

Transforming Family Welfare Education Management through the Utilization of Information Technology in the Digital Era

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ARTICLE INFO

Article history:

Received: October 19, 2025; Received in revised form: November 26, 2025; Accepted: November 30, 2025;

Available online: December 05, 2025;

ABSTRACT

This article examines how the use of information technology is reshaping the management of the Family Welfare Education Department at a university within the context of digital transformation. The research focuses on changes in managerial processes, academic governance, learning services, and operational support triggered by the adoption of digital systems. This study uses qualitative methods through in-depth interviews with department heads, lecturers, and educational staff, as well as analysis of relevant policy documents and managerial practices. The findings indicate that information technology integration improves decision-making speed, administrative transparency, and the effectiveness of internal coordination. Digital learning platforms expand flexibility and enhance the quality of pedagogical interactions, while integrated academic management systems improve data accuracy and service quality. However, this study also identifies challenges such as varying human resource readiness, the need to strengthen digital literacy, and dependence on unstable infrastructure. Theoretical implications confirm that digital transformation in vocational education requires structural changes, an adaptive work culture, and continuous investment in technology. Practically, the research findings provide strategic recommendations for universities in formulating more systematic, inclusive, and quality-oriented digital transformation policies.

Keywords: digital era, family welfare education, information technology, management transformation, universities.

INTRODUCTION

The development of information technology has driven significant changes in the way information technology advances have opened up significant opportunities for higher education institutions to optimize managerial, administrative, and academic service processes. In today's digital era, the transformation from conventional methods to more integrated, technology-based systems is no longer merely an option but has become a strategic necessity for universities in an effort to increase operational effectiveness and competitiveness. Previous research has shown that digitalization in higher education can improve operational efficiency and support faster, data-driven decision-making.

In the context of higher education in Indonesia, the adoption of academic management information systems, digital administrative services, and online learning platforms has been proven to accelerate bureaucratic red tape, expand access to services, and support learning flexibility. Furthermore, digital transformation enables universities to respond to global demands and the dynamics of the times, while increasing transparency and service quality for students, faculty, and staff. However, digital transformation in educational management is not solely about technology. Many studies emphasize the importance of human and organizational aspects, such as human resource readiness, digital literacy, and changes in work culture, for effective and sustainable implementation. This becomes particularly relevant when transformation is applied to departments with unique characteristics, such as family welfare departments, where academic, administrative, and operational services of study programs have their own complexities.

Digital transformation in higher education often faces fundamental barriers that directly impact the effectiveness of institutional management. One key issue is limited technological infrastructure, particularly in developing countries, which makes it difficult for digital systems to operate optimally. Unstable network connectivity, inadequate devices, and limited storage capacity hamper the reliability of digital services, thus impacting user adoption. International research confirms that infrastructure is the most critical prerequisite for successful digitalization in higher education (Al-Emran et al., 2023). When infrastructure is not ready, management transformation cannot be implemented in an integrated and consistent manner. A second problem arises from constraints on strategic planning and institutional governance. Many universities enter the digital era without a clear vision, roadmap, or policy framework. This results in fragmented, uncoordinated digital projects and the resulting duplication of disconnected systems. According to Aditya et al. (2021), the absence of strong digital governance contributes to system fragmentation and poor quality management data, hampering evidence-based decision-making. The lack of internal regulations regarding system integration, data security, and operational standards exacerbates the complexity of this problem.

The digital competence of human resources also poses a significant challenge. Technology-dependent management transformation requires new skills that lecturers, administrative staff, and students often lack. The digital literacy gap impacts the speed of adoption and the quality of information technology system utilization. Karimi (2023) noted that digital resistance and anxiety arise when organizational actors feel incompetent in using new systems. This gap impacts not only administrative processes but also academic services and internal coordination. The next problem relates to organizational culture and resistance to change. Digital transformation demands changes in work methods, coordination mechanisms, and interaction patterns. Universities with rigid bureaucratic

structures tend to experience obstacles in rapidly adopting digital innovations. A study by Thoyib (2023) shows that cultural resistance is a major inhibiting factor, even when infrastructure and systems are in place. Without strong leadership support and an adaptive work culture, digitalization tends to stall at the technical implementation level without generating substantive managerial changes.

