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DIGITAL TRANSFORMATION, EMPLOYEE BEHAVIOUR, AND GOVERNANCE OUTCOMES IN POST-COLONIAL PUBLIC INSTITUTIONS: A SOUTH AFRICAN PERSPECTIVE

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ABSTRACT:

Digital transformation has become a pivotal instrument for enhancing efficiency, transparency, and accountability in public administration. In post-colonial contexts such as South Africa, however, its adoption intersects with entrenched bureaucratic norms, organisational inertia, and socio-cultural legacies. This study investigates the interplay between digital transformation initiatives, employee behaviour, and governance outcomes in South African public institutions. Drawing on a qualitative desk-based approach and secondary data analysis, the research examines patterns of technology adoption, employee attitudes, and informal practices that shape institutional performance. The results show that digital tools have increased information storage, service tracking, and workflow efficiency, which has helped some departments become more responsive. However, progress is not uniform. The potential benefits of technological investments are still being diluted by informal practices like selective use of digital systems, reliance on parallel manual processes, and preference for face-to-face communication. Lack of incentives for compliance, poor change management, and low levels of digital literacy are all associated with resistance to system protocols. Employee willingness to embrace and maintain digital practices was also

found to be significantly influenced by organizational culture and leadership engagement. This research contributes to public administration scholarship by bridging the gap between technology adoption and human behaviour in post-colonial bureaucracies, offering both theoretical insights and practical guidance for enhancing governance outcomes in South Africa's evolving digital landscape.

KEYWORDS: Digital Transformation; Employee Behaviour; Governance Outcomes; Public Administration; South Africa.

INTRODUCTION AND BACKGROUND

Digital technologies have become integral to contemporary public administration, promising enhanced efficiency, transparency, and accountability. The United Nations' (2024) E-Government Survey highlights a significant global acceleration in digital governance, noting that the proportion of the world's population lagging in digital public service adoption decreased from 45.0 percent in 2022 to 22.4 percent in 2024. This progress is reflected in improvements in infrastructure, online service delivery, and human capacity development. Such trends demonstrate both a global drive toward inclusive digital governance and a recognition that e-governance can strengthen accountability and service effectiveness across diverse public sector contexts. However, there are particular difficulties in modernizing public administration in post-colonial nations like South Africa. Inefficiency, long-standing informal practices, and the legacy of hierarchical bureaucratic cultures are the causes of these difficulties (Ncube & Manyika, 2022). Centralized, top-down structures that valued authority over cooperation and process over flexibility have historically shaped South Africa's public institutions. Digital technologies have the potential to upend these traditions, but their adoption is inextricably linked to the employee behaviours and organizational cultures that facilitate their use (Heeks, 2020). There is a critical knowledge gap regarding how digital transformation initiatives translate, or fail to translate, into better governance outcomes because there are still few empirical studies examining the relationship between technology, human behaviour, and governance in South Africa. Numerous initiatives have been used to implement digital transformation in the South African public sector. To expedite access to public services, municipalities, for instance, are increasingly implementing self-service kiosks, predictive analytics, and intelligent chatbots (Mokgolo & Nkomo, 2023). To increase efficiency, lower the risk of corruption, and promote transparency, government agencies have also made investments in automated workflow systems, electronic record-keeping, and

citizen service platforms. Adoption is still uneven and dispersed in spite of these technological advancements. According to Shibambu and Ngoepe (2025), ad hoc implementation for digital transformation has resulted from a lack of a unified legislative framework, leaving gaps in accountability, performance monitoring, and interoperability. While some departments actively adopt innovative solutions, others still rely on antiquated manual systems, which results in inconsistent service delivery and reduces the overall impact of technology.

