

Analysis of the Implementation of Al Farabi Academic Information System Management in Supporting the Quality of Educational Services in the Academic and Financial Fields

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Abstract:

The implementation of academic information systems in higher education institutions often encounters challenges related to management effectiveness, human resource readiness, system integration, and service quality. Similar conditions were identified in the implementation of the Al-Farabi Academic Information System (Si-Aa) at STITNU Al-Farabi Pangandaran, where efforts to improve academic and financial services still require optimization. This study aims to analyze the implementation of the managerial functions of planning, organizing, directing, and controlling in the management of Si-Aa, as well as their contribution to improving the quality of academic and financial services. This research employed a descriptive qualitative approach with a case study design. Data were collected through in-depth interviews, direct observation, and documentation. The analysis focused on the implementation of the four core management functions in Si-Aa management and utilized the SERVQUAL model to assess the quality of academic and financial services provided to students and other academic stakeholders. The findings indicate that the implementation of Si-Aa management has generally contributed positively to improving service quality by enhancing efficiency, transparency, and accountability. However, several challenges remain, including limited technical training for system operators and suboptimal data integration across institutional units. The successful implementation of Si-Aa is supported by leadership commitment, adequate technological infrastructure, and effective communication among organizational units. The originality of this study lies in its integration of managerial functions with Islamic values and the local institutional context, offering a contextual model for managing academic information systems in Islamic higher education institutions. Since this study is limited to a single institution, the findings cannot be generalized to other higher education settings. Future studies are recommended to employ quantitative methods or comparative approaches involving multiple institutions to strengthen the generalizability of the findings.

Keywords: *Academic Information System, Management Functions, Service Quality, SERVQUAL, Higher Education.*

Abstrak:

Implementasi sistem informasi akademik di perguruan tinggi masih menghadapi berbagai permasalahan, seperti belum optimalnya pengelolaan sistem, keterbatasan kompetensi sumber daya manusia, integrasi data yang belum maksimal, serta belum meratanya kualitas layanan akademik dan keuangan. Permasalahan tersebut juga ditemukan pada implementasi Sistem Informasi Akademik Al-Farabi (Si-Aa) di STITNU Al-Farabi Pangandaran sehingga diperlukan kajian mengenai penerapan fungsi-fungsi manajemen dalam mendukung peningkatan mutu layanan. Penelitian ini bertujuan untuk menganalisis implementasi fungsi manajemen yang meliputi perencanaan, pengorganisasian, pengarahan, dan pengendalian dalam pengelolaan Si-Aa serta kontribusinya terhadap peningkatan mutu layanan akademik dan keuangan. Penelitian menggunakan pendekatan kualitatif dengan metode studi kasus. Data dikumpulkan melalui wawancara mendalam, observasi, dan dokumentasi,

kemudian dianalisis dengan memadukan fungsi-fungsi manajemen dan model SERVQUAL untuk mengukur kualitas layanan akademik dan keuangan. Hasil penelitian menunjukkan bahwa implementasi manajemen Si-Aa secara umum telah meningkatkan efisiensi, transparansi, dan akuntabilitas layanan akademik dan keuangan. Meskipun demikian, masih terdapat kendala berupa keterbatasan pelatihan teknis bagi operator sistem dan belum optimalnya integrasi data antarunit kerja. Keberhasilan implementasi didukung oleh komitmen pimpinan, kesiapan infrastruktur teknologi, serta komunikasi yang sinergis antarsatuan kerja. Kebaruan penelitian ini terletak pada analisis implementasi fungsi-fungsi manajemen yang dipadukan dengan nilai-nilai keislaman dan konteks lokal kelembagaan dalam pengelolaan sistem informasi akademik. Oleh karena itu, penelitian selanjutnya disarankan menggunakan pendekatan kuantitatif atau studi komparatif pada beberapa perguruan tinggi agar diperoleh hasil yang lebih komprehensif dan memiliki tingkat generalisasi yang lebih luas.