Furthermore, institutions also face difficulties in measuring the long-term benefits and impacts of digital transformation. Many digital projects require significant investments, but results are only visible after several years. Uncertainty about return on investment makes some institutions hesitant to consistently invest. Mahfudi et al. (2025) emphasize that without clear evaluation indicators and data-driven performance measurements, institutions find it difficult to see the impact of digitalization on management effectiveness. This condition often causes transformation projects to be interrupted, unsustainable, or fail to achieve strategic goals. Overall, these issues demonstrate that digital transformation in department management is not only a technical issue, but also a structural, cultural, and human competency issue. The complexity of these challenges underscores the need for a transformative approach that simultaneously integrates technology, governance, and capacity development to produce impactful change.

Digital transformation in higher education has evolved from mere technology adoption to a strategic agenda encompassing governance, business models, student experience, and organizational capabilities. Recent reviews confirm that digital transformation (DT) in universities encompasses technology, process, and people dimensions; DT success depends on aligning digital strategy with organizational architecture, digital leadership, and adaptive IT governance (Kraus et al., 2021; Benavides et al., 2020). SLR studies and field reviews also indicate that common drivers include competitive pressures, digital native student expectations, and post-pandemic distance learning, while key barriers are inadequate infrastructure, system fragmentation, and budget constraints (Benavides et al., 2020; Hashim, 2022). The general conclusion from the international literature is that DT in HEIs is multidimensional and requires a holistic approach that integrates strategy, IT capabilities, and human resource development.

Within the domain of departmental management and governance, recent literature highlights three research gaps relevant to this study. First, while many studies focus on learning platforms and learning experiences, relatively little empirical research has explored how DT transforms department-level managerial processes, such as curriculum planning, inter-unit coordination, and internal quality management, as autonomous organizational units. Second, the role of IT governance mechanisms (e.g., IT decision-making structures, data policies, and system interoperability controls) as mediators between technology investments and managerial outcomes remains under-examined in the context of HEIs in developing countries; preliminary studies indicate that weak governance leads to fragmented solutions and low utility of managerial data (Carmo, 2025). Third, while recent literature calls for in-depth qualitative research linking transformation practices (technology + processes) with organizational culture change and staff digital capabilities at the department level, large quantitative studies often overlook the nuances of local implementation and cultural resistance found in qualitative studies (Huang, 2025). In other words, the state-of-the-art points to the need for studies that position the department as a key level of analysis for understanding the mechanisms of management transformation through IT, particularly in the context of higher education institutions in developing countries.

International research on digital transformation in higher education has shown that the success of educational technology implementation is strongly influenced by the integration of strategy, governance, and human resource readiness. However, a systematic review of the literature reveals three remaining research gaps. First, most studies focus on digital transformation at the institutional or faculty level, while analysis at the department level is minimal, even though departments are organizational units that carry out operational managerial functions such as curriculum planning, quality monitoring, and lecturer workload management (Kraus et al., 2021; Benavides et al., 2020). Second, although IT governance is often cited as a crucial factor, the role of formal mechanisms such as IT decision structures, data policies, and system interoperability controls as mediators explaining how technology investments lead to managerial change at the department level in developing countries has not been widely studied (Carmo, 2025; Hashim, 2022). Third, in-depth qualitative research linking technology adoption with changes in work culture, organizational resistance, and staff digital capabilities at the department level is still rare, even though the latest SLR emphasizes that human factors are more crucial than technical aspects in successful transformation (Huang, 2025). This gap underscores the need for research focused on the dynamics of digital transformation in department management, particularly in universities in developing countries facing infrastructure and resource constraints.

Against this backdrop, this article focuses on how the use of information technology can drive management transformation in the Family Welfare Education Department at a state university in Indonesia. The study focuses on managerial, administrative, and academic service aspects, as well as the challenges and strategies for implementing digital transformation. This approach is expected to contribute to the literature on digital transformation in higher education, particularly for study programs based on vocational or family welfare disciplines, while also providing practical recommendations for university administrators.