The relationship between employee behaviour and digital technologies is a major worry. Informal behaviours are still common and include workarounds to get around institutional procedures, reliance on offline communication channels, and partial use of digital systems. These actions can negate the intended advantages of digital platforms and are frequently a result of psychological inertia, risk aversion, or a lack of experience with digital tools (Nkosi & Chikandiwa, 2023). Employees may, for example, only update digital records when necessary or prefer in-person interactions over digital workflows, which would reduce timeliness, accuracy, and transparency. Legacy bureaucratic norms that favour obedience to hierarchical authority over creativity or efficiency can sometimes serve to further entrench resistance to technology (Ncube & Manyika, 2022). Leadership and organisational culture play critical mediating roles in shaping how employees interact with digital systems. Proactive leaders who model technology adoption, provide ongoing training, and incentivise compliance foster higher rates of engagement and integration (Shibambu & Ngoepe, 2024). Conversely, weak leadership or fragmented management structures contribute to resistance, partial adoption, and the persistence of informal practices. Studies of local government contexts in South Africa reveal that municipalities with digitally literate management teams are more successful in embedding e-governance practices, whereas departments with entrenched bureaucratic hierarchies struggle to implement even basic digital platforms effectively (Moyo & Dlamini, 2023). Transformation also requires the development of human capacity and digital literacy. Public sector workers must be upskilled, reskilled, and multiskilled in order to adapt to new technologies, according to the Fourth Industrial Revolution (4IR) (Heeks, 2020; Mokgolo & Nkomo, 2023). Nonetheless, disparities in funding for ongoing professional development still exist. The effectiveness and reach of digital initiatives are limited in many departments by staff members who are either undertrained or not exposed enough to new digital tools. Due to their frequent resource limitations and restricted access to training opportunities, historically disadvantaged institutions (HDIs) are especially affected by this skills gap. In order to prevent digital

transformation from making already-existing disparities in the provision of public services worse, it is imperative that these deficiencies be addressed.

The research problem guiding this study is the interplay between digital transformation and employee behaviour, and how this relationship affects governance outcomes in South African public institutions. Specifically, the study examines how informal practices, selective engagement with technology, leadership dynamics, and organisational culture influence the effectiveness of digital initiatives. The study also considers structural factors, such as legislative gaps, resource limitations, and institutional fragmentation, which shape the context in which digital transformation occurs. The objectives of the study are threefold:

- Examine patterns of employee interaction with digital systems in South Africa's public sector, including adoption, resistance, and workaround behaviours.
- Identify behavioural and cultural factors that mediate governance outcomes, including leadership engagement, organisational culture, and digital literacy.
- Propose mechanisms and governance interventions to better align digital initiatives with organisational performance and employee behaviour.

These objectives converge on the central research question:

How does digital transformation influence employee behaviour and, in turn, governance outcomes in post-colonial public institutions?

Addressing this question contributes to both scholarly and policy discourse. On the policy front, it responds to global calls, such as the United Nations E-Government Survey, for investments in digital infrastructure, human capacity, and inclusive e-governance to achieve Sustainable Development Goals (United Nations, 2024). Academically, the study advances understanding of how cultural and behavioural dimensions mediate technology adoption in post-colonial settings, where conventional technology-focused reform agendas may overlook human factors. The problem in South Africa is both structural and cultural. Without taking into account the human element, which includes employee behaviours, informal practices, and digital literacy, technological investments by themselves cannot result in better governance. These difficulties are exacerbated by the lack of thorough legislative frameworks for digital transformation (Shibambu & Ngoepe, 2025). The sustainability and efficacy of digital transformation projects, on the other hand, may be improved by integrated strategies that incorporate leadership involvement, training, institutional incentives, and culturally aware interventions. The ultimate goal of this research is to offer theoretical and

empirical understanding of the connection between employee behaviour in South Africa's public sector and digital transformation. By doing this, it seeks to provide practical suggestions that close the gap between technology and human practice, thereby promoting more accountable, transparent, and efficient governance in post-colonial settings.

LITERATURE REVIEW

In the public sector, digital transformation has become a key tactic for improving institutional efficiency, governance, and service delivery. The push for digitalization in South Africa is a comprehensive endeavour that touches on organizational, cultural, and historical factors rather than just being a technological change. Although the potential advantages of digital transformation are well known, their realization depends on a number of interrelated elements, such as organizational culture, leadership, employee behaviour, and technology infrastructure. This review of the literature explores the various facets of digital transformation in South African public institutions, looking at how technology and human factors interact and stressing the opportunities and difficulties that come with this revolutionary process.

