

Implementation of an Information Management System in The Administration of Outstanding Students

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Abstract: *Effective management of student achievement data has become an essential requirement for higher education institutions in supporting academic services, institutional promotion, and strengthening academic reputation. However, the management of student achievements often faces challenges, including fragmented data collection systems and the suboptimal utilization of information technology. This study aims to analyze the implementation of the Outstanding Student Information Management System through the Web Mapres platform, examine its effectiveness in supporting the management and publication of student achievements, and identify challenges encountered during its implementation. This research employed a qualitative descriptive approach, with data collected through interviews, observations, and documentation involving the administrators of the Web Mapres system. The findings reveal that Web Mapres plays a significant role in facilitating the documentation and dissemination of student achievements in a more structured and systematic manner. The platform functions not only as an information medium that is widely accessible but also as a strategic tool for recognizing students' accomplishments, enhancing academic community motivation, fostering a positive competitive culture, and strengthening the institution's branding and academic identity. Nevertheless, the implementation of the system still faces several challenges, particularly limited human resources in the field of information technology and the suboptimal performance of certain supporting features. This study contributes empirical insights into the development of information systems for Outstanding students in higher education and may serve as a reference for developing more innovative, professional, and sustainable systems in the future.*

Keywords: *Information System; Outstanding Students; Web Mapres; Information Management; Higher Education.*

Introduction

The information technology revolution has brought about major changes in various aspects of human life, demonstrating that information systems are a crucial element in the development of today's digital age.¹ As a means of conveying information, information systems play a crucial role in various fields, including higher education.² With advances in technology, information systems are playing an increasingly strategic role in optimizing data management, communication, and decision-making processes, thereby enhancing the effectiveness and efficiency of performance, particularly in the delivery of education.³ Consequently, the use of computer technology in data processing has become essential for every organization, as computerized systems can help speed up work processes and produce more accurate information.⁴ In the context of higher education, advances in digital technology have encouraged universities to adopt information technology-based governance as a means of improving the quality of academic services, supporting the accreditation process, and strengthening institutional competitiveness amid an increasingly competitive educational landscape.⁵

Higher education institutions are required to present performance data in a structured and integrated manner, which necessitates a systematic information system to support their strategic role in managing both academic and non-academic data, while also supporting the institution's evaluation and decision-making processes.⁶ Student information systems are a vital component in supporting higher education operations, especially in the

¹ Endang Wiguna et al., "Revolusi Teknologi Informasi : Adaptasi Masyarakat terhadap Perubahan di Era Digital," *Saturnus: Jurnal Teknologi dan Sistem Informasi* 4, no. 1 (2026): 64–70, <https://doi.org/10.61132/saturnus.v4i1.1392>.

² Oktari Herlina dan Yuliana, "Perancangan dan Implementasi Sistem Informasi Mahasiswa Berprestasi Program Studi Sistem dan Teknologi Informasi di Universitas Muhammadiyah Kotabumi," *Jurnal Ilmiah Informatika (JIF)* 13, no. 1 (2025), <https://doi.org/10.33884/jif.v13i01.9939>.

³ Ana Nurfadilah dan Ilham, "Penerapan Sistem Informasi Manajemen di Era Digital: Tantangan dan Solusi," *Jurnal Cakrawala Informasi (JCI)* 4, no. 2 (2024): 68–87, <https://doi.org/10.54066/jci.v4i2.499>.

⁴ Rahmatika Pratama Santi et al., "Sistem Informasi Pendataan Prestasi Mahasiswa Pada Departemen Sistem Informasi Menggunakan Metode UAT Dengan Framework Pieces," *Jurnal Fasilkom* 13, no. 1 (2023): 54–60, <https://doi.org/10.37859/jf.v13i01.4959>.

⁵ Atabik et al., "Digitalization Of Educational Quality Management In Higher Education," *RGSA - Revista de Gestão Social e Ambiental* 18, no. 7 (2024): 1–24, <https://doi.org/10.24857/rgsa.v18n7-133>.

⁶ Ardhin Primadewi dan Mukhtar Hanafi, "Pengelolaan Data Terintegrasi Berdasarkan Instrumen Akreditasi Perguruan Tinggi 3.0 Menggunakan Zachman Framework," *Jurnal Resti (Rekayasa Sistem dan Teknologi Informasi)* 4, no. 6 (2020): 1112–34, <https://doi.org/10.29207/resti.v4i6.2540>.

context of rapid change and digitalization.⁷ This information system serves as a vital foundation for supporting the development of students' potential – both academically and non-academically – which requires continuous attention and recognition in order to foster a comprehensive learning and self-development process.⁸ One crucial aspect that must be managed effectively in this context is the tracking of student achievements, which serve as indicators of academic performance as well as a reflection of personal growth. In addition to reflecting individual success, student achievements can also be used as an indicator of the quality of higher education. Furthermore, students' various accomplishments contribute to building the institution's reputation and academic image.⁹ Therefore, an integrated, accurate, and sustainable performance data management system is needed so that the information generated can be utilized optimally.