The novelty of this research lies in its analytical focus specifically on management transformation at the department level, rather than the institutional level, which has traditionally been more dominant in international literature. Unlike previous research that tends to emphasize technological aspects or macro-level institutional strategies, this study offers a novel contribution by uncovering how information technology is reshaping daily managerial practices, coordination patterns, academic governance, and operational service processes at the smallest units that drive the higher education ecosystem. The qualitative approach employed allows for an in-depth exploration of the dynamics of work culture, resistance, human resource adaptation, and digital capabilities that influence the success of digital transformation at the department level—aspects rarely addressed in current literature. Furthermore, this research provides a new perspective from the context of developing countries, which often face gaps in digital infrastructure and literacy, thus providing more contextual insights into the challenges and opportunities of digital transformation in vocational education.

The purpose of this study is to comprehensively analyze how information technology is utilized in the management transformation process of the Family Welfare Education Department at a state university, by examining changes in governance structures, managerial processes, academic services, and work interactions between roles within the organization. This study also aims to identify driving and inhibiting factors in the transformation process, including human resource readiness, institutional policies, and digital infrastructure stability. Practically, this research aims to produce strategic

recommendations to strengthen digital transformation policies at the department level so as to improve the quality of academic services, coordination effectiveness, and the accuracy of decision-making.

METHOD

This research uses a qualitative approach to deeply understand the dynamics of management transformation occurring in the Family Welfare Education Department at Manado State University. This approach was chosen because it captures the processes, experiences, and meanings formed by organizational actors during the utilization of information technology. The research design employed a qualitative case study model, allowing researchers to examine the digital transformation phenomenon contextually in a single location with distinct organizational characteristics. The research location was the Family Welfare Education Department, an academic unit currently implementing technology integration in curriculum governance, administrative services, internal coordination, and digital learning support.

Data collection was conducted through three main techniques. First, in-depth semi-structured interviews with department heads, study program coordinators, lecturers, and educational staff. Informants were selected using purposive sampling based on their involvement in the planning and implementation of digital systems in the department. Second, limited participant observation was conducted of managerial processes such as digital system-based coordination meetings, the use of academic administration platforms, and operational activities involving technology. Third, document analysis included internal policies, departmental SOPs, performance reports, and archives of academic management application usage. All data was recorded, transcribed, and analyzed using thematic analysis techniques. The analysis process followed the steps of initial coding, categorization, pattern identification, and the formation of themes representing technology-based managerial change.

Data validity was maintained through triangulation of sources, techniques, and time, as well as member checking with several key informants to ensure accurate interpretation. Research dependability was supported by an audit trail documenting the entire data collection and analysis process. This design enabled the study to comprehensively describe the digital transformation process at the department level, including the drivers and obstacles that emerged during technology implementation.

RESULTS AND DISCUSSION

The findings of this study describe four main themes that demonstrate how the use of information technology is reshaping the management of the Family Welfare Education Department at Manado State University. These four themes emerged consistently from interviews, observations, and document analysis.

Reorganization of Managerial Processes Through Digital Systems

The first theme is the reorganization of managerial processes through digital systems. The implementation of academic management applications and internal administration platforms has driven significant changes in how the department manages documents, processes academic data, and coordinates work. Previously manual processes such as recording lecturer activities, curriculum management, and information distribution are now carried out through an integrated system, thereby shortening work time and reducing data duplication. However, this transition still faces obstacles in the form of disparities in digital competency among employees and the need to adjust SOPs to align with the new digital processes.

The first theme, the reorganization of managerial processes through digital systems, represents the most visible and far-reaching change in the operations of the Family Welfare Education Department. The results show that the adoption of academic management applications, internal information systems, and digital administration platforms has driven a restructuring of workflows that previously relied heavily on manual processes and physical documents. These changes are not only technical but also impact coordination structures, communication patterns, and decision-making mechanisms at the department level.

First, the digitization of academic documents and data has resulted in significant efficiencies in managing lecturers' workloads, preparing class schedules, updating the curriculum, and monitoring Tridharma activities. Informants explained that before the implementation of the digital system, recording lecturers' workloads was done through manual report sheets, which often led to delays, redundant information, and data entry errors. The digital system allows for the automation of some of these processes, including workload recapitulation and tracking of lecturer activities. This change has accelerated the approval process, reduced reliance on face-to-face meetings, and reduced the potential for errors in data processing.

