

THE ROLE OF INFORMATION TECHNOLOGY IN IMPROVING THE EFFICIENCY OF ACADEMIC PORTALS: A CASE STUDY IN SOUTH TANGERANG CITY

Sitti Aliyah Azzahra^{1*}

¹STIE GANESHA

Email: ¹ sitti.aliyah@stieganasha.ac.id

*) **Corresponding Author**

Abstract

The rapid advancement of Information Technology (IT) has presented challenges and opportunities for higher education institutions in managing academic administrative processes. Academic portals have become essential in supporting various activities, such as enrollment, grade submission, and student communication. However, without proper optimization, these portals often face issues like slow response times, user difficulties, and inadequate features. This study aims to explore how IT can be optimized to enhance the operational efficiency of academic portals, focusing on higher education institutions in South Tangerang. Using a qualitative approach, this research involves interviews with portal administrators, students, and lecturers, as well as case studies at several universities in the region. The findings indicate that integrating advanced IT solutions significantly improves the speed, usability, and overall efficiency of academic portals. Key factors include enhanced server performance, automated processes, and improved user interface design. Optimizing IT in academic portals can lead to substantial gains in operational efficiency, reduce administrative workload, and improve user satisfaction. Recommendations include further technological development and user training to maximize system potential.

Received:

Revised:

Accepted:

Published online:

Keywords:

Information Technology, Efficiency, Academic Portal, Higher Education Institutions, South Tangerang.

INTRODUCTION

The rapid development of Information Technology (IT) in recent decades has brought significant impacts in various sectors, including higher education. Universities are now seeking to integrate technology in academic administration management to improve operational efficiency and provide more responsive services to students and lecturers (Indrayani, 2020). One of the main implementations of IT in higher education is the academic portal, which functions as a digital platform to support various academic activities, such as the registration process, filling grades, monitoring academic progress, and communication between administration, lecturers, and students. The academic portal serves as a means to disseminate information quickly to users and can help overcome various problems faced by the institution (Wira dkk., 2021). However, in practice, academic portals in many universities often face a number of obstacles that hinder their effectiveness (Susilo & Danny, 2023). Common problems that often arise include slow response times, limited features that are unable to meet user needs, and navigation difficulties that affect the user experience.

These problems not only disrupt smooth operations, but also have the potential to reduce the level of satisfaction and trust of students and lecturers in the system provided. In the context of universities in South Tangerang City, improving the efficiency of the academic portal is an urgent need. Optimizing the academic portal by utilizing more advanced and integrated technology is seen as one of the potential solutions to overcome the existing problems (Rinov Cuhazriansyah & Cahyaningrum, 2023). By implementing server performance improvement, administrative process automation, and intuitive user interface design, the academic portal is expected to become more efficient, user-friendly, and support the academic administration process optimally (L. M. Putra dkk., 2021). This optimization will not only reduce the administrative burden, but also provide a better experience for users and allow the college to be more responsive to the academic needs of students and lecturers.

This research aims to explore the role and potential of IT optimization in improving the operational efficiency of academic portals in higher education, with a special focus on the South Tangerang City area. The objectives of this research are as follows: 1) Identify the main problems faced by academic portal users, including technical constraints and feature needs. 2) Analyzing the role of IT solutions in improving the performance and efficiency of academic portals. 3) Develop recommendations in the form of academic portal optimization strategies that can improve speed, ease of use, and user satisfaction, with an emphasis on improving server performance, automating processes, and developing a more intuitive interface.

Through this research, it is hoped that a comprehensive insight into IT optimization measures that can be applied to improve the performance of academic portals in higher education can be obtained. This research also aims to provide practical contributions in the form of recommendations for further technology development and training for users, so that the potential of the system can be maximally utilized in supporting effective and efficient academic activities

METHOD

This research uses a qualitative approach to understand the problems and potential optimization of Information Technology (IT) in academic portals in higher education (Wicaksono dkk., 2024). Data were collected through in-depth interviews with three groups of respondents: academic portal managers, lecturers, and students at several universities in South Tangerang City.

