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Bridging the Gap Between Design and Practice: The Implementation of SILOG in Election Logistics

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ABSTRACT
The rapid development of information and communication technology has encouraged governments to adopt digital systems to improve the efficiency, transparency, and accountability of public services. One form of this transformation is the implementation of E-Government in election administration, including the use of the Logistics Information System (SILOG) by the General Election Commission (KPU). Logistic Information System is a technology-based system designed to integrate the planning, management, distribution, and monitoring of election logistics in a digital and integrated manner. The implementation of this system is important to support more effective, accurate, and well-documented election logistics management. This study aims to analyze the implementation of SILOG in election logistics management at the KPU of Magelang City. The research employs a descriptive qualitative approach with data collected through in-depth interviews, observations, and documentation studies. Informants were selected using purposive sampling and snowball sampling techniques involving several parties directly involved in managing the system. The analysis applies an E-Government framework that includes aspects of support, capacity, value, willingness, and local culture, as well as the identification of supporting and constraining factors in its implementation. The findings indicate that the implementation of SILOG contributes to supporting a more integrated and digital-based election logistics management process. Its implementation is influenced by various factors related to institutional support, resource capacity, and technical and organizational conditions in practice.

Kata Kunci:
E-Government; Komisi Pemilihan Umum*; SILOG; Logistik Pemilu*

ABSTRAK
Perkembangan teknologi informasi dan komunikasi mendorong pemerintah untuk menerapkan sistem digital guna meningkatkan efisiensi, transparansi, dan akuntabilitas pelayanan publik. Salah satu bentuk transformasi tersebut adalah penerapan *E-Government* dalam penyelenggaraan pemilu, termasuk penggunaan Sistem Informasi Logistik (SILOG) oleh Komisi Pemilihan Umum (KPU). SILOG merupakan sistem berbasis teknologi yang digunakan untuk mengintegrasikan proses perencanaan, pengelolaan, distribusi, serta pemantauan logistik pemilu secara

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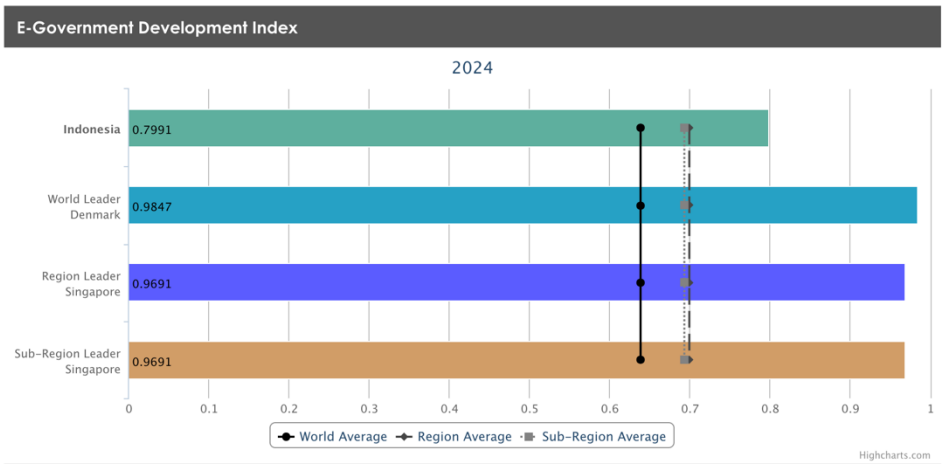
digital dan terintegrasi. Implementasi sistem ini menjadi penting untuk mendukung pengelolaan logistik pemilu yang lebih efektif, akurat, dan terdokumentasi dengan baik. Penelitian ini bertujuan untuk menganalisis implementasi SILOG dalam pengelolaan logistik pemilu di KPU Kota Magelang. Penelitian menggunakan pendekatan kualitatif deskriptif dengan teknik pengumpulan data melalui wawancara mendalam, observasi, dan studi dokumentasi. Informan penelitian dipilih menggunakan teknik purposive sampling dan snowball sampling yang melibatkan beberapa pihak yang terlibat langsung dalam pengelolaan sistem tersebut. Analisis penelitian menggunakan kerangka *E-Government* yang mencakup aspek dukungan, kapasitas, nilai, kemauan, serta budaya lokal, disertai dengan identifikasi faktor pendukung dan faktor penghambat dalam implementasinya. Hasil penelitian menunjukkan bahwa penerapan SILOG memberikan kontribusi dalam mendukung pengelolaan logistik pemilu secara lebih terintegrasi dan berbasis digital. Implementasi sistem ini dipengaruhi oleh berbagai faktor yang berkaitan dengan dukungan kelembagaan, kapasitas sumber daya, serta kondisi teknis dan organisasi dalam pelaksanaannya.