In this context, many college students have achieved both academic and non-academic accomplishments as a result of their perseverance, hard work, and sustained effort in their respective fields.¹⁰ Therefore, a data collection system is needed that can record student achievements accurately, in an organized manner, and in a way that is easily accessible to support comprehensive monitoring of academic performance. However, some universities still face various challenges in managing academic performance data, such as difficulties in the processes of data compilation, reporting, and providing timely access to information.¹¹ In addition, the process of recording student achievements at a number of universities is still carried out separately by various units or departments. This situation has the potential to lead to data duplication, complicate the verification process, and result in the lack of a centralized and integrated database of student achievements.¹² As a result, the process of documenting student achievements has not yet been carried out

⁷ Tugrul Daim et al., "Exploring student information management system adoption post pandemic: Case of Turkish higher education," *Technology in Society* 77 (2024), <https://doi.org/10.1016/j.techsoc.2024.102557>.

⁸ Herlina dan Yuliana, "Perancangan dan Implementasi Sistem Informasi Mahasiswa Berprestasi Program Studi Sistem dan Teknologi Informasi di Universitas Muhammadiyah Kotabumi."

⁹ Jomir Eudochia, "The Role Of University Image And Its Impact To Competitive Advantage," in *DEVELOPMENT THROUGH RESEARCH AND INNOVATION*, vol. 4, 2022, <https://doi.org/10.5281/zenodo.7533819>.

¹⁰ Siti Rohmah et al., "Sistem Informasi Prestasi Mahasiswa Berbasis Web di STMIK Antar Bangsa," *Jurnal Sistem Informasi STMIK Antar Bangsa* XIII, no. 02 (2024): 70–77, <https://doi.org/10.51998/jsi.v13i2.573>.

¹¹ Fuji Rahmadi et al., "Pengembangan Manajemen Sekolah Terintegrasi Berbasis Sistem Informasi di Sumatera Utara," *Fitrah: Journal of Islamic Education* 2, no. 2 (2021): 96–109, <https://doi.org/10.53802/fitrah.v2i2.64>.

¹² Sofyar, Muhammad Rafii, dan Muhammad Fajrian, "Sistem Informasi Manajemen Data Prestasi Mahasiswa Menggunakan PHP dan MySQL (Studi Kasus Universitas Nahdlatul Ulama Kalimantan Selatan)," *NU-JST: Nusantara Journal of Science and Technology* 2, no. 1 (2025): 8–22, <https://doi.org/10.69959/nujst.v2i1.144>.

optimally, and the data generated is not yet fully informative for administrators or students. If this situation is not addressed immediately, the university risks losing its track record of student achievements, which are strategically important for the institution's future development.¹³

This phenomenon is also evident in the Outstanding Students Organization (Mapres) at UIN Prof. K.H. Saifuddin Zuhri Purwokerto. Mapres is an organization that brings together students with various academic and non-academic achievements and is responsible for managing, documenting, and reporting on these student accomplishments. In carrying out its duties, Mapres requires an efficient data management system to support the process of data collection and reporting on student achievements. Prior to the development of Web Mapres, the process of managing student achievement data within the Mapres organization still relied on various scattered documents and storage media. This situation meant that the processes of searching for, compiling, and presenting achievement information could not be carried out optimally. In addition, the use of manual methods also caused various challenges, such as delays in archiving, a lack of data integration, and low management effectiveness¹⁴ Therefore, there is a need for an information system capable of integrating student academic performance data across faculties in a more effective, structured, and easily accessible manner.

Various previous studies have confirmed that academic performance information management systems play a crucial role in improving the efficiency and accuracy of student data management.¹⁵ This indicates that the use of information technology not only simplifies administrative processes but also minimizes errors in data recording and processing. A study titled "Web-Based Student Achievement Information System at STMIK Antar Bangsa" by Siti Rohmah shows that the implementation of the system improves data accuracy and speeds up the validation process for student achievements. However, the implementation of the system is still limited to the scope of individual study programs and therefore does not yet reflect integrated achievement data management at the institutional level.¹⁶ In addition, most previous studies have focused primarily on the technical

¹³ Prema Sahane, Aishwaryaa Obla, dan Piyush Bhangale, "Student Achievements Portfolio Management using Blockchain," in *International Conference on Inventive Computation Technologies (ICICT)*, 2023, <https://doi.org/10.1109/ICICT57646.2023.10134076>.

¹⁴ Harsha Anna John et al., "Student Information Management System," *International Journal of Engineering Research & Technology (IJERT)* 10, no. 4 (2022), <https://doi.org/10.17577/IJERTCONV10IS04023>.

¹⁵ Riris Rismawati, Tatang Ibrahim, dan Opan Arifudin, "Peran Sistem Informasi dalam Meningkatkan Mutu Layanan Pendidikan," *Jurnal Tahsinia* 5, no. 7 (2024): 1099–1122, <https://doi.org/10.57171/jt.v5i7.618>.

¹⁶ Rohmah et al., "Sistem Informasi Prestasi Mahasiswa Berbasis Web di STMIK Antar Bangsa."

design and development aspects of the system. Meanwhile, studies examining the system's implementation, its effectiveness, and the various challenges encountered in managing student achievement information systems at the institutional level of higher education remain relatively limited.