Respondents were selected purposively to ensure representation of various stakeholders in the use of the academic portal.

In addition to interviews, this research also involved case studies at several universities in the South Tangerang area to identify technical and non-technical factors that affect the operational efficiency of the academic portal. The data obtained was analyzed using thematic analysis techniques, which enabled the identification of key themes related to challenges and opportunities for IT optimization in the academic portal system.

RESEARCH AND DISCUSSION

Based on the data obtained from interviews and case studies, this research identified several important points related to the condition and potential for improving the operational efficiency of academic portals in universities in South Tangerang City:

1. **Server Performance:** The academic portal managers reported that the current server often experiences overload, especially during the registration and grade filling periods. This causes slow access times and sometimes the portal cannot be accessed. The use of more sophisticated and optimized server technology is considered essential to support faster and more stable access.
2. **Process Automation:** The lack of automation in some functions in the academic portal is one of the major bottlenecks in operational efficiency. Manual processes in document verification, grade validation, and administrative approval require a lot of time and effort from both administrators and students. With the implementation of automation, the administrative workload can be significantly reduced, allowing managers to focus on more strategic tasks.
3. **User Interface Design:** Interviews with students showed that the portal interface is often not intuitive and difficult to navigate, especially for new users. Students complained of difficulties in finding the information they needed, such as schedules, grades, and important announcements. A more responsive and user-friendly interface is expected to make the portal more user-friendly.

The results of this study show that IT optimization in academic portals has a very important role in improving the operational efficiency of universities. Some of the main aspects that need to be considered include improving technical infrastructure, such as using servers with higher capacity or using cloud technology, which allows for more effective access load distribution. This solution can address the issue of slow response times, especially during times of high traffic.

The application of automation to administrative processes, such as data verification and score processing, can reduce manual workload, increase data processing speed, and reduce the possibility of human error. In addition, automation enables real-time access for students and lecturers, which will improve the overall user experience.

The development of an intuitive and responsive interface design is also an important element that affects not only ease of use, but also user satisfaction. Previous research supports that a good interface can increase user engagement and make it easier to access the key features they need. Responsive design, for example, can provide a better experience across multiple devices, both desktop and mobile, which is increasingly required by today's students. Overall, the results of this study emphasize the importance of an IT optimization strategy that focuses on the user experience.

There are several key factors that need to be considered in the optimization process, including several main aspects:

1. **Server Performance Improvement:** More reliable and faster servers are essential to ensure the academic portal can be accessed with high responsiveness, especially during peak usage periods, such as during registration or grade input. This solution not only speeds up user access, but also minimizes the possibility of downtime that could hamper academic processes.
2. **Automation for Administrative Processes:** Many administrative tasks are repetitive and time-consuming, such as data verification or document processing. With automation, these tasks can be completed more quickly and accurately, reducing the manual workload for administrative staff and delivering more efficient results. The automation process also supports transparency and accuracy of inputted data, thus increasing user confidence in the system (Putri, 2024).
3. **Development of a More Intuitive User Interface:** User experience is greatly influenced by interface design. An intuitive and easy-to-use interface will make it easier for students and faculty to access the features they need. This not only minimizes the time taken to understand the use of the portal, but also increases satisfaction and comfort in long-term use.

With the implementation of more advanced IT solutions, universities can significantly reduce administrative workload, speed up service processes, and ultimately increase user satisfaction, both students and lecturers. This creates a more responsive academic environment and supports sustainable operational efficiency.