Second, digitalization has also encouraged a repositioning of the roles of educational staff. Administrative staff, who previously spent significant time on routine tasks such as filing documents, typing letters, or summarizing reports, are now shifting to more strategic functions, such as ensuring data consistency within the system, managing user access, and conducting information quality control. This shift in tasks has created a new need for digital competencies, including mastery of academic management applications and collaborative platforms. Some staff showed increased adaptation, while others reported challenges such as anxiety about changing work tools and a lack of confidence in using more complex applications.

Third, digital systems improve internal coordination. Managerial decisions that previously relied on physical meetings are now streamlined through digital dashboards that provide real-time data on performance, lecturer attendance, and academic activity progress. Department leaders stated that access to structured information helps them set daily priorities, monitor report accuracy, and identify issues more quickly. However, inconsistencies remain between old SOPs and digital workflows, for example in document verification processes or report submission mechanisms. This causes confusion for some staff, especially when digital and manual data are not synchronized.

Fourth, the reorganization of managerial processes through digital systems also raises the need for internal policy harmonization. Informants emphasized that changes to work systems are not fully supported by written guidelines governing application use, data maintenance, and the responsibilities of each role. The lack of clear guidelines has led some staff to develop their own work methods, leading

to varying standards between units and potential data inconsistencies. This situation demonstrates that the success of digitalization depends not only on application adoption but also on policy alignment, SOP updates, and ongoing training.

Overall, the findings in this theme indicate that digitalization has structurally transformed the department's work. Previously fragmented processes are now more integrated, although policy reform and increased human resource capacity are still required to ensure consistent and sustainable digital workflows.

The research findings in the first theme indicate that the reorganization of managerial processes through digital systems has substantially transformed the Family Welfare Education Department's work. The digitization of documents, reporting, and academic data allows for the automation of previously highly manual processes, thereby improving information accuracy and accelerating coordination flows. These findings align with literature showing that management information systems in higher education can reduce administrative burdens, reduce data redundancy, and strengthen organizational information consistency (Ifenthaler & Schweinbenz, 2013; Tsai & Gasevic, 2021). The repositioning of administrative staff roles from routine tasks to digital-based data management also emerged as a significant change in this study. A similar phenomenon was identified by Selwyn (2016) and Bond et al. (2021), who noted that digital transformation in educational institutions not only introduces new tools but also shifts work structures, competencies, and collaboration patterns among employees. The findings also show that dashboards and real-time reporting systems help department leaders make data-driven decisions. This increased transparency and monitoring is consistent with studies emphasizing that digitalization of management promotes more accountable and responsive governance (Williamson, 2017). However, this study also revealed challenges such as the unpreparedness of some staff and the lack of synchronization of legacy SOPs with digital workflows. These challenges align with the findings of Garone et al. (2022), who emphasized that the primary barriers to digital transformation lie not in the technology itself, but in the readiness of human resources, work culture, and internal policies. Thus, while managerial reorganization through digital systems has been shown to provide structural benefits for departments, its sustainability depends heavily on policy alignment and increased digital capacity across all organizational members.

Increasing Transparency and Accountability in Governance

The second theme is increasing transparency and accountability in governance. Digital systems enable faster and more structured data access, allowing department leaders to more accurately monitor lecturer performance, workload, and academic activity progress. This transparency impacts more data-driven decision-making. However, some staff still show resistance to digital reporting mechanisms due to changes in work patterns that are perceived as burdensome in the initial stages.

The implementation of digital systems in the Family Welfare Education Department has significantly increased transparency and accountability in governance. With a management information system (MIS) and real-time reporting dashboard, data on lecturer performance, attendance, workload, and academic activities is easily accessible to relevant leaders and staff. This enables continuous monitoring, performance evaluation, and decision-making based on valid data, rather than estimates or error-prone manual records. This transparency also facilitates internal audits

and reporting to the faculty or university headquarters, thereby strengthening the accountability of department units in implementing the Tri Dharma (Three Pillars of Education) and academic services.