Kata Kunci: *sistem informasi akademik, fungsi manajemen, mutu layanan, SERVQUAL, perguruan tinggi.*

1. INTRODUCTION

The development of information technology has driven fundamental changes in higher education governance, particularly regarding academic services and institutional management. Academic information systems have become one of the important innovations in supporting transparency, efficiency, and the acceleration of academic and administrative services in higher education institutions. Functioning not only as a means of data storage and processing, academic information systems also serve as strategic elements in improving service quality and achieving educational institutional objectives (Dakwah et al., 2019). In the current digital era, the integration of technology into educational management has become an urgent necessity to address operational complexity, accountability demands, and the increasingly high needs of service users.

STITNU Al-Farabi Pangandaran, as one of the Islamic higher education institutions, has responded to these challenges by developing the Al-Farabi Academic Information System (Si-Aa). This system is designed to manage academic and financial services digitally, in an integrated manner, and more responsively to the needs of students and lecturers. However, the effectiveness of an information system is not determined solely by its technology, but also by how the system is designed, managed, and implemented through sound educational management functions encompassing planning, organizing, directing, and controlling (Purwokerto, 2017). In other words, the success of an academic information system is highly dependent on the institution's ability to manage its managerial aspects comprehensively and sustainably.

A number of previous studies have attempted to examine the effectiveness of academic information systems from various approaches. (Wahyu Alviani, 2020) investigated user satisfaction with SIAKAD at UIN Jakarta using the End-User Computing Satisfaction (EUCS) approach, which demonstrated the importance of service factors in influencing user perceptions. This study is relevant because it highlights the relationship between the system and user experience, although it does not touch upon the internal management aspects of the system. Furthermore, (Yul Efnita et al., 2021) examined the influence of SIAKAD and service quality on student satisfaction at Universitas Islam Riau using a quantitative approach with Smart PLS 3.0 analysis. Although thorough in statistical analysis, that study did not discuss the managerial context and did not consider Islamic institutional values. Meanwhile, (Nur Oktaviana et al., 2024), through a literature review approach, reviewed the general benefits of information systems in improving campus services, but did not focus on a specific institution, was not based on field data, and did not integrate a management framework. These differences indicate the existence of gaps in previous research, particularly in terms

of managerial approaches and local contextualization in Islamic educational institutions.

In view of these conditions, this research is directed to fill the existing gaps by examining in depth the management implementation of the Al-Farabi Academic Information System (Si-Aa) at STITNU Al-Farabi Pangandaran. The main objective of this study is to analyze how the managerial functions of planning, organizing, directing, and controlling are implemented in the system, as well as how their contribution to improving the quality of academic and financial services. In addition, the SERVQUAL approach is used as an evaluation tool to assess service quality based on the tangible, reliability, responsiveness, assurance, and empathy dimensions. The results of this study are expected to provide theoretical contributions in the development of information system-based educational management, as well as serve as practical references in strengthening digital governance in Islamic higher education institutions based on local values.

2. RESEARCH METHODOLOGY

This research employs a qualitative approach with a descriptive research type. This approach was selected because the researcher intends to gain an in-depth understanding of the implementation of academic information system management at STITNU Al Farabi Pangandaran, particularly in supporting the quality of educational services in academic and financial domains. The descriptive approach aims to depict the objective conditions occurring in the field in accordance with the phenomena under investigation (Sugiyono, 2022).

Data collection techniques in this study utilized three main methods: observation, interview, and documentation. Observation was conducted directly on academic information system management activities within the campus environment. Interviews were carried out with key informants consisting of institutional leaders, heads of academic and financial divisions, as well as Si-AA operators. Meanwhile, documentation was performed by collecting various documents related to the academic information system, such as Si-AA user manuals, student data, and digital financial reports.

Data analysis in this study employed thematic analysis, as explained by Sugiyono, who states that thematic analysis involves a systematic process of grouping data into specific themes, including data reduction, data presentation, and conclusion drawing/verification (Sugiyono, 2017). These stages were carried out simultaneously and continuously throughout the research process, thereby enabling the identification of patterns, relationships, and meanings embedded within the data.

To ensure data validity, the researcher utilized source triangulation and technique triangulation. Source triangulation was conducted by comparing interview data from multiple informants, while technique triangulation was performed by comparing data from interviews, observations, and documentation. Through the aforementioned approach and methods, it is expected that the research findings will possess adequate validity and reliability.

