEK faculty website provides contactable contacts.) | Q21 | 81,51% | Very strong |

As seen in Table 4, the Faculty of Science and Technology website performed very well, with a global average index score of 79.53%. While the website excelled in terms of functionality and content (user-friendliness), it still faces challenges in terms of engagement. Users find the website helpful when they need it, but it hasn't become a "main gateway" that they voluntarily visit daily

Tabel 4. Interpretation calculation results.

| Variables | Average Score | General Interpretation |
|-----------------------------|---------------|----------------------------------|
| Ease of Use | 79,40% | Strong (Approaching Very Strong) |
| Customization | 79,87% | Strong (Approaching Very Strong) |
| Download Delay | 79,17% | Strong |
| Content | 80,60% | Very strong |
| Service Interaction Quality | 78,62% | Strong |
| Total Global Score | 79,53% | Strong |

Datasets :

https://www.researchgate.net/publication/402116134_datasets_of_Integration_of_the_User_Satisfaction_Model_Method_in_Measuring_Website_Quality

In-depth Analysis and Discussion of Findings

Based on the data obtained, there are several crucial findings that provide a deeper picture of the quality of the Faculty of Science and Technology Website.:

1. The Paradox of Accessibility vs User Retention

An interesting anomaly occurs between the Q1 (Accessibility: 84.91%) and Q2 (Access Frequency: 67.17%) indicators. Technically, the website is considered very easy to find and access, but this does not directly correlate with users' intention to return to visit regularly. This indicates that the website is currently still "Transactional-Based." Users only come when they have an urgent need (such as searching for a specific schedule or document), but do not find a compelling reason (such as dynamic content or daily news) to make this website their daily information portal.

2. Performance Gap Between Navigation and File Management

Analysis of the Download Delay dimension shows a gap between page transition speed (Q11: 81.13%) and the efficiency of the information download process (Q10: 76.23%). This finding indicates that the server infrastructure is capable of handling navigation traffic, but there are issues with the file management backend—such as excessively large document sizes or suboptimal download server optimization.

3. Content Characteristics: Clarity vs Topicality

This website excels in text readability (Q18: 84.91%), but faces challenges in updating or keeping information up-to-date (Q17: 76.60%). Visually, the information presented is very easy to read, but substantively, users perceive delays in data updates. If this continues, the satisfaction level for the Content variable, which is currently in the "Very Strong" category, could degrade to merely "Strong" in the future.

Implications of Model Integration and Theoretical Comparison

The combined use of User Satisfaction, EUCS, and Webqual 4.0 variables in this study proved effective in providing a 360-degree view of website quality. This integration yielded findings that enrich the literature on measuring information systems quality:

1. **Validation of Content Theory:** This finding aligns with (Mardiana, 2020) research, which states that content is the primary driver of user satisfaction. However, this study provides a new contribution by proving that static content (rarely updated) significantly reduces revisit intention (Q2), despite high readability.
2. **Expansion of the EUCS Model:** Unlike (Marwati & Krisbiantoro, 2023) research, which focused on ease of use in the academic environment, the integrated results in this study show that satisfaction depends not only on ease of navigation but also on the quality of service interaction. This proves that for institutions like FSAINTEK, the website is not just a learning tool, but also a communication bridge between faculty and students.
3. **Weaknesses of a Single Indicator:** The discovery of unreliable values on the Availability variable due to the limited number of questions (only one indicator) provides an important methodological lesson. This confirms that future development of satisfaction models should ensure that each variable is represented by at least 3 indicators to ensure good internal consistency.

CONCLUSION

Overall, the Faculty of Science and Technology website is already at a Very Good level in terms of functionality (user-friendliness). However, if it is to move up a level, the focus must shift from "technical improvements" to "enriching value.":

- a. **Static Content Issues:** The lower Up-to-date score (Q17: 76.60%) compared to readability (Q18: 84.91%) indicates that although the text is clear, the information may be updated infrequently.
- b. **Passive Interaction:** Interaction scores (Q19 & Q20) are below 80%. Users feel this website is a one-way source of information, not a space for warm, two-way communication.
- c. **The researcher planned for 9 groups of respondents, but in reality, 77% were students.** This makes the "User Satisfaction" conclusion less valid for other groups (such as parents or stakeholders) who may have different needs.
- d. **This study also has several limitations that should be considered when interpreting the findings.** Although the questionnaire distribution targeted nine respondent categories, the final respondents were still dominated by university students (77%). As a result, the findings primarily represent the perceptions of internal academic users rather than external stakeholders such as parents, prospective students, institutional partners, or the general public. Different user groups may have distinct expectations regarding website functionality, information needs, and interaction quality. Therefore, the generalization of the findings to all categories of website users remains limited.

Based on the results of the analysis of data interpretation and the findings of anomalies in several variables, researchers formulated a number of strategic steps to improve the quality of service and the level of user satisfaction of the Faculty of Science and Technology Website of UIN Datokarama Palu:

1. Dynamic Content Strategy Transformation (Increased Retention Rate)

In response to the low score in the Q2 indicator (67.17%), which indicates a low frequency of repeat visits, website managers need to shift from a static information model to a Content Management Strategy. This can be done by:

- Implementation of a periodic content update schedule (weekly/daily) in the news and announcements columns.
- Integration of educational content that is relevant to the keywords (SEO) discussed in the introduction, such as in-depth articles about the career prospects of the Informatics Study Program to attract prospective new students.
- In practical implementation, several types of content should be updated routinely to maintain user engagement and improve revisit intention. Examples include scholarship announcements, academic schedules, internship opportunities, seminar and workshop activities, student achievements, lecturer research publications, accreditation updates, graduate career information, and collaboration activities with external institutions. Regular updates to these content categories can encourage users to revisit the website more frequently because the website becomes a continuously evolving source of information rather than a static institutional profile.

In a different context, such as a library website, the availability of books is crucial for library visitors. If the content of the books doesn't match what's on the shelves, it can lead to service inequities and a decrease in visitor satisfaction with the library (Khairul Fikri, 2021). Updating the library website is necessary to improve user satisfaction, especially the library catalog (Khairul Fikri, 2025).

2. Technical Performance Optimization and File Management

Although page navigation speed (Q11: 81.13%) was rated as excellent, there were obstacles in the file download process (Q10: 76.23%). Researchers suggest:

- Perform server-side optimization and compress public documents (PDF/Doc) before uploading.
- Implementation of a Content Delivery Network (CDN) system to ensure more stable data distribution when high access loads occur.

3. Strengthening the Service Interaction Quality Dimension

An interaction score that hasn't reached the "Very Strong" category indicates that the website is still viewed as a one-way communication tool. To improve the engagement aspect, it is recommended:

- Activate an AI-based Live Chat or Chatbot system integrated with the faculty's WhatsApp to provide a fast response.
- Optimization of responsive comment and FAQ features to create a sense of community between users and institutions.

4. Development of Further Research Models

Considering the limitations in the distribution of respondents who were dominated by students (77%), further research is expected to be able to:

- Added more specific Information Quality variables to measure the accuracy of technical data on the website.
- Future research is recommended to involve a broader and more proportional distribution of respondents, particularly from external stakeholder groups such as parents of students, prospective students, alumni, industry partners, and institutional collaborators. Expanding respondent diversity would provide a more representative understanding of website quality perceptions across different user segments.
- Furthermore, future studies may integrate additional dimensions such as trust, perceived usefulness, security quality, user experience (UX), and AI-based interaction quality to enrich the evaluation framework of higher education websites in the digital era.

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