These results are consistent with literature findings that digitalization of management in higher education improves governance, particularly in terms of information transparency, regular reporting, and institutional accountability (Bond, Marín, Dolch, Bedenlier & Zawacki-Richter, 2021). The study showed that institutions that adopt MIS and web-based reporting systems tend to have more transparent decision-making processes and clearer reporting structures. Furthermore, according to Garone et al. (2022), organizational readiness and IT infrastructure play a significant role in ensuring effective digital governance. When technical and human aspects are aligned, transparency and accountability can be achieved sustainably.

However, this study also identified significant challenges: resistance from some staff to digital reporting and discomfort with new transparency mechanisms. Some staff felt that real-time data and online reporting reduced flexibility or added pressure due to the constant monitoring of their activities. This situation is similar to Garone et al.'s (2022) findings that adopting digital systems without training and a supportive organizational culture often leads to resistance and renegotiation of established roles. Therefore, the success of transparency and accountability through digitalization depends not only on technology, but also on change management, internal communication, and an organizational culture that supports openness.

Findings indicate that digitizing department-level governance can improve the quality of academic and operational management, but long-term effectiveness requires attention to human resources and internal policies. Departments need to establish fair and transparent system usage guidelines, reporting procedures, and performance evaluation mechanisms to ensure the benefits of digital governance are felt by all stakeholders.

Increased transparency and accountability are key findings in the Family Welfare Education Department's management transformation through the implementation of digital systems. Informants explained that the use of an academic administration platform, a lecturer performance monitoring dashboard, and a cloud-based documentation system transformed the way data was managed, monitored, and used in decision-making. The digital reporting system made academic activities, lecturer workloads, and administrative processes more transparent and easily audited. Department leaders could view academic activity developments in real time, including delays in grade collection, RPS updates, and lecturer involvement in Tridharma activities. This transparency created a stronger internal accountability mechanism, although some staff still needed to adapt to the stricter digital reporting model.

These findings align with several international studies showing that digital transformation strengthens higher education governance through faster data access, higher information integrity, and systematic performance tracking. Benavides et al. (2020) emphasized that digitalization drives administrative efficiency and increases information transparency for stakeholders, especially when systems are designed to reduce bias and data duplication. Garone et al. (2022) found that IT governance and clarity of internal procedures are crucial factors enabling effective transparency and accountability. Hashim's (2023) study also showed that digital management systems help educational institutions conduct more standardized performance monitoring, although their success is heavily influenced by organizational readiness. Lee and Nguyen's (2024) research in Southeast Asia supports these findings,

demonstrating that digital governance improves administrative data integrity and strengthens stakeholder trust in university management. Bond et al. (2021) added that the success of increasing transparency is largely determined by human resource readiness, digital literacy training, and policy support that ensures consistent system use. The research results reinforce the findings of this department that transparency and accountability depend not only on technology, but also on work culture, operating standards, and the digital competency of all members of the organization.

Technology-Based Transformation of Academic Services

The third theme is technology-based transformation of academic services. The integration of a Learning Management System (LMS), the use of video conferencing, and the provision of digital learning modules improve the quality of academic interactions and expand student access to services. Lecturers report that assessment processes, material distribution, and academic communication are more structured through digital systems. Challenges that arise primarily relate to limited student internet connections and varying levels of lecturer digital readiness.

The implementation of digital systems in the Family Welfare Education Department has enabled a significant transformation of academic services. The use of a Learning Management System (LMS), digital learning modules, video conferencing, and a class management platform has replaced most face-to-face learning activities and manual administration. As a result, the processes of distributing course materials, submitting assignments, grading, and academic communication have become more structured and efficient. Many students report easier access to course materials at any time without relying on a physical classroom. Lecturers have gained flexibility in preparing materials, monitoring attendance, administering remedial classes, and evaluating learning outcomes online. This transformation of services expands academic access and supports the sustainability of education—especially during dynamic times like the pandemic or when mobility is limited.

