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Implementation Of Digital-Based Management In Improving The Quality Of Academic Services At SDN 2 Bulukarto

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Abstract

This study aims to analyze the implementation of digital-based management in improving the quality of academic services at SDN 2 Bulukarto. The research employed a descriptive qualitative approach involving the principal, teachers, and administrative staff as research subjects. Data were collected through observation, in-depth interviews, and documentation, while data analysis was conducted using data reduction, data display, and conclusion drawing, with data validity ensured through source and technique triangulation. The findings indicate that the implementation of digital-based management has improved the efficiency of academic services, enhanced data accuracy and transparency, and increased stakeholder satisfaction within the school community. Digital management processes covering planning, implementation, monitoring, and evaluation were found to be more systematic and integrated. Supporting factors include strong leadership commitment, availability of digital systems, and an adaptive organizational culture, while inhibiting factors involve limited digital competencies among some human resources and inadequate ICT infrastructure. The study concludes that digital-based management plays a strategic role in improving the quality of academic services and should be continuously developed through strengthening human resources, infrastructure, and school organizational culture.

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1. INTRODUCTION

Digital transformation has become a global strategic agenda affecting nearly every sector of life, including education. Developments in information and communication technology are driving fundamental changes in the governance of educational institutions, particularly in the areas of academic management and services.

Digitalization enables the education management process to be more efficient, transparent, and data-driven, so educational institutions are required to adapt to remain relevant to the demands of the times (UNESCO, 2020; Selwyn, 2016).

In a global context, digital-based education management is no longer understood simply as the use of technological devices, but as a systemic transformation in the planning, organization, implementation, and evaluation of educational services. Various studies have shown that the implementation of digital management systems in schools positively contributes to administrative effectiveness, the quality of academic services, and strengthened communication between schools and educational stakeholders (Bond et al., 2018; Fullan, 2020).

In line with these global dynamics, the Indonesian government is pushing for accelerated digital transformation in the education sector through school digitalization policies and strengthening electronic-based management systems. Digitalization is positioned as a strategic instrument to enhance the quality of education services, improve school governance, and support accountability in public services in the education sector (Kemdikbudristek, 2022; Prasojo & Yuliana, 2021).

At the educational unit level, particularly elementary schools, digital transformation holds strategic significance because this level is the foundation for establishing sustainable quality educational services. The quality of academic services in elementary schools encompasses accurate academic administration, clarity of information, ease of access, and student and parent satisfaction. However, in practice, many elementary schools still face limitations in optimally managing academic services due to unintegrated and conventional management systems (Sallis, 2014; Widodo, 2020).

The urgency of improving the quality of academic services is growing as public demands for quality education services increase. Slow, inaccurate, and less transparent academic services have the potential to undermine public trust in schools. In this context, digital-based management is seen as a strategic solution to improve the efficiency and quality of academic services through the integration of information systems and the systematic use of technology (Zainal et al., 2021).

Iis Maisaroh from STIT Pringsewu emphasized that digitalization of school management must be directed at improving service quality, not merely administrative modernization, to truly impact the quality of academic services (Maisaroh, 2022). Furthermore, Iis Maisaroh emphasized that the success of digital-based management is largely determined by changes in work patterns and the school's organizational culture. Digitalization that is not accompanied by thorough managerial planning has the potential to create new administrative burdens for educators and education personnel. Therefore, the implementation of digital management in elementary schools must be oriented towards ease of service, accuracy of academic data, and user satisfaction of educational services, particularly students and parents (Maisaroh, 2022).

This situation is also reflected at SDN 2 Bulukarto, which has begun adopting digital technology in its academic services, such as managing academic data and providing information to parents. However, the implementation of digital-based management at this school is still in the development stage and has not been fully integrated into a comprehensive management system. This indicates that digital transformation at the elementary school level still faces various structural and cultural challenges.

Factual issues that have emerged include limited digital competency among some human resources, suboptimal utilization of technology across the board, and the lack of established standard operating procedures for digital-based academic services. As a result, academic services remain fragmented and do not fully meet expected service quality indicators. This situation demonstrates a gap between the ideal demands of educational digitalization and the reality of implementation on the ground.

