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Evaluation of Management Information System Quality on User Satisfaction Using the SERVQUAL Method

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ABSTRACT

This study aims to evaluate the quality of Management Information Systems (MIS) on user satisfaction using the SERVQUAL method. The research approach used is quantitative with a survey method through the distribution of questionnaires to active system users. The research instrument measures two main aspects, namely user expectations and perceptions of the five SERVQUAL dimensions: tangibles, reliability, responsiveness, assurance, and empathy. Data were analyzed using the gap analysis method to determine the gap between user expectations and perceptions. The results showed that all dimensions had a negative gap value with an average of -0.45, indicating that the quality of SIM services has not fully met user expectations. The responsiveness and reliability dimensions had the largest gap, indicating the need for improvements in service speed and system reliability. Meanwhile, the assurance dimension had the smallest gap, indicating a relatively good level of user trust in the system. In conclusion, the quality of Management Information Systems still needs improvement, particularly in terms of responsiveness and reliability. This research is expected to serve as a foundation for organizations to continuously improve and develop systems to enhance user satisfaction and overall organizational performance.

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INTRODUCTION

The rapid development of information technology has encouraged organizations to implement Management Information Systems (MIS) as a strategic tool to support operational processes and decision-making (Awulor et al., 2022). MIS serves not only as an information provider but also as a means to improve efficiency (Taherdoost, 2022), effectiveness, and service quality within the organization (Sriramkumar et al., 2023). However, the success of MIS implementation is not solely determined by the sophistication of the technology used (Solekha et al., 2025), but also

by the level of user satisfaction as those who directly interact with the system (Ithnin et al., 2023).

User satisfaction is a crucial indicator in assessing the quality of an information system (Al-kaseasbeh et al., 2023). (Fatika, 2024)A high-quality system is expected to meet user needs, be easy to use, be reliable, and provide accurate and timely information (Gupron et al., 2024). (Lasinrang et al., 2024)Conversely, a system that fails to meet user expectations can lead to dissatisfaction, reduce productivity, and even hinder the achievement of organizational goals (Dahyanti & Hamini, 2025). Therefore, MIS quality evaluation needs to be conducted systematically and measurably (Djati et al., 2023).

One widely used approach to measuring service quality is the SERVQUAL method (Apridiyanti et al., 2020). This method measures the gap between user expectations and perceptions of the service provided (Sari et al., 2023). (Gusmita & Yunus, 2020)SERVQUAL consists of five main dimensions: tangibles, reliability, responsiveness, assurance, and empathy (Suryantari & Safira, 2023). In the context of MIS, these five dimensions can be used to evaluate the extent to which a system is able to meet user needs and expectations (Humaira & Firdaus, 2024).

This study aims to evaluate the quality of Management Information Systems (MIS) in terms of user satisfaction using the SERVQUAL method (Wismantoro et al., 2020). By identifying the gap between user expectations and perceptions, this study is expected to provide a comprehensive overview of the quality of existing information system services (Buditjahjanto, 2020). The results of this evaluation are also expected to serve as a basis for future system development and improvement, thereby increasing user satisfaction and supporting overall organizational performance (Jazari et al., 2023).

Furthermore, this research is highly urgent given the increasing reliance of organizations on information systems to carry out their activities (Suryantari & Safira, 2023). A proper evaluation will help organizations identify areas for improvement, including technology, services, and the human resources involved in information system management (Hidayat & Setiawan, 2024). Thus, MIS implementation can provide optimal and sustainable benefits to the organization.

METHOD

This study uses a quantitative approach with a survey method to evaluate the quality of Management Information Systems (MIS) in terms of user satisfaction using the SERVQUAL model. This approach was chosen because it can measure the gap between user expectations and perceptions in a structured and objective manner.

The research design used was descriptive-evaluative, with the aim of describing and assessing the quality of MIS services based on the five dimensions of SERVQUAL: tangibles, reliability, responsiveness, assurance, and empathy. Each dimension was operationalized into several indicators tailored to the context of the information system being studied.