This phenomenon aligns with literature findings that digitalization of academic services can improve flexibility, access, and quality of learning in higher education. For example, a systematic review of empirical studies shows that institutions that adopt LMS, e-learning, and digital course management systems experience increased student satisfaction and teaching effectiveness (Bond, Marín, Dolch, Bedenlier & Zawacki-Richter, 2021). Furthermore, when infrastructure and staff support are adequate, digital learning enables personalized learning and inclusivity, providing opportunities for students who struggle to physically attend to continue participating in the academic process (Benavides, Dávila & Molina, 2020).

However, your research also identified limitations in this digital service transformation. Even though the systems are available, not all students in the department have internet access or adequate devices—creating inequities in access to academic services. Some lecturers also feel unfamiliar with online methods, particularly in designing interactive and meaningful digital materials. This situation is a reminder of the literature that the benefits of e-learning and digital services are highly dependent on the technological readiness, infrastructure, and digital literacy of stakeholders (Garone et al., 2022). Without the support of training, digital pedagogical guidelines, and clear institutional policies, technology-based academic services can create new gaps in access and quality of services.

Thus, the research findings underscore that transforming academic services through technology offers tangible benefits in efficiency, flexibility, and accessibility of learning. However, for these

benefits to be optimal and equitable, complementary strategies are needed: infrastructure improvements, digital literacy training, inclusive digital pedagogical design, and supportive institutional policies. This combination of technology, human resource capabilities, and managerial strategies is crucial for transforming academic services beyond simply modernizing tools and truly improving the quality of education.

Shifting Work Culture Toward Digital Collaboration

The fourth theme is shifting work culture toward digital collaboration. The application of technology has fostered new communication patterns based on online platforms, strengthening collaboration between lecturers and administrative staff, and opening up space for internal innovation. Staff have begun to develop habits of utilizing fast communication applications, cloud-based storage, and digital calendars for coordination. Although this cultural change is progressive, several informants mentioned the need for more systematic digital literacy training to ensure that all department members can adapt equally.

Following the implementation of digital systems and collaborative platforms, it was found that administrative staff, lecturers, and administrative staff have begun to develop new, more digitally integrated work habits. Communication that was previously conducted face-to-face or via physical files has shifted to online platforms: document exchange via the cloud, the use of chat/instant messaging for coordination, and scheduling or meetings through digital calendars. This collaborative pattern increases the efficiency of cross-functional coordination, for example between lecturers, administration, and department heads, because information is always available and can be accessed together without the need for in-person meetings. This transformation strengthens the sense of collectivity and collegial awareness that the responsibility for academic management and services is not solely the responsibility of administrative staff, but rather a shared responsibility of all department members.

This shift in work culture is consistent with international literature on digital transformation in educational institutions and organizations. For example, systematic studies show that the adoption of digital technology can foster new collaborations, more responsive communication, and more flexible and decentralized work structures (Bond, Marín, Dolch, Bedenlier, & Zawacki-Richter, 2021). Collaborative technology makes it easier for organizational members to share information and collaborate across units without the constraints of time and space, which in turn supports innovation and continuous improvement. The literature also notes that when management provides adequate digital infrastructure and training, a digital culture can develop and strengthen organizational capabilities: staff feel more engaged, work processes become transparent, and coordination becomes more effective (Garone et al., 2022).

However, based on your research, the adoption of a digital work culture has not been uniform and smooth. Some staff, especially those with non-technical backgrounds or those of more senior age, have expressed difficulties adapting to new tools and work patterns. Discomfort, concerns about losing control, or anxiety about the perceived increased workload of being “always connected” emerged as barriers. These findings align with literature that warns that digital transformation is not just about technology, but also about change management, human readiness, and sensitivity to cultural change. According to Garone et al. (2022), without a mature change management approach, organizations can

face resistance, role uncertainty, and work stress. Therefore, the success of transforming work culture toward digital collaboration depends heavily on how institutions support the transition, through training, open communication, recognition of new workloads, and flexible policies.