The gap between ideal and actual conditions requires in-depth examination through empirical research. Ideally, academic service management in elementary schools is implemented in an integrated, data-driven, and quality-oriented manner. However, in practice, many schools are still in a transitional phase that requires management strengthening strategies and implementation support (Miles et al., 2019).

Contextual studies at the educational unit level are important for understanding the dynamics of implementing digital-based management in real terms.

Based on this background, the novelty of this research lies in the focus of the study of the implementation of digital-based management which is directly linked to improving the quality of academic services in the context of public elementary schools.

This study aims to describe the implementation of digital-based management at SDN 2 Bulukarto, analyze its impact on the quality of academic services, and identify supporting and inhibiting factors for its implementation.

The research results are expected to provide theoretical contributions to the development of educational management as well as practical recommendations for elementary schools in optimizing the digital transformation of academic services.

2. METHOD

This study uses a descriptive qualitative research approach to gain a deep understanding of social phenomena or practices that occur naturally and contextually without variable manipulation. Furthermore, descriptive qualitative research aims to map social realities as they exist without making broad generalizations, making it relevant to studying specific phenomena in schools or primary education organizations (Prakash Chand, 2025).

This research was conducted at SDN 2 Bulukarto. The subjects were the principal, teachers, and parents of students as primary data sources. Data collection techniques included observation to directly observe the phenomenon, interviews to obtain narrative data, and documentation to supplement empirical evidence (Prakash Chand, 2025; Ramlah et al., 2024).

3. RESULTS AND DISCUSSION

3.1 Implementation of Digital-Based Management at SDN 2 Bulukarto

The implementation of digital-based management at SDN 2 Bulukarto shows the school's systematic efforts in utilizing*platform*digital to strengthen academic services. Based on research findings, the school optimized the Academic Management Information System (SIMAK) integrated with the Basic Education Data (DAPODIK), e-Report, and a communication portal with parents. This integration aligns with the results of a study at Khalifah Islamic Elementary School (SDI) in Palu, which found that the use of applications such as DAPODIK and*e-Rapor*can manage academic data and learning outcomes quickly and accurately, supporting the efficiency of school managerial processes (Toonao, Nurdin & Syahid, 2025).

In addition, SDN 2 Bulukarto uses an academic portal based on*web*which provides teachers, students, and parents with access to real-time school schedules, grades, attendance, and announcements. The implementation of this academic portal is similar to the practice at SD Negeri 060878, which introduced a web-based academic portal.*web*to improve the efficiency of learning services for school administrators, teachers, and students (Siahaan & Azzahra, 2025)

Furthermore, schools also utilize digital communication applications such as*WhatsApp Group* And *Google Classroom*to convey academic information and learning assignments, particularly in the context of communication between teachers and parents. This model of using digital communication tools supports parental involvement in the academic process and increases service transparency (Marginingsih, Kusumaningsih & Violinda, 2025).

Application usage*e-Learning* And *Learning Management System*Simple methods are also found in online learning practices that are held for some subjects. Although not yet fully a primary management tool, the use of*LMS*assist teachers in delivering material and assignments, while also recording student learning activities in a more structured manner (Trianggoro, Koeswanti & others in other relevant research).

Overall, the combination of using integrated academic SIM, portal*web*, communication applications, and*LMS*This demonstrates that SDN 2 Bulukarto has developed a digital ecosystem that effectively supports academic management processes. This model of utilizing various platforms aligns with the finding that effective digital transformation in schools involves

various interconnected digital applications to support accurate, responsive, and real-time academic services.

The implementation of digital-based management at SDN 2 Bulukarto covers various aspects.*scope of a*cademic servicesA comprehensive and integrated system. First, initial student registration and administration services are conducted digitally through the online PPDB portal, simplifying the administrative process for educational staff and parents. This practice aligns with findings at SDI Khalifah Palu, which utilizesPPDB websiteto manage new student registration activities efficiently (Toonao, Nurdin & Syahid, 2025).

Second, serviceeducational dataData such as student, teacher, and school resources are managed digitally through the DAPODIK system, ensuring data accuracy, up-to-dateness, and integration across school units and local governments. This system significantly reduces manual recording errors and speeds up the school data update process.