Based on a review of previous research, there remains a lack of in-depth studies examining the implementation of information management systems for Outstanding students in state-run Islamic higher education institutions. Furthermore, previous studies have generally treated information systems merely as a means of data collection, while research on the system's functions as a medium for documentation, publication, recognition, and strengthening the institution's academic branding has yet to be extensively conducted. Consequently, there is a knowledge gap due to the limited number of studies that comprehensively examine the implementation of information management systems for Outstanding students in the context of state-run Islamic higher education institutions, particularly those that manage student achievement data across faculties.

Given these circumstances, this study offers a novel approach through an analysis of the implementation of the Outstanding Student Information Management System (Web Mapres) in the context of state-run Islamic higher education institutions, with a focus on the system's role in supporting the documentation, publication, and strengthening of the institution's academic identity. This research is important because integrated management of student achievement data can support the provision of data-driven information, improve the effectiveness of documentation and publication of achievements, and strengthen the academic reputation of the university. Therefore, this study aims to examine the implementation of the Outstanding Student Information Management System (Web Mapres), analyze the system's effectiveness in supporting the management, documentation, and publication of student achievements, and identify various challenges encountered during the implementation process. The results of this study are expected to contribute theoretically to the development of educational information systems research and to serve as practical considerations for the development of a more integrated, adaptive, and sustainable system for managing student achievement data at universities.

Methods

This study employs a qualitative descriptive approach to examine the implementation of the Outstanding Student Information Management System (Web Mapres) in the management of student achievement data. This approach was chosen because it provides an in-depth understanding of the phenomenon under study through real-world conditions in the field, thereby allowing the information system management process to be understood based

on the experiences and perspectives of the informants.¹⁷ In addition to providing a description of the phenomena that occur, the qualitative approach also allows researchers to interpret the meaning of the various activities and interactions that take place during the management of information systems.¹⁸

The research was conducted at UIN Prof. K.H. Saifuddin Zuhri Purwokerto, focusing on the implementation of the Outstanding Students Information Management System (Web Mapres), which is managed by the Outstanding Students (Mapres) organization. The scope of the research covered the processes of data collection, documentation, management, and publication of student achievements, including the effectiveness of the system's utilization and the various challenges encountered in its implementation. The entire research process was carried out over approximately two months, beginning with the preparation phase, followed by data collection, data analysis, and finally the preparation of the research report.

Research informants were selected using purposive sampling, which involves selecting informants based on the consideration that they possess knowledge, experience, and direct involvement with the subject of the study.¹⁹ This technique was chosen to ensure that the data obtained truly align with the research objectives. The informants consisted of the founder and CEO of the Mahasiswa Berprestasi organization, the managers or administrators responsible for the development and operations of Web Mapres, and Outstanding students who were registered as users of the system. The information-gathering process was conducted in stages until the data reached saturation, at which point the collected information was deemed to adequately represent the phenomenon under study.

Data collection was conducted through observation, interviews, and documentation. Observations were conducted directly on the management of the Web Mapres platform, covering the data entry process, the management of student achievement information, the system's workflow, and the use of various available features. Interviews followed a semi-structured format, allowing the researcher to follow a set of guiding questions while still providing informants with the opportunity to explain their experiences and perspectives in greater detail.

Through this technique, the researchers obtained information regarding the system's implementation, the perceived benefits, the various challenges encountered, and the efforts made in developing Web Mapres. Meanwhile, documentation was carried out by collecting various supporting

¹⁷ Rola Pola Anto et al., *Metode Penelitian Kualitatif: Teori dan Penerapannya*, ed. oleh Septian Nur Ika Trisnawati (Surakarta: Tahta Media Group, 2024).

¹⁸ Amtai Alaslan et al., *Penelitian Metode Kualitatif*, ed. oleh Achmad Hidir, 1 ed. (Tasikmalaya: Perkumpulan Rumah Cemerlang Indonesia, 2023).

¹⁹ Bharat Prasad Neupane et al., "Data collection methods in qualitative research : researchers' reflections," *Frontiers in Research Metrics and Analytics*, 2026, <https://doi.org/10.3389/frma.2026.1778160>.

documents, such as student achievement data, organizational documents, activity archives, screenshots of Web Mapres,²⁰ and other documents related to the research focus.

In this study, the researcher served as the primary instrument (human instrument), directly participating in all stages of the research—from identifying informants, conducting observations and interviews, and collecting documents, to analyzing data and drawing research conclusions. To support this process, the researcher used interview guidelines, observation sheets, field notes, and documentation tools as supporting instruments during data collection activities.²¹

Data analysis was conducted continuously from the start of data collection until the completion of the study. The first stage began with data collection through observation, interviews, and documentation. Next, the interview results were transcribed to facilitate the data analysis process. The collected data was then reduced by selecting information relevant to the research focus and grouping the data based on specific themes, such as system implementation, effectiveness of use, and obstacles encountered. The categorized data was subsequently presented in the form of descriptive analyses so that the relationships among the findings could be understood more systematically. The final stage involves continuously drawing and verifying conclusions until consistent findings are obtained that address the research objectives.