Framing Digital Transformation in the Public Sector

The term "digital transformation" describes how digital technologies are fully incorporated into every aspect of public administration, radically altering how services are provided, procedures are run, and institutions engage with the public. Digital transformation goes beyond simply implementing new technologies; it also involves rearranging institutional frameworks, workflows, and organizational structures to properly use digital tools. Technology advancements, adjustments to organizational procedures, and conformity to more extensive policy and regulatory frameworks are all components of this multifaceted transition (Heeks, 2020; Shibambu & Ngoepe, 2024). Heeks (2020) emphasizes that successful digital transformation requires alignment across three critical dimensions: technological, organizational, and institutional. The technological dimension involves deploying digital tools, infrastructure, and platforms capable of supporting efficient operations and citizen engagement. The organizational dimension addresses changes in institutional structures, processes, and workplace culture to facilitate adoption and utilization of digital systems. The institutional dimension encompasses the legal, regulatory, and policy environments that govern public sector activities, including data protection, digital service mandates, and interoperability standards. Misalignment in any of these dimensions can lead to fragmented initiatives, inefficiencies, and suboptimal governance outcomes.

This multifaceted alignment is regularly upset in South Africa by historical injustices and infrastructure issues. According to research, a lack of IT infrastructure, human resource capacity, and training opportunities make it difficult for historically disadvantaged institutions (HDIs), such as many local government departments and rural municipalities, to adopt digital technologies (Moyo & Dlamini, 2023). These differences are a lasting effect of resource marginalization and underinvestment during the apartheid era. As a result, HDIs find it difficult to keep up with technological developments, which exacerbates structural inequities in access to digital public services and maintains gaps in service delivery (Nkosi & Chikandiwa, 2023). Fragmented digital strategies compound these challenges. Shibambu and Ngoepe (2024) note that South African public agencies often pursue digital initiatives in isolation, lacking cohesive policy frameworks and coordinated implementation plans. Departments may adopt ad-hoc digital solutions, ranging from automated workflows to e-record systems, without ensuring interoperability or integration with national digital service platforms. This fragmentation limits efficiency gains, increases operational complexity, and undermines the broader goal of a unified, digitally-enabled public sector.

The State Information Technology Agency (SITA), which is tasked with managing and facilitating digital government services, is a prime example of institutional fragmentation. SITA has faced ongoing budgetary limitations, difficulties coordinating across government agencies, and worries about cybersecurity and data privacy (Hammond et al., 2024). These problems hinder system dependability, hinder scalability, and undermine public confidence in digital services. Further underscoring the susceptibility of digital transformation initiatives to governance instability is the agency's inability to prioritize projects and maintain a consistent roadmap in the face of frequent leadership changes and shifting political directives (Shibambu & Ngoepe, 2024). Rapid technological evolution introduces additional complexity. Public institutions often struggle to keep pace with innovations such as cloud computing, AI-driven analytics, and mobile service delivery platforms. Outdated IT systems, lack of interoperability, and inconsistent adoption practices limit the benefits of technological investments. Integrating new technologies into existing infrastructure without disrupting service delivery remains a persistent challenge, particularly in resource-constrained municipalities (Mokgolo & Nkomo, 2023).

Furthermore, the process of digital transformation is intrinsically socio-technical. Improved governance outcomes cannot be ensured solely by technological tools; institutional norms, employee behaviour, and organizational culture all have an equal impact. Even well-designed digital platforms can be undermined by informal practices, resistance to change, and

low digital literacy. The need for a comprehensive, context-sensitive approach to digital transformation is highlighted by the interaction between technology and human factors (Heeks, 2020; Nkosi & Chikandiwa, 2023). In conclusion, the public sector in South Africa has a great deal of room to improve service delivery, accountability, and efficiency through digital transformation. However, achieving these potential calls for integrated approaches that match institutional frameworks, organizational capabilities, and technology investments. Addressing historical inequalities, investing in digital infrastructure and human capacity, fostering coordinated policies, and promoting a culture of digital adoption are essential for achieving sustainable transformation. Only by attending to both the technical and human dimensions can South African public institutions fully harness the benefits of digital transformation.