A. INTRODUCTION

The rapid expansion of digital technologies has significantly reshaped public sector governance, particularly through the adoption of E-Government systems aimed at enhancing efficiency, transparency, and accountability. Digital transformation has become a central agenda in contemporary public administration reform, particularly through the adoption of E-Government system aimed at improving efficiency, transparency, and accountability (Winarni, 2019). Digital transformation in the public sector is not merely about adopting new technologies, but rather a profound process of restructuring organizational values and culture (Mergel et al., 2021).



E-Government Development Index	2024	2022	2020	2018	2016	2014	2012	2010	2008	2005	2004	2003
Indonesia (Rank)	64	77	88	107	116	106	97	109	106	96	85	70
Indonesia (Value)	0.79911	0.71600	0.66120	0.52580	0.44784	0.44874	0.49486	0.40264	0.41070	0.38186	0.39090	0.42243

Figure 1. E-Government Development Index

Figure 1 above illustrates the E-Government Development Index, which shows the ranking of E-Government readiness across countries. The figure presents the latest data showing an improvement in Indonesia's E-Government Index, rising from rank 99 in 2020 to rank 64 in

2024. However Indonesia remains behind neighboring countries such as Singapore, which is the leading country both in the Asian region and the Southeast Asian subregion.

Table 1. Index of the KPU

Year	Value	Predicate
2021	2,16	Enough
2022	2,73	Good
2023	3,62	Very Good
2024	3,12	Good

Source: Kemenpanrb

Table 1 above presents the Index of the KPU, which shows fluctuations over the past few years. Based on evaluations conducted by the Ministry of Administrative and Bureaucratic Reform (KemenPAN-RB) together with related institutions, index score for KPU has been issued annually. The index at KPU increased from 2.16 in 2021 with a "Fair" rating to 2.73 in 2022 with a "Good" rating, and even reached 3.62 in 2023 with a "Very Good" rating. However, in 2024 the score declined to 3.12 (on scale of 5), although it remained within the "Good" category. This decline is an important note considering that in 2024 KPU faced a critical moment, namely the implementation of the simultaneous General Elections and Regional Elections, which heavily rely on the utilization of information and communication technology. The index assessment itself considers various aspects, including organizational governance and policies, public services, ICT infrastructure, information security management, and human resource competencies (Prassida & Rifky, 2023). This indicates that the effectiveness of digital system utilization in supporting election administration still needs comprehensive improvement. Digitalization of public services currently requires a user centric approach to ensure that system are truly accessible and can be utilized effectively (Lindgren et al., 2022).

Advances in information and communication technology cannot be separated in this era of digitalization, where the government is required by modern society to increase transparency, effectiveness and efficiency in carrying out its duties (Timpal et al., 2021). In the context of election administration, digitalization is often framed as a technical solution to longstanding logistical challenges, including planning, distribution, and monitoring of election materials. In Indonesia, the KPU has introduced the SILOG as part of its broader effort to modernize election logistics management through digital integration. The success of digital government reforms depends not only on technological infrastructure but also on structural alignment within public institutions (Anugerah & Parwanti, 2024).