Data validity was ensured through the application of triangulation techniques, including source triangulation and methodological triangulation. Source triangulation was conducted by comparing information obtained from each group of informants—namely, the founder, the CEO, the system administrator, and Outstanding students—thereby yielding a more comprehensive understanding of the research subject.²² Methodological triangulation was conducted by comparing the results of observations, interviews, and documentation to ensure the consistency of the information obtained from each data collection technique. The application of these two techniques aimed to enhance the credibility of the research findings while minimizing the possibility of bias during the research process.²³

²⁰ M. Fathun Nizam et al., *Metode Penelitian Kualitatif*, ed. oleh Evi Damayanti, 1 ed. (Bandung: Widina Media Utama, 2024).

²¹ Satish Prakash Chand, "Methods of Data Collection in Qualitative Research : Interviews , Focus Groups , Observations , and Document Analysis," *Advances in Educational Research and Evaluation* 6, no. 1 (2025): 303–17, <https://doi.org/10.25082/AERE.2025.01.001>.

²² Putri Wahidah Luthfiyani dan Sri Murhayati, "Strategi Memastikan Keabsahan Data Dalam Penelitian Kualitatif," *Jurnal Pendidikan Tambusai* 8, no. 3 (2024): 45315–28, <https://jptam.org/index.php/jptam/article/view/21803>.

²³ Mhd Husnul Fikri, Sri Murhayati, dan Ronal Darmawan, "Kebebasan Data dalam Penelitian Kualitatif," *Jurnal Pendidikan Tambusai* 9, no. 2 (2025): 13057–65, <https://doi.org/10.31004/jptam.v9i2.27042>.

Result and Discussion

Implementation of Web Mapres as a Management Information System for Outstanding Students

Advances in information technology have brought about significant changes to information management systems across various sectors, including higher education. The use of web-based technology is no longer limited to serving as a medium for conveying information; rather, it has evolved into a tool that supports more effective data management, communication, and academic services. The integration of technology into information systems enables administrative processes to proceed more quickly and systematically, while also providing easy access for various stakeholders. In the context of higher education, the implementation of web-based information systems also contributes to improving the quality of academic services while supporting more efficient institutional governance.²⁴

Based on the findings of observations conducted during the study, Web Mapres was developed as a platform for managing information on Outstanding students under the coordination of the Outstanding Students Organization (Mapres). This platform is designed to integrate various data on student achievements into a single system so that data collection, documentation, and publication can be carried out in a more structured manner. Through this system, information about Outstanding students can be accessed more easily by the academic community and the general public, so that the Web Mapres serves not only as a data repository but also as a means of disseminating information about students' achievements.

The findings of the observation also show that Web Mapres has provided key information regarding the profiles of Outstanding students, documentation of academic and non-academic achievements, and coverage of various activities organized by the Outstanding Students Organization. All of this information is presented on a single platform, which simplifies the data search process and supports a more systematic presentation of information compared to manual management. This system also makes it easier for administrators to update data and facilitates the dissemination of information about student achievements to a wider audience.

These findings were corroborated by an interview with one of the developers of Web Mapres. The informant explained that the development of this platform was driven by the organization's need for an information system

²⁴ Sri Rahmawati, Angga Putra Juledi, dan Volvo Sihombing, "Implementasi Sistem Informasi Manajemen dalam Perguruan Tinggi : Studi Kasus tentang Efisiensi Operasional dan Pelayanan Mahasiswa," *Jurnal Ilmu Komputer dan Sistem Informasi (JIKOMSI)* 7, no. 1 (2024): 75-77, <https://doi.org/10.55338/jikoms.v7i1.2716>; Eka Indah Wahyuni, Fatimah Muthmainnah, dan Bintang Permana, "Pengembangan Sistem Informasi Manajemen Sekolah Berbasis Web untuk Meningkatkan Efisiensi Administrasi Pendidikan," *URANUS: Jurnal Ilmiah Teknik Elektro, Sains dan Informatika* 3, no. 2 (2025): 65-76, <https://doi.org/10.61132/uranus.v3i2.802>.

capable of managing all student achievement data in an integrated manner. Before Web Mapres was developed, the process of collecting and storing academic achievement data was still carried out using various separate media, which made it difficult to search for, update, and publish the data. These circumstances prompted the organization to develop a platform capable of compiling all information on student achievements into a single system that is more effective, easier to manage, and openly accessible. According to our source, the Web Mapres platform is expected not only to streamline administrative management but also to serve as a medium for fostering greater appreciation of student achievements and expanding the reach.

The research findings also show that Web Mapres is still in the ongoing development phase. Nevertheless, various key features that support the collection, documentation, and publication of student achievements are already available and being utilized in organizational activities. The system is being developed in phases, taking into account user needs and advancements in information technology. This demonstrates the administrators' commitment to continuously improving the functionality of Web Mapres so that it not only serves as a documentation tool but is also capable of supporting the management of information on Outstanding students in a more professional, effective, and sustainable manner.