Employee Behaviour: The Human Factor in Digital Transformation

The success of digital transformation is largely dependent on the human factor, even though technological infrastructure is essential. Adoption of digital systems is still significantly hampered by resistance to change, which is frequently based on status-quo bias. Technology adoption is hampered by psychological inertia, which is typified by a resistance to giving up accustomed routines, unless it is addressed with incentives and change management techniques (Heeks, 2020; Shibambu & Ngoepe, 2024). Employees in the public sector in South Africa usually only partially adopt digital tools, preferring offline communication channels like phone conversations, handwritten notes, or in-person meetings, particularly when digital systems are seen as being unwieldy. Data transparency and reliability are further compromised by selective reporting and retroactive updates to digital systems (Africa's Public Service Delivery Review, 2023). This phenomenon is particularly evident in institutions with limited digital literacy and inadequate training programs. Leadership plays a critical mediating role in influencing employee behaviour towards digital adoption. In legislative settings, digital leaders navigated outdated policy landscapes during the pandemic, reshaping parliamentary procedures and investing in capacity building and infrastructure to enable remote operations. Their proactive approach facilitated smoother transitions and greater acceptance among employees. However, the success of such initiatives is contingent upon the establishment of a supportive organizational culture that encourages innovation and adaptability (Shibambu & Ngoepe, 2024; Hammond et al., 2024).

The significance of digital leadership in promoting employee engagement and performance has been highlighted by recent studies. For example, job crafting, where employees proactively alter their work roles to better align with their skills and interests, is one way that

digital leadership fosters employee innovative performance. In addition to improving job satisfaction, this strategy helps make digital transformation initiatives more successful overall (Nguyen et al., 2023; Scholtz & Moyo, 2022). Furthermore, the implementation of resilience-building programs has been shown to equip employees with tools to persevere through challenges and setbacks related to technology adoption. Such programs are particularly beneficial in culturally diverse contexts, where acknowledging and respecting cultural backgrounds can enhance the effectiveness of technology adoption strategies (Nkosi & Mbatha, 2024). The success of digital transformation in the public sector depends heavily on human factors, even though technological advancements are crucial. Fostering an environment that is favourable to digital adoption requires addressing employee resistance through effective leadership, training, and support systems. Public sector organizations can improve service delivery and organizational performance by giving the human element top priority in their digital transformation initiatives.

Digital Literacy, Inclusion, and the Digital Divide

Digital literacy has emerged as a fundamental prerequisite for meaningful digital transformation in public institutions. It encompasses the knowledge, skills, and competencies required to navigate digital environments effectively, engage with online services, and critically evaluate digital information (Heeks, 2020). In South Africa, the government has recognised the critical role of digital literacy in fostering equitable access to public services and bridging the digital divide. The launch of South African Digital Literacy Day in October 2024 illustrates a national effort to elevate digital competencies among both citizens and institutions. Organised by the Library and Information Association of South Africa (LIASA) under UNESCO's Global Media and Information Literacy framework, this initiative highlights the importance of collaborative literacy-building across government departments, academic institutions, and civil society (Redfame, 2024). Such programs aim to create a digitally literate citizenry capable of engaging with e-government platforms, accessing information efficiently, and participating meaningfully in digital governance. The digital divide in South Africa is still a major problem in spite of these initiatives. Access to digital technologies is still shaped by historical injustices, rural-urban divides, and economic marginalization. The lack of suitable devices and dependable internet connectivity in many rural communities restricts access to digital platforms and reduces the reach of e-governance programs (Moyo & Dlamini, 2023). Internet service providers' monopolistic tactics and the uneven distribution of infrastructure further widen these disparities, resulting in a situation where those with digital connections gain disproportionately while marginalized groups

continue to be excluded. Infrastructure alone is not enough to achieve digital inclusion, as studies reveal that even in urban areas, the cost of devices and data continues to be a major obstacle to equitable access (Nkosi & Chikandiwa, 2023).