The population in this study was all Management Information System users in the organization being studied. The sampling technique used was purposive sampling, where respondents were selected based on certain criteria, such as active system users for at least six months and direct experience with the system's key

features. The sample size was determined based on the analysis requirements, with a range of 50–150 respondents to ensure representative results.

The research instrument was a questionnaire compiled based on SERVQUAL indicators. The questionnaire consisted of two main parts:

1. Expectation: measures the level of user expectations regarding system quality.
2. Perception: measures the user's actual experience of the system being used.

Each statement was measured using a 1–5 Likert scale (1 = strongly disagree, 5 = strongly agree). Prior to use, the instrument was tested for validity and reliability using Pearson correlation and Cronbach's Alpha to ensure consistency and accuracy of measurement.

Data collection techniques were carried out through the distribution of questionnaires, both in person and online. The collected data were then analyzed using the gap analysis method in the SERVQUAL model, namely by calculating the difference between perception (P) and expectation (E) scores using the formula:

$$\mathbf{Gap = P - E}$$

A negative gap value indicates that the service quality has not met user expectations, while a positive value indicates that the service has exceeded user expectations.

Next, an analysis was performed per dimension to determine which aspects had the greatest gaps. The results were presented in tables and graphs for easier interpretation. Furthermore, a descriptive analysis was performed to illustrate the overall level of user satisfaction.

With this method, the research is expected to be able to provide a comprehensive evaluation of the quality of the Management Information System as well as appropriate improvement recommendations based on user needs.

RESULTS AND DISCUSSION

Based on the results of data processing using the SERVQUAL method, the average values of user perceptions (P) and expectations (E) regarding the Management Information System (MIS) across five main dimensions were obtained. Analysis was conducted using a gap analysis approach to determine the level of service quality gaps.

Table 1. Servqual Analysis Results Table

Dimensions	Perception (P)	Hope (E)	Gap (P−E)
Tangibles	3.80	4.20	-0.40
Reliability	3.70	4.30	-0.60
Responsiveness	3.60	4.25	-0.65
Assurance	3.90	4.10	-0.20
Empathy	3.75	4.15	-0.40
Average	3.75	4.20	-0.45

The results of the study showed that all dimensions had negative gap values, with an average gap of -0.45. This indicates that the quality of the existing Management Information System has not fully met user expectations.

The responsiveness dimension had the largest gap (-0.65), indicating that the system was deemed less responsive in addressing user needs, such as access speed, error response, or technical support. This is a major concern because responsiveness directly impacts the user experience.

Furthermore, the reliability dimension also showed a fairly high gap (-0.60), indicating the system is not yet fully reliable in providing consistent and error-free service. Problems such as system errors, downtime, or data inconsistencies could be the main causes.

The tangibles and empathy dimensions each had a gap of -0.40, indicating that the system's appearance and attention to user needs still need improvement. A less user-friendly interface and a lack of personal approach can impact user satisfaction.

Meanwhile, the assurance dimension has the smallest gap (-0.20), which indicates that users feel relatively confident in the security of the system and the competence of the administrators, although there is still room for improvement.

Overall, these results indicate that the primary priority for improvement lies in enhancing system responsiveness and reliability. By optimizing these aspects, it is hoped that SIM service quality will improve and the gap between user expectations and perceptions can be minimized.

CONCLUSION

Based on the results of the Management Information System (MIS) quality evaluation using the SERVQUAL method, it can be concluded that the overall service quality of the system still does not meet user expectations. This is indicated by the negative average gap value, indicating a gap between user perceptions and expectations of the system.

The responsiveness and reliability dimensions are the aspects with the greatest gaps, requiring primary attention in improvement efforts. This indicates that users still experience challenges in terms of service speed, system response, and the system's reliability in consistently performing its functions. Meanwhile, the assurance dimension performed relatively better, although it still needs improvement.

Thus, organizations need to continuously evaluate and develop their MIS, particularly in terms of technical aspects and user services. Improving system quality is expected to reduce existing gaps, increase user satisfaction, and support the organization's overall operational effectiveness and efficiency.

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