Despite these ambitions, the implementation of digital systems, in the public sector frequently reveals a gap between system design and practical realities. The tension between ideal system design and practical implementation often arises due to discrepancies between policy intent and the bureaucratic realities on the ground (Klievink & Bharosa, 2023). Rather than functioning as neutral and efficient tools, E-Government systems are embedded within complex institutional environment shaped by resource limitations, organizational practices, and socio-cultural dynamics. E-Government initiatives are increasingly positioned as strategic instruments for enhancing public serve performance and institutional modernization (Sudrajat et al., 2019). Exiting studies in digital governance have highlighted recurring issues such as implementation failure, technical dependency, uneven capacity, and resistance at the local level. However, these challenges are often overlooked in policy narratives that portray

digitalization as inherently beneficial. In this context, system implementation must be understood as part of broader bureaucratic transformation processes rather than as isolated technological innovation (Amalia & Anwar, 2024).

In the case of election logistics, this tension becomes particularly critical due to the high stakes of electoral processes, where delays, inaccuracies, or system failures may directly affect the integrity of elections. While SILOG is designed to provide an integrated and real-time logistics management system, its actual implementation at the local level remains underexplored. The success of technology adoption by local governments is heavily influenced by contextual variables that extend beyond mere technical infrastructure availability (Alcaide-Munoz & Rodriguez-Bolivar, 2023). Specifically, there is limited understanding of how institutional, technical, and organizational factors interact to shape the performance of such systems in practice. However, recent scholarship emphasizes that digital transformation does not automatically generate improved governance outcomes, as implementation processes are shaped by institutional capacity and organizational readiness (Novita et al., 2021).

This study addresses this gap by examining the implementation of SILOG in the KPU of Magelang City. Rather than assuming the success of digitalization, this research seeks to analyze how and why discrepancies emerge between the intended design of the system and its operational realities. By applying an E-Government implementation perspective that considers dimensions of support, capacity, value, willingness, and local culture, this study aims to provide a more nuanced understanding of digital governance in election logistics.

B. LITERATURE REVIEW

Paradigms in Public Administration

Public administration is a way of completing government work by coordinating existing resources to achieve mutually determined goals (Anwar, 2021). Etymologically, public administration comes from the English word “administration” or “administer” which means to manage or serve society (Arsi & Arsyam, 2021). Public administration has evolved through several paradigmatic shifts that influence how governance and reform are understood. Traditional bureaucratic paradigms emphasize hierarchy, formal rules, and administrative control as the foundation of public management. In contrast, contemporary governance approaches highlight flexibility, collaboration, and performance orientation in public sector reform.

The shift from traditional bureaucracy toward New public Management (NPM) introduced performance-based management, efficiency orientation, and the use of private-sector principles in public institutions. In the context of digital transformation, governance paradigms increasingly integrate technology as a strategic instrument for improving service delivery and administrative coordination.

More recent developments emphasize digital governance and socio-technical perspectives, which view public sector systems not merely as technical tools but as integrated institutional arrangements shaped by organizational culture, capacity, and human interaction. This perspective aligns with implementation studies that stress the importance of institutional support, resource capacity, and contextual adaptation in determining reform outcomes.

Within this paradigmatic evolution, the implementation of SILOG can be understood as part of a broader transition toward digitally enabled public administration. However, its effectiveness depends on how the digital system interacts with existing administrative structures and organizational practices.

E-Government and the Problem of Implementation

E-Government or electronic government is the application of information and communication technology in government administration processes which aims to increase

efficiency, effectiveness and transparency in public services (Heriyanto, 2022). E-Government has been widely promoted as a transformative approach to improving public sector performance through the use of digital technologies. E-Government is an effort to utilize information and communication technology which aims to increase transparency, efficiency and quality of public services (P. A. Lestari et al., 2021). E-government research highlights its role in strengthening service quality and administrative efficiency in the public sector (I. P. Lestari & Fajri, 2022). E-Government is the use of information and communication technology to support the implementation of government duties and provide better public services to the community (Muliawaty & Hendryawan, 2020). Early perspectives often emphasized its potential to enhance efficiency, transparency, and accountability in public services delivery. However, more critical strands of literature have challenged this optimistic view by highlighting that the success of E-Government initiatives is far from guaranteed. Instead, implementation processes are frequently marked by discrepancies between policy design and practical outcomes.