Research findings indicate that the implementation of Web Mapres has supported the management of student academic performance through an integrated web-based information system. This platform facilitates the collection, storage, updating, and publication of information on student academic performance, making data management more systematic and accessible.²⁵ The use of Web Mapres also demonstrates that websites no longer serve merely as a medium for conveying information, but have evolved into a tool for data management and digital services that support administrative efficiency within higher education institutions.²⁶ In addition, this system promotes transparency, facilitates access to data, and strengthens organizational governance. These factors demonstrate that the implementation of web-based information technology contributes to improving the quality of academic services while supporting the development of information systems that are more adaptable to the institution's needs.²⁷

²⁵ Rahmawati, Juledi, dan Sihombing, "Implementasi Sistem Informasi Manajemen dalam Perguruan Tinggi : Studi Kasus tentang Efisiensi Operasional dan Pelayanan Mahasiswa."

²⁶ Fried Sinlae et al., "Evolusi Teknologi Web dan Dampaknya Terhadap Masyarakat Digital," *Jurnal Ilmu Multidisiplin* 3, no. 2 (2024): 146-54, <https://doi.org/10.38035/jim.v3i2.608>.

²⁷ Rasyad Amhar dan Nuur Wachid Abdul Majid, "Pengembangan Media Informasi berbasis Web di Program Studi Pendidikan Sistem dan Teknologi Informasi

Unlike some previous studies, which have primarily focused on the use of websites as a medium for conveying information, the results of this study indicate that Web Mapres serves a broader range of functions. In addition to supporting the documentation and publication of student achievements, this platform also serves as a means of recognizing student accomplishments, a medium for promoting these achievements to the public, and a tool for strengthening the institution's academic branding.

Thus, the implementation of Web Mapres not only provides benefits in terms of administration but also holds strategic value in fostering a culture of appreciation for student achievements while strengthening the university's image through the use of information technology.

The Development and Strategic Role of the Mapres Website in Managing Student Academic Performance

Based on an interview with the developers of Web Mapres, the platform was designed from the outset as an information system accessible to the general public, without restricting access to members of the organization. This policy was implemented to ensure that information about student achievements is disseminated openly while also enhancing transparency in the management of achievement data.²⁸ The informant also explained that the development of Web Mapres is carried out in stages, adapting to the organization's needs and advancements in information technology, so that the system provides increasingly effective and relevant services to its users. This indicates that the implementation of a web-based information system supports a more structured administrative process, accelerates the dissemination of information, and improves the quality of data management compared to systems that are still operated manually.

The Mapres website has been utilized as an integrated platform for documenting and publishing various student achievements. All information regarding academic and non-academic achievements is compiled on a single platform, making it easier for administrators to update data and allowing users to access information quickly and systematically. These findings show that the use of web-based technology can increase flexibility in accessing information because it can be used at any time, in various locations, and through various types of devices connected to the internet.²⁹

The development of the Mapres Web Platform was driven by the need of the Outstanding Students Organization to have a system capable of integrating all student achievement data into a single, centralized platform.

Universitas Pendidikan Indonesia," *Sistemasi: Jurnal Sistem Informasi* 13, no. 4 (2024): 1609–25, <http://sistemasi.ftik.unisi.ac.id>.

²⁸ Wahyuni, Muthmainnah, dan Permana, "Pengembangan Sistem Informasi Manajemen Sekolah Berbasis Web untuk Meningkatkan Efisiensi Administrasi Pendidikan." <https://doi.org/10.61132/uranus.v3i2.802>

²⁹ Amhar dan Majid, "Pengembangan Media Informasi berbasis Web di Program Studi Pendidikan Sistem dan Teknologi Informasi Universitas Pendidikan Indonesia."

Before this platform was developed, achievement data was still stored across various separate systems, so the processes of searching for, updating, and publishing information were not yet functioning optimally. Web Mapres provides a solution to these issues through an information management system that is more organized and easily accessible to various stakeholders.

Web Mapres serves a broader purpose than simply publishing information. This platform acts as a strategic tool for promoting student achievements by presenting information that is systematically documented, easily accessible, and can be used to showcase various student accomplishments.³⁰ On the other hand, the Web Mapres platform also strengthens internal organizational communication, as all performance data can be managed within a single integrated system. This functionality aligns with the role of a management information system, which not only simplifies data management but also supports the smooth flow of information, enhances the effectiveness of coordination, and continuously improves the quality of organizational management.³¹

Further interviews revealed that the development of Web Mapres goes beyond simply documenting and publicizing student achievements. The administrators are committed to continuing to develop this platform so that it can provide broader benefits, including supporting the organization's sustainability through more productive website management. If this development can be realized, Web Mapres is expected to become a digital asset that provides added value to the organization, enabling it to be utilized to support the implementation of work programs, student development activities, and the organization of various competitions. Thus, Web Mapres serves not only as an information platform but also as a strategic tool that supports organizational strengthening, fosters greater appreciation for student achievements, and promotes the development of a more professional and sustainable information system.