Language barriers further deepen digital exclusion. Many digital platforms in South Africa primarily operate in English and Afrikaans, marginalising speakers of African languages. While some software now includes translations for Zulu, Xhosa, and Sesotho, dozens of other local languages remain unsupported, limiting usability and access for large segments of the population (Mokgolo & Nkomo, 2023). This linguistic exclusion not only reduces participation in digital services but also perpetuates historical inequities in education and public administration, as citizens are unable to engage fully with information and services that are not available in their first language. Digital literacy is not only a matter of individual skills but also institutional capacity. Many public sector employees lack adequate training to navigate and manage digital platforms effectively. This gap affects the quality-of-service delivery, as employees may struggle with tasks such as e-record management, online citizen engagement, and data analysis. Recent studies suggest that continuous professional development programs, combined with incentives for digital adoption, can improve both employee competence and public trust in digital systems (Shibambu & Ngoepe, 2024). For South Africa's digital transformation to be successful, digital literacy and inclusivity are essential. Although there is a deliberate effort to close the gap, the effectiveness of national programs like Digital Literacy Day is still constrained by linguistic barriers, economic disparities, infrastructure gaps, and structural inequalities. Coordinated efforts are needed to address institutional and citizen literacy, lessen infrastructure disparities, and create multilingual platforms that take into account the nation's linguistic diversity in order to achieve an inclusive digital transformation. South Africa can only progress toward a fair, digitally enabled public sector that can provide effective, transparent, and easily accessible services by addressing these interrelated issues.

Informal Practices, Organisational Culture, and Legacy Norms

The success of digital transformation in public institutions is greatly influenced by organizational culture, especially in post-colonial settings like South Africa. The bureaucratic and hierarchical structures that were left over from colonial and apartheid administrations are still present in many public sector organizations. These structures incorporate legacy norms, deference to authority, and informal channels of communication that frequently clash with the formal procedures needed by digital systems (Ncube & Manyika, 2022). For example, employees prefer to use personal relationships to navigate

workflows, so informal networks often avoid digital protocols. This conduct perpetuates inefficiencies and unequal service delivery outcomes by undermining the standardization and transparency that digital transformation seeks to establish. According to research, resistance to formal protocols and attitudes of bureaucratic privilege are still common in South African e-governance initiatives. Staff often engage in selective compliance, using digital tools only when convenient or when directly monitored by supervisors, while reverting to traditional, informal methods for routine tasks (Ncube & Manyika, 2022). Such practices highlight the central tension between technology and entrenched human behaviours: digital systems may provide enhanced record-keeping, accountability, and process automation, yet their benefits are contingent upon employee alignment with prescribed workflows.

Masuda, Tshuma, and Sibanda (2022) observe that local municipalities hold significant potential to leverage digital technologies for improved service delivery by integrating citizen expectations, regulatory requirements, and operational efficiency targets. However, this potential frequently falters due to fragmented leadership, reactive planning, and a lack of strategic vision. Municipal leaders often implement digital solutions in an ad-hoc manner, responding to immediate pressures rather than embedding systemic changes. Consequently, digital rollouts remain superficial, limited in scope, and poorly integrated across departments, which constrains their long-term impact on governance outcomes. Heeks's (2020) concept of "adverse digital incorporation" provides a useful lens for understanding these dynamics in the global South. Heeks warns that digital platforms, if implemented without attention to socio-cultural and institutional realities, can inadvertently reinforce existing inequalities. In such cases, digital inclusion initiatives may allow already privileged groups to extract greater value from technological systems, while less advantaged employees and citizens remain marginalized. This phenomenon is evident in South African public institutions, where resource-rich municipalities and well-trained staff are better able to navigate digital tools, leaving under-resourced municipalities and employees at a disadvantage (Africa's Public Service Delivery Review, 2023).