Scholars have identified several recurring challenges in E-Government implementation, including technological determinism, where digital systems are assumed to automatically generate improvements, as well as institutional constraints such as limited human resources capacity, bureaucratic rigidity, and fragmented organizational coordination. Nevertheless, empirical studies indicate that implementation outcomes vary significantly depending on organizational capacity and human resource readiness (Alesia Naifah Zayyan & Rining Nawangsari, 2025). In addition, the dependence on centralized digital infrastructures often creates vulnerabilities at the local level, particularly when technical disruptions occur. These issues suggest that E-Government should not be understood merely as a technical innovation, but as a socio-technical process shaped by institutional and contextual factors.

Digital Governance in Election Logistics

In the specific context of election administration, digitalization plays a crucial role in managing complex logistical processes, including the planning, distribution, and monitoring of election materials. Election logistics represents a high-risk domain in public administration, where operational failures may have direct implications for electoral integrity and public trust. As a result, digital systems such as SILOG are expected to reduce inefficiencies and improve coordination. Digital-based public service innovation has been recognized as a key response to increasing demands for transparency and accountability (Afriyanti et al., 2024).

However, existing studies indicate that the adoption of digital system in election logistics does not automatically eliminate operational challenges. Digital transformation in public administration requires adaptive organizational and institutional support to achieve sustainable outcome (Maryanah et al., 2024). Instead, new forms of dependency, coordination problems, and technical vulnerabilities may emerge. For example, the reliance on centralized systems can limit local flexibility, while uneven digital capacity across regions can lead to inconsistent implementation outcomes. These findings reinforce the need to examine how digital systems function in practice, rather than assuming their effectiveness based on design.

Analytical Framework: Beyond a Checklist Approach

To analyze the implementation of SILOG, this study draws on an E-Government implementation perspective that emphasizes several key dimensions: institutional support, capacity, value, willingness, and local culture. While these dimensions are often used in previous studies, they are frequently applied in a mechanistic manner as a checklist to assess success or failure. Information system performance in logistics management is strongly influenced by coordination mechanisms within institutions (Muslim et al., 2021).

This study departs from such an approach by treating these dimensions as interconnected factors that shape implementation dynamics. Institutional support is not only understood as formal commitment, but also as the extent to which policies are translated into operational guidance. Capacity is examined not merely in terms of resource availability, but in relation to the ability of actors to adapt to technological changes. Similarly, value is not assumed to be inherent in the system, but is critically assessed based on its actual impact in practice.

Willingness and local culture are also conceptualized as dynamic elements that may both enable and constrain implementation. While a supportive work culture can facilitate adaptation, it may also generate informal practices that deviate from system design. By adopting this perspective, the study aims to move beyond a static evaluation framework and instead provide a more nuanced explanation of how and why implementation outcomes vary.

Research Gap

Although previous studies have examined E-Government implementation in various public sector contexts, most discussions remain normative and tend to emphasize the benefits of digitalization, such as efficiency, transparency, and administrative modernization. In the context of election administration, studies on SILOG have generally focused on its formal functions and technical advantages, while paying limited attention to the practical tensions and implementation constraints experienced at the local level. As a result, there is still insufficient understanding of how digital governance systems operate within complex operational realities, particularly in high-stakes sectors such as election logistics management.

This study identifies that the implementation of SILOG is not merely a technical process of system adoption, but a dynamic interaction between institutional demands, technical conditions, and human adaptation. Several informants explained that although SILOG is formally mandatory, operational implementation often encounters technical disruptions such as unstable servers, delayed synchronization, and input mismatches. One logistics officer stated that when the system experiences problems, staff members frequently rely on direct coordination and temporary manual recording to ensure that logistics distribution continues effectively. This indicates that implementation actors actively negotiate between formal digital procedures and practical field conditions rather than simply following system instructions mechanically.