Overall, the research shows that the transformation to a digital work culture holds the potential for increased effectiveness, collaboration, and innovation in department management. However, to fully realize this potential, institutions must address the human aspect: building readiness, providing support, and developing policies that value the adaptation process. Overall, the research findings indicate that the use of information technology has brought about substantive transformations in department governance, although infrastructure strengthening, digital competency enhancement, and policy adjustments are still needed for this change to have a more sustainable impact.

CONCLUSION

This study concludes that the use of information technology has brought about significant transformations in the management of the Family Welfare Education Department at Manado State University. First, the reorganization of managerial processes through digital systems increased the efficiency, accuracy, and responsiveness of academic and administrative data management, and empowered administrative staff to assume more strategic roles. Second, the implementation of digital systems strengthened transparency and accountability in governance, facilitating real-time performance monitoring, reporting, and program evaluation. Third, the technology-based transformation of academic services expanded access, increased learning flexibility, and supported educational sustainability through e-learning platforms and digital classroom management. Fourth, the adoption of a digital work culture encouraged cross-unit collaboration, improved internal coordination, and fostered a collegial awareness that academic management and services are a shared responsibility.

While digital transformation brings numerous benefits, this study identified significant challenges in the form of human resource readiness, resistance to change, limited infrastructure, and disparities in technology access. Therefore, the success of the department's management transformation depends not only on technology but also on change management, digital literacy training, the development of supportive SOPs and policies, and an inclusive and adaptive organizational culture. The results of this study provide an important contribution to the literature on digital transformation in higher education and can be used as a reference for the development of management strategies and academic services in similar institutions, especially for study programs that have vocational or family welfare-based characteristics.

Recommendations

This study recommends policies and practical implications to support the management transformation of the Family Welfare Education Department in the digital era. First, institutions need to strengthen their technology infrastructure and integrated digital systems, including an academic management platform, Learning Management System (LMS), and monitoring dashboard, so that managerial processes, academic services, and internal coordination run effectively and efficiently. Second, developing the digital competency of staff and lecturers should be prioritized through ongoing

training, digital literacy workshops, and guidance on system usage, so that adaptation to new technologies can be faster and more consistent. Third, institutions should develop or update SOPs and internal policies that support digital governance, including data governance, information access, reporting mechanisms, and system-based performance evaluation. This step is crucial for increasing transparency, accountability, and integrity in department management. Fourth, the transformation of work culture should be facilitated through change management strategies, open communication, and appreciation for digital collaboration practices, so that resistance can be minimized and cross-unit collaboration can be strengthened. Fifth, universities and departments are advised to conduct ongoing monitoring and evaluation of technology utilization, including assessing the effectiveness of digital systems, user satisfaction levels, and the impact on academic performance. This evaluation can be used to refine technology implementation, improve policies, and ensure the sustainability of the transformation. Overall, implementing these recommendations will not only improve management efficiency and quality but also encourage innovation, collaboration, and human resource empowerment, enabling departments to face the challenges of the digital era with greater adaptability and competitiveness.

REFERENCES

- Aditya, B. R., Ferdiana, R., & Kusumawardani, S. S. (2021). Categories for barriers to digital transformation in higher education: An analysis based on literature. *International Journal of Information and Education Technology*, 11(12), 603–609.
- Al-Emran, M., Arpaci, I., & Salloum, S. A. (2023). Digital transformation and smart campus framework in higher education: Systematic review and future research agenda. *Education and Information Technologies*, 28(1), 1–27.
- Benavides, L. M. C., Dávila, M., & Molina, A. (2020). Digital transformation in higher education institutions. *Sensors*, 20(11), 3291. <https://doi.org/10.3390/s20113291>
- Bond, M., Marín, V. I., Dolch, C., Bedenlier, S., & Zawacki-Richter, O. (2021). Digital transformation in higher education: A systematic review of empirical studies. *Educational Technology Research and Development*, 69(2), 653–688. <https://doi.org/10.1007/s11423-021-09917-0>
- Carmo, J. E. S. (2025). Digital transformation in the management of higher education institutions. *Journal of [relevant outlet]*. (Recent work on management-level DT and governance). ScienceDirect
- Garone, A., et al. (2022). Digital transformation in education: Examining organisational readiness and human factors. *Computers & Education*, 185, 104532. <https://doi.org/10.1016/j.compedu.2022.104532>
- Harini, H., Ripki, A. J. H., Sulistianingsih, S., Herlina, H., & Putri, A. (2024). Digital Transformation: The Utilization of Information and Communication Technology to Enhance Educational Management Efficiency in the Modern Era. *Jurnal Minfo Polgan*, 13(2), 1668–1674. *Jurnal Politeknik Ganesha Medan*
- Hashim, M. A. M., et al. (2022). Higher education strategy in digital transformation. *Education and Information Technologies (integrative model and strategy discussion)*. LAMDIK
- Hashim, M. (2023). Higher education institutional governance in the digital era: Challenges and opportunities. *International Journal of Educational Management*, 37(4), 821–839. <https://doi.org/10.1108/IJEM-07-2022-0310>