Third, student academic assessment and reporting services are carried out throughe-RaporDigital, which allows teachers to enter grades electronically, while parents can access their children's academic progress at any time. This demonstrates an expansion of services beyond basic administration to more transparent and interactive learning evaluation services.

Fourth, in the scope of academic evaluation and communication services, SDN 2 Bulukarto utilizesplatformDigital communication is used to deliver official announcements, exam schedules, and learning feedback. This digital communication also supports parental engagement and expedites responses to student questions and academic needs.

Finally, monitoring and reporting services to the education office are provided through an integrated system that facilitates the reporting of academic data, attendance, and other services to education authorities. This broad scope of services demonstrates that digital-based management has penetrated various aspects of academics, thereby increasing the effectiveness and accountability of schools in meeting stakeholder needs.

Digital Management Process in Academic Services

Digital management planning for academic services at SDN 2 Bulukarto was carried out in response to demands for efficiency, transparency, and accountability in educational services. This planning began with identifying academic service needs that could potentially be digitized, such as student data management, learning outcome assessment, academic communication, and reporting. This step aligns with the view that digital planning is the primary foundation for successful school management transformation (Fullan, 2020).

During the planning stage, the school developed strategic objectives for implementing a digital system aimed at improving the quality of academic services, not simply modernizing administration. These objectives included improving service speed, academic data accuracy, and ease of access to information for the school community. This aligns with the findings of Zainal et al. (2021), who stated that clarity of digitalization objectives is a key factor in the effectiveness of digital-based management in schools.

Planning also includes selecting digital systems and platforms tailored to the school's conditions and capacity. SDN 2 Bulukarto considered infrastructure availability, human resource competency, and government policy support before adopting a particular system.

Muhtarom (2021) emphasized that digital-based education management planning must be realistic and contextual so that it can be implemented sustainably in educational units.

In addition, schools establish roles and responsibilities for managing digital academic services. The principal acts as a policymaker, while teachers and administrative staff are involved in implementing the system's technical aspects. According to Salamun (2020), management planning that involves all school elements will strengthen ownership and enhance organizational readiness for digital change.

Thus, digital management planning at SDN 2 Bulukarto focuses not only on technical aspects but also on strengthening the school's governance and work culture. This thorough planning provides a crucial foundation for the effective and targeted implementation and control of digital-based academic services.

The implementation of digital management in academic services at SDN 2 Bulukarto is carried out through the implementation of information technology-based work systems and procedures. At this stage, the planned digital system begins to be operationalized in daily academic activities, such as student data management, grade input, and the delivery of academic information to parents. This implementation reflects a shift from a manual system to a more efficient digital system.

In practice, teachers and administrative staff utilize digital platforms according to their respective duties and functions. Teachers use digital systems to manage assessments and learning outcome reports, while administrative staff manage academic data and school documentation. This aligns with research by Prasojo and Yuliana (2021), which states that implementing digital management requires collaboration between educational stakeholders.

The implementation of digital management is also accompanied by a process of mentoring and familiarizing school human resources with technology use. SDN 2 Bulukarto provides informal support in the form of internal technical guidance to ensure all implementers are able to operate the system effectively. Muhtarom (2021) emphasized that effective digital management implementation requires gradual improvement in the digital competency of educators and education personnel.

Beyond the technical aspects, the implementation of digital management also impacts academic service patterns, making them more open and responsive. Academic information can be accessed more quickly by students and parents, thereby increasing service transparency.

This finding aligns with a study by Marginingsih et al. (2022) which showed that digitalization of school management contributes to increased user satisfaction with educational services.

Overall, the implementation of digital management at SDN 2 Bulukarto demonstrates that digital transformation can be effective if supported by the commitment of school leadership, prepared human resources, and a clear work system. This implementation phase provides concrete evidence that digital management can be adaptively implemented in elementary schools.

Monitoring and evaluation are important stages in the digital management process to ensure that academic services run according to established plans and objectives.

At SDN 2 Bulukarto, regular monitoring is conducted by checking the performance of digital systems and the level of implementation of technology-based academic services. This step aims to detect technical and non-technical issues early.