Challenges, Achievements, and the Direction for the Sustainable Development of Web Mapres

Based on interviews with the developers of Web Mapres, the main challenge in managing the system remains the limited availability of human resources with expertise in information technology. As of the time of this study, the website's development and maintenance still rely on a single developer who is also responsible for managing the entire system. This situation has prevented the development of new features and system maintenance from being carried out optimally, as all technical work is still

³⁰ Kelvin Asclepius Minor, "Web Application for Providing Score Access to Facilitating Students' Performance," *Journal of Students' Research in Computer Science* 4, no. 2 (2025): 199-214, <https://doi.org/10.31599/etc6sg46>.

³¹ Salbiah dan Muhammad Irwan Padli Nasution, "Analisis Pengolahan Data Dalam Sistem Informasi Manajemen," *Jurnal Ilmiah Ekonomi Dan Manajemen* 2, no. 12 (2024): 1-12, <https://doi.org/10.61722/jiem.v2i11.3017>.

concentrated in the hands of a single administrator. Nevertheless, the administrator expressed a commitment to strengthening the team by involving students with a background in computer science so that the development of Web Mapres can proceed more effectively and sustainably. These findings indicate that the quality of human resources is one of the key factors determining the success of the implementation and development of web-based information systems.³²

The results of the observation indicate that the implementation of Web Mapres is still in the early stages of development, so access to the system has not yet been widely opened to all users. At this stage, access rights are still limited to administrators tasked with managing data and ensuring system stability while the refinement process is underway. Although user access is still restricted, the documentation shows that Web Mapres has been utilized in administrative activities, particularly for collecting student achievement files for the Student Awards program.

The use of this system facilitates a centralized document collection process, making it easier to manage, archive, and retrieve data when needed. This indicates that the adoption of a web-based information system has improved the effectiveness of data management, even though its implementation is still being carried out in phases.³³

Web Mapres' current efforts remain focused on refining the system's basic functions. Some features, such as account registration for general users, have not yet been implemented because the developers are still prioritizing system stability before the platform is used more widely. Nevertheless, throughout the implementation process, the Web Mapres server has been able to operate stably without experiencing any significant disruptions. This stability is a key asset in supporting the ongoing process of documenting and managing student achievements. These findings indicate that the development of an information system is determined not only by the comprehensiveness of its features, but also by the reliability of its infrastructure, which ensures the continuity of services to users.

The interview results also indicate that the development of Web Mapres will continue in phases, in line with the organization's needs and user feedback. The administrators plan to add various features, such as account registration for students and the general public, self-managed academic achievement data, document uploads, and the development of other support services that can enhance the effectiveness of student academic achievement

³² Norshima Humaidi, Mashitah Mohamed Esa, dan Nor Azian Abdul, "Development of Human Resource Information System: The Managerial Implications," *International Journal Of Academic Research In Business And Social Sciences* 11, no. 2 (2021): 593-610, <https://doi.org/10.6007/IJARBS/v11-i2/8615>.

³³ Ikhsanul Kamil Akbar, "Implementasi Sistem Informasi Pengelolaan Arsip Digital Berbasis Web: Studi Kasus Dinas Pertanian Provinsi Aceh," *Journal of Information Systems and Technology*, no. September (2025): 92-103, <https://doi.org/10.64845/jistech.v1i2.87>.

management. In addition, Web Mapres is expected to be developed into a system that not only serves as a documentation tool but also supports the management of organizational activities, reporting, and the presentation of achievement data in a more comprehensive manner. This direction for development reflects ongoing efforts to build an information system that is more adaptive, efficient, and capable of meeting the needs of both the organization and its users in the future.

Conclusion

This study shows that the implementation of the Outstanding Student Information Management System (Web Mapres) makes a significant contribution to supporting the more structured management of student achievements. Based on the results of observations, interviews, and documentation, Web Mapres has been utilized as a medium for documenting, managing, and publishing various student achievements on a single integrated platform. This system simplifies the data management process while expanding the dissemination of information about student achievements to the academic community and the general public. In addition to improving administrative efficiency, Web Mapres also plays a role in strengthening the branding of student achievements, fostering a culture of appreciation for various accomplishments, and supporting the reinforcement of the university's academic identity.

On the other hand, this study found that the development of Web Mapres still faces several challenges, particularly a shortage of human resources with expertise in information technology. As a result, system development, feature enhancement, and website maintenance have not yet been carried out to their full potential. Nevertheless, the research findings indicate a commitment on the part of the administrators to continue improving Web Mapres by strengthening the development team, adding features that meet user needs, and expanding the system's functionality so that it can support the management of student achievements in a more effective, professional, and sustainable manner. These findings contribute to the development of management information systems research by demonstrating that the success of a system's implementation is influenced not only by technological factors but also by the readiness of human resources and organizational management strategies.

In practical terms, the findings of this study can serve as a basis for universities to develop a student achievement management information system that is more integrated, adaptive, and user-centered. Therefore, strengthening human resource capacity in the field of information technology, continuously improving system features, and expanding access to the system are steps that must be prioritized so that the benefits of Web Mapres can be fully realized. Further research is recommended to examine the effectiveness of the system from the users' perspective, evaluate user satisfaction with the Web Mapres service, and develop integration with the academic information

system so that the management of student academic performance can be conducted in a more comprehensive, efficient, and sustainable manner.