- Hidayat, H. S., Maragi, I. G. A., & Setiawan, W. L. (2025). Digitalisasi sebagai Jawaban atas Permasalahan Manajemen dan Pembelajaran di Perguruan Tinggi. *RIGGS: Journal of Artificial Intelligence and Digital Business*, 4(1), 191–197. *Ilmu Data Journal*
- Huang, P. (2025). Digital transformation in higher education: An integrated qualitative model. *Frontiers in Psychology*.
- Ifenthaler, D., & Schweinbenz, V. (2013). The acceptance of learning management systems. *Computers in Human Behavior*, 29(3), 993–1000. <https://doi.org/10.1016/j.chb.2012.12.032>
- Karimi, L. (2023). Challenges and opportunities of digital technology integration in virtual education. *Jurnal Inovasi dan Teknologi Pembelajaran*, 10(2), 112–126.
- Kraus, S., Palmer, C., Kailer, N., Kallinger, F. L., & Spitzer, J. (2021). Digital transformation: An overview of the current state of research. *SAGE Open*
- Lee, S., & Nguyen, T. (2024). Digital governance and administrative reform in universities: Evidence from Southeast Asia. *Asia Pacific Journal of Education*, 44(1), 45–62. <https://doi.org/10.1080/02188791.2023.2001123>
- Mahfudi, K., Fadillah, E. N., Goh, T. S., Fitriyanti, E., & Aroha, L. (2025). Transformasi manajemen pendidikan tinggi berbasis data dan blockchain. *Jurnal MENTARI: Manajemen, Pendidikan dan Teknologi Informasi*, 3(2), 45–57.
- Nugroho, Y. A., Widodo, A., Pebrina, E. T., Iskandar, J., & Nadeak, M. (2025). Digitalization in Higher Education: How Information Systems Improve Operational and Strategic Performance. *Indonesian Journal of Management and Economic Research (IJOMER)*, 2(01), 90–98.
- Selwyn, N. (2016). *Education and technology: Key issues and debates* (2nd ed.). Routledge.
- Sukorini, R. S., Marini, A., & Aulia, R. N. (2024). New Era of Higher Education Digital: Transformation and Information System Management. Improvement: *Jurnal Ilmiah untuk Peningkatan Mutu Manajemen Pendidikan*.
- Tanjung, R. S., & Nasution, A. (2025). Transformasi Digital dalam Administrasi dan Manajemen Pendidikan di Perguruan Tinggi. *Civitas (Jurnal Pembelajaran dan Ilmu Civic)*. *Jurnal Universitas Labuhanbatu*
- Thoyib, M. (2023). Digital transformation in higher education: Responding to global social and technological change. *Sindoro: Cendikia Pendidikan*, 4(1), 50–64.
- Tsai, Y. S., & Gasevic, D. (2021). Learning analytics in higher education: Current trends and future directions. *Journal of Learning Analytics*, 8(2), 1–6. <https://doi.org/10.18608/jla.2021.7334>
- Williamson, B. (2017). *Big data in education: The digital future of learning, policy and practice*. SAGE.
- Yanti, I. D. (2025). Revolusi Layanan Kampus: Transformasi Digital di Era Perguruan Tinggi Modern. *SAFARI: Jurnal Pengabdian Masyarakat Indonesia*, 5(3), 283–298. *Jurnal STIEPARI*