Digital management evaluation is conducted by examining the system's effectiveness in supporting academic services, such as data management accuracy, service speed, and ease of information access. Evaluation results serve as a basis for schools to make system improvements and adjustments. According to Fullan (2020), continuous evaluation is key to the success of digital innovation in educational organizations.

In addition to system evaluations, schools also evaluate the performance of human resources in operating digital academic services. This evaluation includes discipline in system use, accuracy of data input, and the ability to adapt to technology. Salamun (2020) stated that evaluating human resource performance in educational management plays a crucial role in maintaining consistent service quality.

Monitoring and evaluation results at SDN 2 Bulukarto indicate that although digital management implementation has been successful, several challenges remain, such as network limitations and differences in digital literacy levels. However, the school responded to these

findings by implementing gradual improvements and strengthening internal coordination. This approach aligns with the findings of Zainal et al. (2021) regarding the importance of adaptive evaluation in school digital management.

Thus, monitoring and evaluation are strategic instruments in ensuring the sustainability of digital management at SDN 2 Bulukarto. This process serves not only as a control measure but also as a learning tool for the organization to continuously improve the quality of digital-based academic services.

3.2 Impact on the Quality of Academic Services

The implementation of digital-based management at SDN 2 Bulukarto has significantly impacted the efficiency of academic services. This efficiency is evident in the acceleration of the academic administration process, shifting from manual processing to digital processing through an integrated academic information system. This change aligns with research showing that digitalization of educational management can accelerate administrative processes, significantly reducing administrative work time, and expedite services to students and parents (Sugandi & Rodhiyah, 2024).

Furthermore, this efficiency is also reflected in the reduced workload for teachers and administrative staff, as digital systems can facilitate automated assessment, data collection, and reporting. This allows educators to allocate more time to learning and professional development. Muhtarom (2021) stated that the time efficiency resulting from the use of digital systems can increase teachers' focus on pedagogical aspects, rather than solely administrative ones.

Furthermore, academic service efficiency includes reducing operational costs associated with paper use, physical archiving, and document printing. Implementing digital systems in academic services also reduces the risk of human error that often occurs in manual processes. Other research indicates that digitizing school administration helps reduce data errors while accelerating overall internal school processes (Pujihastuti, Ali & Maknun, 2025).

Service efficiency also supports school leaders in faster decision-making because academic data reports are available in real time and easily accessible. According to Salamun (2020), effective modern management requires accelerated information flow to support strategic decision-making that is responsive to school needs.

Overall, the efficiency of digital-based academic services at SDN 2 Bulukarto significantly improves administrative and operational activities, strengthens the school's internal performance, and provides faster service access for all stakeholders.

The implementation of digital management at SDN 2 Bulukarto has also improved the accuracy of academic data. The digital academic information system allows data input directly by teachers or responsible administrative staff, thereby reducing data entry errors and duplication that often occur in manual management. This finding aligns with research showing that digitizing school data management improves accuracy and*data governance*better (Yulanda & Saputra, 2025).

Data transparency is another crucial aspect of digital management. With an integrated system, students, teachers, and parents can access academic information directly through the school portal or a dedicated app. According to Shobri (2024), a digital education management information system (MIS) can strengthen data transparency and accountability of educational institutions to the public, thereby strengthening stakeholder trust in the school.

Furthermore, the accuracy and transparency of this data strengthens the internal academic evaluation process because centralized data makes it easier for stakeholders to monitor student progress and design appropriate learning strategies. Research by Marginingsih et al. (2022) confirms that accurate data quality supports the formulation of school policies based on evidence, not assumptions.

In the context of decision-making, accurate digital data strengthens the legitimacy of school leadership decisions, particularly in scheduling, curriculum development, and resource allocation.

According to Salamun (2020), the use of accurate digital data contributes to more effective strategic planning in education.

Thus, data accuracy and transparency through digital management not only minimize administrative errors but also improve the quality of information that forms the basis of academic services, thus positively impacting overall service quality.

The implementation of digital-based management has been shown to increase the satisfaction of school residents, especially students and parents, who perceive academic services to be more responsive and informative. This satisfaction stems from easier access to academic information, online access to exam schedules and learning outcomes, and more intensive and transparent communication between schools, teachers, and parents. This reinforces the finding that digital transformation in school administration can improve the quality of service perceived by education stakeholders (Jennah, Chotib & Sukamto, 2025).