Bibliography

- Akbar, Ikhsanul Kamil. "Implementasi Sistem Informasi Pengelolaan Arsip Digital Berbasis Web: Studi Kasus Dinas Pertanian Provinsi Aceh." *Journal of Information Systems and Technology*, no. September (2025): 92–103. <https://doi.org/10.64845/jistech.v1i2.87>.
- Alaslan, Amtai, Ade Putra Ode Amane, Bangun Suharti Laxmi, Nanang Rustandi Eko Sutrisno Rustandi, dan Siti Rahmi Darmadi Richway. *Penelitian Metode Kualitatif*. Diedit oleh Achmad Hidir. 1 ed. Tasikmalaya: Perkumpulan Rumah Cemerlang Indonesia, 2023.
- Amhar, Rasyad, dan Nuur Wachid Abdul Majid. "Pengembangan Media Informasi berbasis Web di Program Studi Pendidikan Sistem dan Teknologi Informasi Universitas Pendidikan Indonesia." *Sistemasi: Jurnal Sistem Informasi* 13, no. 4 (2024): 1609–25. <http://sistemasi.ftik.unisi.ac.id>.
- Anto, Rola Pola, Nikmatullah Nur, Yusriani, dan Fenni Kurniawati Ardah. *Metode Penelitian Kualitatif: Teori dan Penerapannya*. Diedit oleh Septian Nur Ika Trisnawati. Surakarta: Tahta Media Group, 2024.
- Atabik, Nurfuadi, Masruri, Imam Hidayat, dan Sofia Nur. "Digitalization Of Educational Quality Management In Higher Education." *RGSA – Revista de Gestão Social e Ambiental* 18, no. 7 (2024): 1–24. <https://doi.org/10.24857/rgsa.v18n7-133>.
- Chand, Satish Prakash. "Methods of Data Collection in Qualitative Research : Interviews , Focus Groups , Observations , and Document Analysis." *Advances in Educational Research and Evaluation* 6, no. 1 (2025): 303–17. <https://doi.org/10.25082/AERE.2025.01.001>.
- Daim, Tugrul, Dilek Ozdemir Gungor, Nuri Basoglu, dan Ainur Yarga. "Exploring student information management system adoption post pandemic: Case of Turkish higher education." *Technology in Society* 77 (2024). <https://doi.org/10.1016/j.techsoc.2024.102557>.
- Eudochia, Jomir. "The Role Of University Image And Its Impact To Competitive Advantage." In *DEVELOPMENT THROUGH RESEARCH AND INNOVATION*, Vol. 4, 2022. <https://doi.org/10.5281/zenodo.7533819>.
- Fikri, Mhd Husnul, Sri Murhayati, dan Ronal Darmawan. "Kebebasan Data dalam Penelitian Kualitatif." *Jurnal Pendidikan Tambusai* 9, no. 2 (2025): 13057–65. <https://doi.org/10.31004/jptam.v9i2.27042>.
- Herlina, Oktari, dan Yuliana. "Perancangan dan Implementasi Sistem Informasi Mahasiswa Berprestasi Program Studi Sistem dan Teknologi Informasi di Universitas Muhammadiyah Kotabumi." *Jurnal Ilmiah Informatika (JIF)* 13, no. 1 (2025). <https://doi.org/10.33884/jif.v13i01.9939>.
- Humaidi, Norshima, Mashitah Mohamed Esa, dan Nor Azian Abdul.