The findings further demonstrate that digital governance in election logistics reflects a hybrid administrative practice in which digital systems coexist with informal coordination mechanisms. Differences in digital literacy, dependence on centralized systems, and the need for operational flexibility shape how SILOG is implemented in practice. Therefore, this study contributes to a more critical understanding of E-Government by showing that the effectiveness of digital systems depends not only on technological design, but also on institutional capacity, organizational adaptation, and the ability of local actors to respond to operational challenges.

C. METHOD

This study employs a qualitative case study approach to examine the implementation of the SILOG in election logistics management at the KPU of Magelang City. A case study design is selected as it allows for an in-depth exploration of complex implementation processes within their real-life institutional practice are not clearly defined.

Data were collected through multiple qualitative techniques, including in-depth interviews, non-participant observation, and document analysis. In-depth interviews were conducted with key actors directly involved in the implementation of SILOG, such as logistics officers, administrative staff, and relevant decision-makers within the KPU. These interviews aimed to capture participants experiences, perception, and interpretations of the system's implementation. Observations were carried out to understand actual operational practices,

while document analysis focused on internal reports, technical guidelines, and policy documents related to SILOG.

The selection of informants was conducted using purposive sampling to identity individuals with direct knowledge and experience of the system, followed by snowball sampling to expand the range of perspectives. This approach ensures that the data reflect both formal institutional viewpoints and practical insight from field-level actors.

Data analysis was conducted using a thematic analysis approach, which involves coding, categories, and interpreting qualitative data to identify recurring patterns and relationships. The analysis is guided by an E-Government implementation framework that includes dimensions of institutional support, capacity, value, willingness, and local culture. However, rather than applying these dimensions as a rigid evaluative checklist, they are used as analytical lenses to explore how different factors interact in shaping implementation outcomes.

To enhance the credibility and validity of the findings, this study applies data triangulation by comparing information obtained from interviews, observations, and document. In addition, interpretive validation was conducted by cross-checking key findings with the selected informants to ensure consistency between the research's interpretation and participants perspective.

D. RESULT AND DISCUSSION

From System Design to Implementation Reality

The KPU is the first organization with an interest in holding elections, this institution is independent, permanent, national in carrying out its duties (Azahra et al., 2023). The KPU has a crucial role in ensuring a democratic, transparent and fair election process, including presidential, legislative, and regional head elections (Silalahi, 2022). Implementation of E-Government in the KPU is important in strengthening openness, accountability and efficiency in the election process (Dhimas & Aprilia, 2023). The implementation of the SILOG at the KPU of Magelang City reflects a common challenge in many E-Government initiatives, where a well-designed digital system encounters practical limitations during implementation. SILOG was introduced to improve efficiency, transparency, and accuracy in election logistics management by integrating data and simplifying monitoring and reporting processes. In several aspects, the system has successfully centralized logistics information and reduced administrative duplication compared to previous manual methods.

However, field findings show that the realization of these objectives remains uneven. The effectiveness of SILOG is influenced not only by technological infrastructure, but also by institutional readiness, human resource capacity, organizational culture, and the willingness of users to adapt to digital work mechanisms. Informants explained that while SILOG helps simplify documentation and monitoring, operational challenges frequently emerge during peak election periods when workloads increase and system access becomes unstable. Under such conditions, staff often rely on informal coordination and manual adjustments to maintain workflow continuity.

Differences in digital literacy among employees also affect implementation consistency. Younger or more technologically familiar staff generally adapt more quickly, while some senior staff still experience difficulties operating the system. As a result, implementation often depends on a small number of technically capable personnel, creating dependency within the organization.

Institutional support formally exists through regulations, technical guidance, and training activities. However, informants noted that operational support is sometimes insufficient to address practical field-level problems, especially because training is often conducted only

before election stages. Consequently, some staff perceive SILOG not only as a helpful system, but also as an additional administrative burden when technical issues occur.