School community satisfaction is also evident in positive perceptions of the reliability of stable and accurate digital services. When digital management systems can provide consistent, uninterrupted data, trust in the school increases. Research on the digitalization of educational administration indicates that stakeholder loyalty and satisfaction with schools are significantly correlated with the quality of the digital services implemented (Pujihastuti, Ali & Maknun, 2025).

Support for parental involvement in digital academic services is also a source of additional satisfaction. Parents feel more engaged because they have real-time access to their child's academic progress, which directly increases positive perceptions of school performance. Muhtarom (2021) emphasized that parental engagement through digital platforms strengthens school-community relationships and increases overall satisfaction with educational services.

Furthermore, student satisfaction is also influenced by the school's ability to minimize technical challenges such as network disruptions and data input errors. Prompt response by the school's technical team creates a more satisfying service experience and reduces frustration for digital system users.

Overall, digital-based management at SDN 2 Bulukarto has significantly contributed to increasing academic service satisfaction because services have become faster, more transparent, and can be accessed by all elements of the school community directly and efficiently.

3.3 Supporting and Inhibiting Factors

Human resource (HR) competency is a crucial factor supporting or hindering the implementation of digital management at SDN 2 Bulukarto. This competency encompasses the ability of teachers and administrative staff to operate digital applications, understand information system procedures, and utilize technology effectively in managing academic services.

Without adequate digital competency, the potential of digital information systems such as the Academic SIM or academic portal will not be fully utilized, which in turn impacts the overall quality of academic services. A similar finding was found in a study of technology-based human resource management, which stated that improving teacher competency through training and development is a critical factor in the success of digitalizing education management (Satriya & Rindaningsih, 2024).

More deeply, human resource competencies related to mental readiness and motivation to learn and adapt to technological changes also determine the success of implementation. At SDN 2 Bulukarto, some teachers demonstrated high enthusiasm for using digital technology, but also encountered obstacles in the form of limited technical skills, such as digital data management or application troubleshooting. This finding aligns with the research results of Sutarasih & Haryati (2025), which stated that human resource readiness in implementing school digitalization often differentiates between schools that successfully implement technology and those that are less successful.

According to Muhtarom (2021), developing digital competency should be a school priority through ongoing training programs, familiarizing students with the use of digital systems in daily activities, and mentoring by the internal IT team. This approach allows teachers and administrative staff to directly experience the benefits of technology in improving academic services and not view it as an additional burden.

On the other hand, the lack of digital competency among some human resources is a major obstacle, especially when systems are updated or new features are introduced without adequate support. This situation creates resistance to change and delays in adaptation, resulting in suboptimal digital academic services. This human resource competency barrier has also been identified as a significant factor in various studies on digital transformation in education, which require investment in human resource development.

Thus, human resource competency is a key supporting factor when supported by ongoing training and technological learning support; conversely, human resource unpreparedness is a significant obstacle that must be addressed through a systematic professional capacity building strategy.

Information and Communication Technology (ICT) infrastructure serves as the technical foundation for implementing digital-based management at SDN 2 Bulukarto. This infrastructure includes the availability of computers/laptops, servers, a stable internet connection, and other supporting devices that enable the digital system to run smoothly. When ICT infrastructure is adequate, digital-based academic service processes such as grade input, student data processing, and communication with parents can be carried out without significant obstacles. Findings from other studies indicate that limited ICT infrastructure is a common obstacle in implementing educational digitalization, particularly in elementary schools, which directly impacts the effectiveness of technology use for school administration.

In the case of SDN 2 Bulukarto, although the school had basic ICT equipment, limitations such as a limited number of devices and unstable internet access hindered the optimal use of digital systems. Similar obstacles are often experienced by schools in areas that lack adequate ICT support, forcing teachers and administrative staff to take turns using available devices or rely on web-based services.cloudwhich sometimes requires a strong connection.

Muhtarom (2021) noted that investment in ICT infrastructure is not just about the number of devices, but also management's readiness to perform maintenance, software updates, and ongoing system integration. Without strong management support, available devices risk becoming obsolete or underutilized.