- "Development of Human Resource Information System: The Managerial Implications." *International Journal Of Academic Research In Business And Social Sciences* 11, no. 2 (2021): 593–610. <https://doi.org/10.6007/IJARBS/v11-i2/8615>.
- John, Harsha Anna, Jewel Augustine, Muhayim Sharee, Nabeel Muhamed, dan Sunitha. "Student Information Management System." *International Journal of Engineering Research & Technology (IJERT)* 10, no. 4 (2022). <https://doi.org/10.17577/IJERTCONV10IS04023>.
- Luthfiyani, Putri Wahidah, dan Sri Murhayati. "Strategi Memastikan Keabsahan Data Dalam Penelitian Kualitatif." *Jurnal Pendidikan Tambusai* 8, no. 3 (2024): 45315–28. <https://jptam.org/index.php/jptam/article/view/21803>.
- Minor, Kelvin Asclepius. "Web Application for Providing Score Access to Facilitating Students' Performance." *Journal of Students' Research in Computer Science* 4, no. 2 (2025): 199–214. <https://doi.org/10.31599/etc6sg46>.
- Neupane, Bharat Prasad, Niroj Dahal, Rebat Kumar Dhaka, Md. Kamrul Hasan, Joseph A Villarama, dan Bench Go Fabros. "Data collection methods in qualitative research: researchers' reflections." *Frontiers in Research Metrics and Analytics*, 2026. <https://doi.org/10.3389/frma.2026.1778160>.
- Nizam, M. Fathun, Emma Rumahlewang, Hesti Umiyati, Ni Putu Sinta Dewi, dan Suci Atiningsih. *Metode Penelitian Kualitatif*. Diedit oleh Evi Damayanti. 1 ed. Bandung: Widina Media Utama, 2024.
- Nurfadilah, Ana, dan Ilham. "Penerapan Sistem Informasi Manajemen di Era Digital: Tantangan dan Solusi." *Jurnal Cakrawala Informasi (JCI)* 4, no. 2 (2024): 68–87. <https://doi.org/10.54066/jci.v4i2.499>.
- Prema Sahane, Aishwaryaa Obla, dan Piyush Bhangale. "Student Achievements Portfolio Management using Blockchain." In *International Conference on Inventive Computation Technologies (ICICT)*, 2023. <https://doi.org/10.1109/ICICT57646.2023.10134076>.
- Primadewi, Ardhin, dan Mukhtar Hanafi. "Pengelolaan Data Terintegrasi Berdasarkan Instrumen Akreditasi Perguruan Tinggi 3.0 Menggunakan Zachman Framework." *Jurnal Resti (Rekayasa Sistem dan Teknologi Informasi)* 4, no. 6 (2020): 1112–34. <https://doi.org/10.29207/resti.v4i6.2540>.
- Rahmadi, Fuji, Munisa, Salma Rozana, Charles Rangkuti, Rustam Ependi, dan Eko Harianto. "Pengembangan Manajemen Sekolah Terintegrasi Berbasis Sistem Informasi di Sumatera Utara." *Fitrah: Journal of Islamic Education* 2, no. 2 (2021): 96–109. <https://doi.org/10.53802/fitrah.v2i2.64>.
- Rahmawati, Sri, Angga Putra Juledi, dan Volvo Sihombing. "Implementasi Sistem Informasi Manajemen dalam Perguruan Tinggi: Studi Kasus tentang Efisiensi Operasional dan Pelayanan Mahasiswa." *Jurnal Ilmu Komputer dan Sistem Informasi (JIKOMSI)* 7, no. 1 (2024): 75–77.

- <https://doi.org/10.55338/jikomsi.v7i1.2716>.
- Rismawati, Riris, Tatang Ibrahim, dan Opan Arifudin. "Peran Sistem Informasi dalam Meningkatkan Mutu Layanan Pendidikan." *Jurnal Tahsinia* 5, no. 7 (2024): 1099–1122. <https://doi.org/10.57171/jt.v5i7.618>.
- Rohmah, Siti, Zakia Mawarni, Azkia Nida, Dian Kasoni, dan Firdha Aprilyani. "Sistem Informasi Prestasi Mahasiswa Berbasis Web di STMIK Antar Bangsa." *Jurnal Sistem Informasi STMIK Antar Bangsa* XIII, no. 02 (2024): 70–77. <https://doi.org/10.51998/jsi.v13i2.573>.
- Salbiah, dan Muhammad Irwan Padli Nasution. "Analisis Pengolahan Data Dalam Sistem Informasi Manajemen." *Jurnal Ilmiah Ekonomi Dan Manajemen* 2, no. 12 (2024): 1–12. <https://doi.org/10.61722/jiem.v2i11.3017>.
- Santi, Rahmatika Pratama, Febby Apri Wenando, Jefril Rahmadoni, Salsabila Ramadhani Putri, dan Lathif Nur. "Sistem Informasi Pendataan Prestasi Mahasiswa Pada Departemen Sistem Informasi Menggunakan Metode UAT Dengan Framework Pieces." *Jurnal Fasilkom* 13, no. 1 (2023): 54–60. <https://doi.org/10.37859/jf.v13i01.4959>.
- Sinlae, Fried, Fatah Sabila Rosyad, Fadayen Nurhidayat, dan Wildanul Jannah. "Evolusi Teknologi Web dan Dampaknya Terhadap Masyarakat Digital." *Jurnal Ilmu Multidisiplin* 3, no. 2 (2024): 146–54. <https://doi.org/10.38035/jim.v3i2.608>.
- Sofyar, Muhammad Rafii, dan Muhammad Fajrian. "Sistem Informasi Manajemen Data Prestasi Mahasiswa Menggunakan PHP dan MySQL (Studi Kasus Universitas Nahdlatul Ulama Kalimantan Selatan)." *NU-JST: Nusantara Journal of Science and Technology* 2, no. 1 (2025): 8–22. <https://doi.org/10.69959/nujst.v2i1.144>.
- Wahyuni, Eka Indah, Fatimah Muthmainnah, dan Bintang Permana. "Pengembangan Sistem Informasi Manajemen Sekolah Berbasis Web untuk Meningkatkan Efisiensi Administrasi Pendidikan." *URANUS: Jurnal Ilmiah Teknik Elektro, Sains dan Informatika* 3, no. 2 (2025): 65–76. <https://doi.org/10.61132/uranus.v3i2.802>.
- Wiguna, Endang, Mutiara Permana, Nur Oktaviani S, dan Faisal Dudyayef. "Revolusi Teknologi Informasi: Adaptasi Masyarakat terhadap Perubahan di Era Digital." *Saturnus: Jurnal Teknologi dan Sistem Informasi* 4, no. 1 (2026): 64–70. <https://doi.org/10.61132/saturnus.v4i1.1392>.