The findings further show that local organizational culture strongly shapes system implementation. Staff frequently rely on direct communication, messaging applications, and informal coordination because these methods are considered faster and more flexible in urgent situations. This indicates that digital governance systems do not fully replace existing administrative practices, but instead coexist with informal and manual mechanisms.

Overall, the case of SILOG demonstrates that digital transformation in public administration is an adaptive and negotiated process rather than a purely technical intervention. The implementation gap reflects the interaction between technology, institutions, organizational culture, and human actors. Therefore, strengthening E-Government initiatives requires not only technological development, but also continuous investment in institutional learning, human resource capacity, and organizational adaptation to ensure that digital systems function effectively in real administrative settings.

Institutional Support: Formal Commitment vs Operational Translation

Institutionally, the implementation of SILOG in the KPU of Magelang City reflects a strong formal commitment toward digital governance. This is shown through the existence of regulations, technical guidelines, and organizational directives that establish SILOG as the official platform for election logistics management. The mandatory use of the system across administrative levels indicates an effort to standardize logistics governance through an integrated digital mechanism. From a structural perspective, this institutional support provides legal legitimacy and organizational direction for the implementation of E-Government.

However, field findings show that formal institutional support does not automatically ensure smooth operational implementation. Although SILOG has been formally institutionalized, staff members still face various practical challenges, particularly during urgent logistical situations, unstable networks, or mismatches between field conditions and system procedures. Informants explained that under these circumstances, staff often coordinate manually through direct communication before data can later be entered into the system. According to one logistics officer, this practice is not intended to ignore formal procedures, but rather to ensure that operational activities continue effectively despite technical limitations.

These findings indicate that institutional support in digital governance often remains procedural and normative, while field actors must independently adapt to operational realities. As a result, informal coordination becomes an adaptive organizational mechanism rather than merely a deviation from formal procedures. The implementation gap emerges because institutional support tends to emphasize system adoption and procedural compliance more than operational readiness in diverse local conditions.

The study also shows that digital governance implementation remains hybrid in nature. Although SILOG was designed to replace manual administration with integrated digital processes, conventional coordination practices such as direct communication and situational problem-solving continue to coexist with the formal system. This reflects that digital transformation in public administration is not a complete replacement of old practices, but rather a gradual negotiation between technological systems and existing organizational work cultures.

Furthermore, centralized system structures limit the flexibility of local actors in responding to technical disruptions. When problems occur, local staff often depend on higher administrative levels for system adjustments, creating delays and operational bottlenecks. Consequently, the effectiveness of SILOG depends not only on institutional policy, but also on the adaptive capacity of field-level actors.

Overall, the findings suggest that effective institutional support should go beyond regulatory endorsement and formal obligation. Successful digital governance requires continuous operational facilitation, technical responsiveness, and adaptive governance mechanisms capable of bridging the gap between centralized digital systems and local administrative realities. In line with Prassida & Rifky (2023), digital transformation is most effective when regulatory frameworks are aligned with practical operational needs and contextual implementation challenges.

Capacity: Beyond Resource Availability

Capacity issues emerge as a major constraint in the implementation of SILOG at the KPU of Magelang City. Although digital infrastructure and system access are formally available, the effectiveness of implementation is strongly influenced by uneven human resource capacity. This finding supports previous studies arguing that the success of information systems depends not only on technology, but also on the readiness and competence of users. Likewise, digital administration requires continuous institutional support to help users adapt to evolving digital work mechanisms (Ditasman & Amrullah, 2024).

Field findings show that differences in digital literacy among staff create varying levels of operational efficiency. Younger or more technologically familiar employees generally adapt more quickly to system features and procedural changes, while others still experience difficulties when facing updates or technical disruptions. Informants explained that the operation of SILOG often depended on a small number of staff with stronger technical abilities. During busy election periods, these individuals became informal sources of assistance for colleagues encountering problems with data input or system procedures. As a result, workflows sometimes slowed because employees had to wait for support from more technically capable staff.