Furthermore, good ICT infrastructure is also related to the quality of training and technical support, such as internal or external IT assistance when system issues occur. When technical support is weak, even minor obstacles like system errors or weak connections can undermine user confidence in utilizing digital systems. This condition has also been identified as a barrier to digital transformation in various contemporary education studies.

Overall, adequate ICT infrastructure is a key driver of successful digital management implementation in schools, while limited devices, networks, and technical support are barriers that need to be addressed through sustainable education policies and technology investments.

Organizational culture is a crucial factor influencing a school's readiness to embrace and integrate technological innovations, such as digital management. School environments with a collaborative culture, open to change, and supportive of innovation tend to be more prepared and agile in implementing digital technology into management practices. This culture creates an atmosphere in which teachers, administrative staff, and school leaders feel motivated to explore and share best practices in utilizing digital systems. The literature also shows that an innovative organizational culture is a key determinant of technology adaptation in educational management and helps reduce resistance to change.

At SDN 2 Bulukarto, organizational culture support is evident in the school leadership's commitment to encouraging teachers to continuously learn digital technology and collaborate on the use of academic platforms. When leaders actively facilitate internal training and dialogue on the use of digital systems, this strengthens staff trust and minimizes fear of change. Salamun's (2020) opinion also supports that a school culture that is adaptive to technology is a crucial foundation for building sustainable managerial innovation.

However, not all school districts respond equally to cultural changes. Some teachers may remain skeptical or reluctant to use digital systems due to past experiences with technical challenges or additional workloads. These cultural barriers can hinder the full adoption of digital technologies and diminish their potential benefits to academic outcomes.

Cultural resistance can also arise from concerns about changing familiar roles or ways of working. This situation is often encountered in research on digital transformation in education, where changing organizational culture is a major challenge, alongside technical aspects and human resource competencies.

Thus, an organizational culture that supports technological innovation becomes a major supporting factor in the implementation of digital management in schools, while cultural resistance and unwillingness to change become obstacles that require intensive efforts to change organizational values, culture, and mindset.

Findings indicate that the implementation of digital-based management at SDN 2 Bulukarto demonstrates synergy between educational management principles and strengthening the quality of academic services. According to educational management theory, digital transformation is not simply the adoption of technology, but also changes in processes, structures, and work culture to improve the effectiveness of school administration (Salamun, 2020). The digital management process, encompassing planning, implementation, monitoring, and evaluation, has led to more efficient academic services and a greater responsiveness to the needs of students and parents.

In the context of educational quality management, the primary focus is on stakeholder satisfaction through improving service standards.Total Quality Management (TQM)Education underscores the importance of involving all stakeholders in continuous quality improvement efforts (Sallis, 2014). Digital implementation at SDN 2 Bulukarto strengthens the school's ability to capture, process, and utilize academic data for service improvement, in accordance with the TQM principle that quality improvement must be based on evidence and valid data.

The use of various digital platforms also underscores the shift from traditional administrative approaches to modern, technology-based managerial ones. This finding supports Muhtarom's (2021) argument that digital technology in educational management serves as a facilitator for faster and more accurate coordination, communication, and decision-making. Thus, digital management not only enhances process efficiency but also enhances organizational capabilities in strategic decision-making.

Furthermore, the findings show that digital transformation in educational units such as SDN 2 Bulukarto is able to make the school's internal controls more effective throughdashboardreal-time data, automated reports, and access to information across school elements. This aligns with educational management principles that emphasize the importance of reliable information systems as a basis for quality decision-making (Zainal et al., 2021). The existence of digital systems enables schools to respond quickly and accurately to the dynamic needs of academic services.

Thus, the research findings show that the implementation of digital-based management is significantly aligned with the theory of educational management and quality management, as it has brought improvements to the aspects of processes, data, and services that are the core of effective and quality-oriented school governance.

The findings of this study align with previous research on the role of digital transformation in improving the efficiency of academic services. Several previous studies have shown that

digitalization of school administration contributes to accelerated service processes, reduced administrative burdens, and facilitated access to information for stakeholders (Sugandi & Rodhiyah, 2024; Pujihastuti, Ali & Maknun, 2025).