3. RESULTS

A. Planning

The planning of the Al Farabi Academic Information System (Si Aa) commenced with a comprehensive evaluation of the previous system (SIKAD), which was perceived as slow, dependent on external developers, and having limited lecturer access; this evaluation

was conducted participatively by leaders, lecturers, students, and the technical team. Based on the evaluation results, objectives for the new system were formulated, prioritizing more efficient, transparent, and autonomous services for lecturers and students, as well as the integration of academic and financial services. Feature requirements such as independent grade input, online attendance, lecturer journals, automatic reporting, and payment notifications were compiled through a needs assessment approach, in accordance with user requirement-based system development theory (Nur Oktaviana et al., 2024). The technical system strategy was established internally by the campus team, aiming for autonomy, sustainable development capability, and cost efficiency; this encompassed platform selection, internal servers, and virtual account integration with partner banks. This model is similar to the AIS implementation evaluation approach applied at UIN Walisongo (Fatkuroji et al., 2025) and the system evaluation using the PIECES framework applied at UKSW (Winandhito Adi & Maria, 2023), which also emphasize the need for system evaluation based on performance, efficiency, service, and control.

B. Organizing

After the new system was planned, STITNU Al Farabi Pangandaran established the Si Aa management team directly by the Chair of STITNU (Dr. Dasep Supriatna), with a structure encompassing the Chair of STITNU Al Farabi Pangandaran (Person in Charge), Vice Chairs 2 and 3 as managers, Andi Abdul Hanafi, S.Pd (Head of the IT Center Team), Azi Ramdani, S.Pd and Dasis Susanti, S.Pd (Members). Task allocation follows Fayol's managerial principles such as division of work and clearly distributed authority (Fayol, 2016). Academic administrators handle student data, attendance, and grades, while financial administrators manage transactions and financial reports. The system structure is aligned with the campus bureaucratic structure (organizational alignment) so that system access reflects formal authorization flows such as grade verification by the Study Program Coordinator and financial recapitulation by Vice Chair II (Primasari, 2020). Inter-unit communication and coordination are strengthened through formal meetings and digital media, including WhatsApp groups, for rapid solutions to technical and administrative obstacles. This approach also involves students as direct users to provide systematic feedback, indicating that the organization of Si Aa is designed participatively, structurally, and adaptively in order to enhance transparent and accountable digital education governance.

PERSON IN CHARGE	
Prof. Dr. Dasep Supriatna U, M..Pd.I.,M.Pd	
ADMINISTRATOR	
Samsudin, S.Pd., MM.	
Dr. Yanti Nurdiyanti, S.Pd.I., MM. MCE,AWF Syari'ah, CSFT	
Head of the IT Centre Team	
Andi Abdul Hanafi, S.Pd	

Member
Azi Ramdani, S.Pd Daris Susanto, S.Pd

Figure 1. Si-Aa Management Structure

C. Directing

The directing phase of the Al Farabi Academic Information System (Si Aa) implementation encompasses formal and informal socialization, user motivation, daily technical supervision, and digital adaptation coaching for the entire academic community of STITNU Al Farabi Pangandaran. Socialization was conducted through inter-unit coordination meetings and direct assistance for lecturers, administrators, and students to understand the features and usage methods of the system; this was supplemented with technical guidelines in WhatsApp groups for real-time troubleshooting (Sukmawati, L., & Wibowo, 2021). Collective motivation and commitment were fostered by campus leaders who provided transformational direction so that the use of Si Aa would become part of the institutional culture (Rizki, D., & Amelia, 2022). Administrators and leaders provided daily guidance and technical supervision regarding grade input, attendance, academic reports, and financial transaction verification in order to maintain data accuracy and accelerate responses to operational problems (Prasetyo, H., Lestari, P., & Hartanto, 2023). Furthermore, attitude coaching and digital adaptation were conducted through an educational approach to facilitate mindset changes among system users, particularly for senior lecturers and administrative staff who were initially unfamiliar with digital technology (Anindita, 2023). This approach demonstrates that the directing function in Si Aa was designed comprehensively to build an adaptive, efficient, and accountable digital culture within the higher education environment.