The findings indicate that capacity should not be understood merely as the availability of computers or internet access, but also as digital literacy, technical confidence, organizational learning, and the ability to adapt to changing operational conditions. Uneven technical competence creates dependency on certain individuals and limits the broader institutionalization of digital governance practices within the organization.

In addition to human resource limitations, technical disruptions such as server downtime, system lag, and unstable connectivity also affected implementation performance, particularly during critical election stages when system traffic increased significantly. Informants explained that these disruptions reduced staff confidence in relying fully on SILOG, leading employees to combine digital procedures with manual recording and informal communication to maintain operational continuity.

The interviews further reveal that technical instability indirectly shapes organizational behavior. Rather than relying entirely on formal digital mechanisms, staff frequently use messaging applications, phone calls, and face-to-face coordination to solve problems more quickly. This suggests that the implementation of SILOG is not only a technological process, but also a negotiation between formal digital procedures and existing organizational culture.

Overall, the implementation of SILOG demonstrates that capacity is multidimensional. Successful digital governance requires not only technological infrastructure, but also continuous training, institutional support, adaptability, and organizational resilience to ensure that digital systems can operate effectively in dynamic administrative environments.

Value: Between Expected Benefits and Practical Outcomes

SILOG was introduced to improve efficiency, accuracy, transparency, and accountability in election logistics management through an integrated digital system. In practice, the system

has partially achieved these goals by improving data organization, reducing the risk of document loss, and simplifying administrative tracking compared to previous manual methods. Integrated documentation also strengthens institutional accountability because logistics activities can be monitored more systematically.

However, field findings show that the benefits of SILOG are not experienced equally by all users. While the system helps simplify documentation, technical disruptions such as server errors, synchronization failures, and data input problems often create additional administrative burdens. Informants explained that staff sometimes need to manually recheck data, repeat input processes, or maintain parallel manual records to ensure accuracy. In some cases, these corrective efforts take more time than the previous manual system.

This condition highlights a paradox in digital governance implementation. Although digital systems are associated with efficiency and automation, they can also generate new forms of work related to managing technical problems and maintaining data consistency. As a result, SILOG does not completely replace manual administration, but instead creates a hybrid working process that combines digital procedures with manual adjustments and informal coordination.

The findings also show that perceptions of SILOG vary among staff. Some employees see the system as useful for improving accountability and documentation, while others perceive it as rigid and burdensome during technical disruptions and high-pressure situations. This suggests that the effectiveness of digital systems depends not only on technological capability, but also on user experience, workload conditions, and organizational context.

Overall, the implementation of SILOG demonstrates that digital governance should be assessed critically and contextually. The system functions both as a tool for administrative modernization and as a source of new operational challenges. This reflects the broader reality that digital transformation in public administration is an adaptive and negotiated process rather than a simple technological improvement.

Willingness and Local Culture: Adaptation and Informal Practices

The implementation of SILOG at the KPU of Magelang City is influenced not only by technological infrastructure and institutional regulations, but also by staff willingness and organizational culture. In general, employees show a positive attitude toward digitalization and view SILOG as an important tool for improving election logistics management. This is supported by a work culture that emphasizes responsibility, cooperation, and mutual assistance, especially during critical election stages.

However, the same culture also encourages the emergence of informal adaptive practices. Interviews revealed that when technical problems such as server delays or system instability occur, staff often coordinate first through WhatsApp or direct communication to ensure operational continuity, while data input into SILOG is completed afterward. These practices are seen not as procedural violations, but as practical adjustments to maintain efficiency under urgent conditions.

The findings show that organizational culture plays a dual role. On one hand, cooperation and informal communication strengthen institutional resilience and help staff respond quickly to operational challenges. On the other hand, the persistence of manual coordination indicates that SILOG has not fully replaced previous administrative practices. Instead, implementation becomes hybrid in nature, combining formal digital procedures with informal workarounds.