CONCLUSION

The research concluded that the optimization of Information Technology (IT) in academic portals is needed to improve operational efficiency in universities, especially in the South Tangerang City area. The academic portal plays an important role in supporting academic administration activities, such as registration, grade filling, and communication between the administration, lecturers, and students. However, limited system performance, slow manual administration processes, and user-unfriendly interface design often hinder the effectiveness of this portal. Here are some key factors to consider in the optimization process, including a few key aspect, a) Server Performance Improvement, b) Automation for Administrative Processes, and c) Development of a More Intuitive User Interface. Suggestions from this study include continuous technology development and training for academic portal users. With proper training, both managers and users can maximize the benefits of the system, while continuous technology development ensures the portal remains adaptive to evolving needs. This step is expected to not only improve operational efficiency, but also provide a better experience for all stakeholders, support a more structured academic administration process, and increase user confidence in the academic portal system as a reliable and modern platform.

REFERENCES

- Indrayani, E. (2020). Pengelolaan Sistem Informasi Akademik Perguruan Tinggi Berbasis Teknologi Informasi Dan Komunikasi (Tik. *Jurnal Penelitian Pendidikan*. https://www.academia.edu/37910109/Pengelolaan_Sistem_Informasi_Akademik_Perguruan_Tinggi_Berbasis_Teknologi_Informasi_Dan_Komunikasi_Tik
- Mukhadharoh, R. M., Jundillah, M. L., & Islamiyah, I. (2023). Analisis Kepuasan Pengguna Website Beasiswa Kalimantan Timur (Bkt) Pada Mahasiswa Menggunakan Metode Pieces (Performance, Information, Economics, Control Dan Security, Efficiency, Service). *Kreatif Teknologi Dan Sistem Informasi (Kretisi)*, 1(2), 75–83. <https://doi.org/10.30872/kretisi.v1i2.832>
- Pangri, M., Sunardi, S., & Umar, R. (2021). Metode Pieces Framework Pada Tingkat Kepuasan Pengguna Sistem Informasi Perpustakaan Universitas Muhammadiyah Sorong. *Bina Insani Ict Journal*, 8(1), 63–72. <https://doi.org/10.51211/biict.v8i1.1499>
- Putra, D. M., & Sutabri, T. (2024). Analisis Kebutuhan Pengguna Dan Desain Antarmuka Pengguna Pada Sistem Informasi Perpustakaan Berbasis Web.
- Putra, L. M., Arman, A., & Hilmi, K. (2021). Analisis Kepuasan Terhadap Portal Mahasiswa Sistem Informasi Stmik Indonesia Padang Menggunakan Eucs. *Ijcit (Indonesian Journal On Computer And Information Technology)*, 6(2). <https://doi.org/10.31294/ijcit.v6i2.11033>
- Putri, M. I. (2024). Analisis Tingkat Kepuasan Mahasiswa Dalam Penggunaan Portal Akademik Dengan Metode Pieces Pada Universitas Widya Gama Mahakam Samarinda.
- Rinov Cuhanazriansyah, M., & Cahyaningrum, Y. (2023). Optimalisasi Pengembangan Website Program Studi Pendidikan Teknologi Informasi Dengan Integrasi Data Center. *Journal Iicet*, 8, 217–220.
- Susilo, A., & Danny, M. (2023). Evaluasi Sistem Informasi Akademik E-Campus Universitas Pelita Bangsa Dengan Metode Pieces. 14(2).
- Wicaksono, A., Saefullah, A., Candra, H., & Tahang, M. (2024). Penggunaan Platform Akademik Untuk Meningkatkan Publikasi Karya Ilmiah; Evaluasi Kinerja Dosen Stie Ganesha. *Harmoni Pendidikan : Jurnal Ilmu Pendidikan*, 1(2), 135–146. <https://doi.org/10.62383/hardik.v1i2.195>
- Wira, D., Putra, T., Bulkis, H., Mandarani, P., & Syahrani, A. (2021). Metode Pieces Dalam Mengukur Tingkat Kepuasan Pengguna Portal Akademik. Dalam *Jurnal Sains Dan Teknologi* (Vol. 21, Nomor 1).