D. Controlling

After the system was operational, STITNU Al Farabi Pangandaran conducted control through monitoring and internal audit by leaders who possess super-admin access to user activities, including lecturers, students, and administrators; periodic evaluations were conducted weekly and monthly to examine attendance, grade input, and student payments as part of service quality oversight (Wibowo, A., & Kurniawan, 2022). The system evaluation was then used as the foundation for SOP formulation by the LPM and campus leaders, encompassing procedures for grade input, payment verification, and systematic academic and financial reporting to support internal accountability and accreditation (Saputra, D., Herman, T., & Suryadi, 2022). The financial control process was conducted through manual validation of student transactions against transfer evidence and bank data, in accordance with internal financial audit principles to ensure administrative data accuracy (Nugroho, F., & Putri, 2023). System findings, such as input delays or technical errors, were followed up promptly through continuous improvement involving the LPM and campus technical team, so that the system could develop adaptively according to user needs (Leonita, 2024). This control approach reflects transparent, data-based digital governance that consistently supports reliable educational service quality.

4. DISCUSSION

The implementation of system monitoring and internal audits by campus leaders

constitutes one of the main controlling pillars, conducted routinely on a weekly to monthly basis. The Chair of STITNU together with Vice Chairs I, II, and III possess super-admin access to monitor user activities, such as lecturer grade input, attendance, and student payment status. This real-time data enables leaders to identify deficiencies and follow up on them promptly without waiting for physical reports (Dasep S Ubaidillah, 2025). This dashboard-based monitoring aligns with academic system governance practices conducted at other campuses such as Universitas Halmahera, which has achieved defined KO BIT maturity levels (levels 3–4) through periodic evaluations (Madubun et al., 2021).

The evaluation of internal audit results was then used as the basis for formulating and refining operational SOPs for Si Aa usage, ranging from grade input procedures, transaction validation, to academic and financial reporting. The LPM together with the leadership periodically revises operational standards to reflect current practices and address user complaints. This process reflects the application of Total Quality Management (TQM) principles in internal higher education quality assurance (Saputra et al., 2022).

In financial management, periodic manual validation of student transactions was conducted by comparing system data, bank transfer evidence, and financial reports. Financial administrators actively performed cross-verification when discrepancies were found, ensuring that only students with valid status could access academic services. This internal audit approach reflects internal financial audit principles to maintain transparency and prevent input errors (Nugroho & Putri, 2023).

The subsequent stage is system follow-up and continuous improvement, conducted based on audit findings and user reports (Ilmi, I., Muslim, K., & Aziz, N. 2025). Every issue such as grade input errors, login system disturbances, or data synchronization delays became material for technical and systematic evaluation. The LPM and technical team actively formulated system improvement recommendations, which were implemented iteratively. This model is consistent with the information technology audit framework of other universities through the MEA (Monitor, Evaluate, Assess) domain in COBIT 5, which emphasizes internal control and performance evaluation (Trisari et al., 2021).

Overall, the controlling activities at STITNU Al Farabi demonstrate the institution's commitment to data-based and quality-oriented digital governance. Nevertheless, improvement is needed through the inclusion of system performance indicators in the dashboard and documented automatic error reporting systems. When digital audits and system quality assessments become part of internal SOPs, control becomes not only responsive but also anticipatory, reflecting an academic information system that is resilient to personnel and technological changes in the future.

5. CONCLUSION

This research concludes that the implementation of Al-Farabi Academic Information System (Si-Aa) management at STITNU Al-Farabi Pangandaran has contributed to improving the quality of academic and financial services through a digitalization process that is more effective, efficient, transparent, and accessible. The application of management functions encompassing planning, organizing, directing, and controlling has generally proceeded well, thereby supporting the delivery of more integrated services. The success of this implementation is also supported by leadership commitment, the readiness of the management team, and good communication among work units.

The implementation of Si-Aa still requires refinement in order to operate optimally and sustainably. Several aspects that need to be strengthened include the formulation of more systematic planning documents and SOPs, human resource capacity development to

reduce dependence on specific individuals, and the application of monitoring and evaluation based on measurable performance indicators. With strengthening in these aspects, Si-Aa will not only be able to improve the quality of academic and financial services but can also become a model of adaptive, accountable, and continuous quality improvement-oriented higher education information system governance.

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