This study also finds that implementation constraints are interconnected. Technical instability, uneven digital literacy, institutional limitations, and user perceptions continuously influence one another. When the system functions effectively, staff perceive SILOG as useful for accountability and documentation. However, recurring technical disruptions often reduce confidence in the system and increase dependence on informal coordination.

Another major issue is the strong dependence on centralized digital infrastructure. Local operators have limited authority to resolve technical problems independently and often must wait for responses from higher administrative levels. This creates bottlenecks during time-sensitive election stages and reduces local flexibility in responding to operational needs.

Overall, the implementation gap in SILOG reflects the interaction between technology, institutions, and local organizational culture rather than simply technical failure. The case demonstrates that digital governance is adaptive and negotiated in practice. Therefore, improving SILOG requires not only stronger technical infrastructure, but also continuous capacity-building, flexible institutional support, and recognition of the informal practices that emerge in everyday administrative processes.

Discussion: Rethinking Digital Governance in Election Logistics

The findings of this study challenge the assumption that digital systems automatically improve governance outcomes. In the case of SILOG at the KPU of Magelang City, the effectiveness of the system depends not only on technological design, but also on the compatibility between the system and its implementation context. Although SILOG was introduced to improve efficiency, transparency, and accountability in election logistics management, field findings show that manual practices, informal coordination, and technical adjustments continue to play an important role in daily operations.

Interviews revealed that staff often relied on direct communication and manual verification when technical disruptions occurred, particularly during critical election stages. One informant explained that when the system experienced delays or errors, operational coordination was usually carried out through messaging applications first, while data input into SILOG was completed later once the system became stable. This indicates that digitalization is not a linear replacement of manual administration, but rather a negotiated and adaptive process shaped by operational realities.

The study also found that differences in digital literacy and technical capacity among staff affected the consistency of implementation. Combined with recurring technical issues such as server instability and system lag, these limitations reduced confidence in the system and encouraged the persistence of informal workarounds. As a result, the success of implementation depended heavily on the ability of human actors to adapt and compensate for system limitations.

These findings support the argument that E-Government should be understood as a socio-technical phenomenon, shaped by the interaction between technology, institutions, and human actors. By highlighting the implementation gap, this study contributes to a more critical understanding of digital governance, particularly in high-stakes sectors such as election logistics, where operational reliability is essential for maintaining administrative effectiveness and public trust.

E. CONCLUSION

This study demonstrates that the implementation of the SILOG in election logistics management at the KPU of Magelang City is characterized by a persistent gap between system design and operational reality. While SILOG is formally institutionalized and supported as a digital solution to improve logistics management, its practical implementation reveals partial and uneven outcomes, shaped by a combination of institutional, technical, and socio-cultural factors.

The findings show that strong institutional support does not automatically translate into effective implementation when it is not accompanied by adequate operational guidance and adaptive capacity at the local level. Similarly, the expected value of the system particularly in

terms of efficiency and accuracy is contingent upon the system's reliability and the user ability to respond to technical disruptions. The study also highlights the dual role of local organizational culture, which not only facilitates system adoption but also produce informal practices that compensate for system limitations.

These findings suggest that digital governance initiatives, particularly in high stakes sectors such as election logistics, should not be evaluated solely based on their formal design or intended objectives. Instead, their effectiveness must be understood as an outcome of continuous interaction between technology, institutional arrangements, and human agency. In this regard, the study contributes to the literature by reinforcing the view of E-Government as a socio-technical process rather than a purely technical intervention, and by demonstrating how implementation gaps emerge and persist at the local level.

In practical terms, this study highlights the need for a more context sensitive approach to digital system implementation. Rather than relying on standardized and centralized system designs, policymakers should prioritize flexible operational guidelines, continuous technical support, and targeted capacity development that reflects local conditions. In addition, reducing excessive dependence on centralized infrastructure may improve system resilience and allow for more adaptive responses at the local level. Finally, this study is limited to a single case, and therefore future research is encouraged to conduct comparative studies across different regions or institutional settings to better understand the variation in E-Government implementation outcomes.

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