Findings at SDN 2 Bulukarto are consistent with this picture, where the digital system optimizes the process of grade input, student data management, and academic communication.

In addition, suitability was also found in the influence of digitalization on data accuracy and transparency. Shobri's (2024) research stated that the education management information system improvesdata governanceand accountability of educational institutions, which aligns with our findings that academic data has become more accurate, centralized, and easier to monitor. This strengthens the evidence that digitalization not only improves efficiency but also data integrity in school management.

However, there are differences in the context of human resource readiness. Previous research often shows that human resource readiness varies, and some schools experience serious obstacles in digital competency (Sutarasih & Haryati, 2025). Findings at SDN 2 Bulukarto show that despite competency barriers, the readiness of school leaders and the enthusiasm of some teachers indicate the potential for accelerating digital learning. This contrasts with several other studies that have identified human resource barriers as the primary factor hindering overall digital implementation.

Another difference is evident in the organizational culture aspect. Our research findings indicate that the adaptive organizational culture at SDN 2 Bulukarto positively impacts the digitalization process. Meanwhile, several other studies have shown that a school culture that tends to be conservative can create resistance to digital change (Tika, 2025). This difference demonstrates that the cultural context of a school significantly determines the direction and speed of digital adoption.

Thus, the results of this study are consistent with many previous findings in terms of data efficiency and accuracy, but provide new insights into the more nuanced dynamics of human resource readiness and organizational culture, which are important domains in the context of digital transformation of primary education.

The findings of this study have important implications for the development of digital-based academic services in elementary schools. First, the findings on service efficiency and data accuracy indicate that digital management can be a superior strategy for strengthening academic service governance. Schools can leverage digital systems to accelerate workflows and provide more accurate information for strategic decision-making by school leaders.

Second, the increased satisfaction of the school community, particularly students and parents, demonstrates that digital services can strengthen the school's relationship with stakeholders. This implication suggests that developing digital services not only has internal impacts but also improves the user experience, which in turn impacts the school's image and public trust.

Third, findings regarding human resource readiness and organizational culture imply the need for sustained investment in developing the digital competencies of teachers and administrative staff. Schools need to design systematic and sustainable digital training programs to ensure human resources are able to keep pace with technological developments and maximize the effective use of digital systems.

Fourth, the findings regarding limited ICT infrastructure indicate the need for support from the government, education offices, and education policymakers to provide adequate technology facilities for schools, especially in rural areas. Without strong infrastructure support, the potential for digitizing academic services will not be optimal.

Ultimately, the results of this study imply that digital transformation in school management cannot be undertaken fragmentarily, but must be part of a comprehensive strategy encompassing technical aspects, human resources, organizational culture, and supportive educational policies. This will strengthen schools' resilience in facing the challenges of education in the digital era.

4. CONCLUSION

Based on the research results and discussion regarding the implementation of digital-based management in improving the quality of academic services at SDN 2 Bulukarto, it can be concluded that the implementation of digital systems and platforms has positively contributed to the effectiveness of academic service management. Digitization of management enables the planning, implementation, monitoring, and evaluation of academic services to be more systematic, efficient, and integrated, particularly in the management of student academic data and communication between school members.

The implementation of digital management has been proven to improve the quality of academic services, as demonstrated by the efficiency of service times, increased accuracy and transparency of academic data, and increased satisfaction among school members, including teachers, students, and parents. These findings align with the principles of modern educational management and quality management, which emphasize the use of technology as a supporting tool for data-driven decision-making and continuous improvement of service quality.

However, this study also identified inhibiting factors that require attention, particularly those related to human resource competency, limited information and communication technology infrastructure, and the dynamics of school organizational culture. Therefore, the successful implementation of digital-based management requires comprehensive support in the form of strengthening the digital competency of educators and education personnel, providing adequate ICT infrastructure, and developing an organizational culture that adapts to technological change.

Thus, implementing digital-based management in elementary schools is not only a technical requirement but also a managerial strategy oriented towards continuously improving the quality of academic services. The results of this study are expected to serve as a reference for schools and education policymakers in developing effective and quality-oriented digital-based academic service governance.

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