The interplay between informal practices, organisational culture, and legacy norms thus represents a critical barrier to digital transformation. Overcoming these barriers requires more than technology deployment; it necessitates a holistic approach that addresses institutional culture, employee behaviour, and leadership practices. Empirical studies suggest that organisations that foster participatory decision-making, accountability, and collaborative cultures are more likely to achieve effective digital adoption (Shibambu & Ngoepe, 2024). Leadership is particularly important: managers who actively model the use of digital tools,

enforce compliance with protocols, and provide continuous training create an environment where formal digital processes are respected and internalized by staff. Furthermore, aligning digital initiatives with organisational culture involves recognizing informal practices rather than attempting to eliminate them entirely. For example, hybrid workflows that integrate formal digital systems with informal communication channels can maintain operational efficiency while respecting established behavioural norms (Mokgolo & Nkomo, 2023). Such strategies enable institutions to harness the advantages of digital technologies without alienating staff or disrupting long-standing work practices. The success or failure of digital transformation in post-colonial public institutions is largely determined by legacy norms, ingrained organizational culture, and informal practices. Both technological innovation and careful consideration of cultural and human factors are necessary for effective digital adoption. Strategic leadership, culturally aware policies, and flexible implementation techniques that respect the realities of legacy systems while fostering fair and effective service delivery are all necessary to meet these challenges. The full potential of digital transformation in South African public institutions can only be achieved by incorporating behavioural and cultural factors.

THEORETICAL FRAMEWORK

The conceptual framing of this study draws on three complementary theoretical lenses: New Public Management (NPM) Theory, Organisational Discipline Theory (ODT), and Sociomateriality Theory. Together, these frameworks enable a multidimensional analysis of digital transformation in South African public institutions, situating technology adoption within the broader interplay of governance imperatives, employee behaviour, and institutional culture.

New Public Management (NPM) Theory

As a paradigm shift in public administration, NPM arose in the late 20th century and promoted the use of private-sector management techniques to boost government performance, accountability, and efficiency (Hood, 1991). It places a strong emphasis on decentralized decision-making, citizen-centred services, and quantifiable results. The drive for e-government, data-driven performance monitoring, and process automation as instruments for accountability and transparency in the digital age has strengthened NPM (Christensen & Laegreid, 2023). Policies that prioritize efficiency, cost reduction, and quantifiable service outcomes are clear examples of NPM-informed reforms in South Africa. The implementation of workflow automation, integrated financial management systems, and

e-governance platforms demonstrates the NPM theory that digital tools are tools for increased accountability and rationalization (Ngobeni & Ojo, 2023). However, scholars argue that the South African context reveals the limitations of a “pure” NPM model. Persistent structural inequalities, weak oversight capacity, and entrenched informal practices often blunt the expected efficiency gains of digitalisation (Mafini & Makhubele, 2022). The conflict between the managerialist philosophy of NPM and the sociopolitical conditions of post-colonial states is highlighted by recent research. Christensen and Laegreid (2023), for example, demonstrate how NPM-framed digital governance reforms frequently undervalue behavioural and cultural resistance, leading to inconsistent results. Because employees in South Africa still prefer informal reporting channels or hierarchical clearance systems, digital performance dashboards and service tracking systems are occasionally underutilized (Shibambu & Ngoepe, 2025). Efficiency, accountability, and service delivery are the governance goals of digital transformation, and NPM offers a critical lens for understanding these goals. However, it must be examined in light of the institutional and behavioural dynamics that influence its implementation.

Organisational Discipline Theory (ODT)

Organizational Discipline Theory offers a framework for comprehending internal compliance, deviance, and the continuation of informal practices within bureaucracies, whereas NPM concentrates on external governance goals. According to ODT, organizational order is largely maintained by rules, procedures, and disciplinary measures; however, employees frequently negotiate, defy, or oppose these regulations in ways that impact results (Sitkin & Bies, 1993). Formal regulations and deeply ingrained informal norms frequently coexist in post-colonial bureaucracies, creating hybrid systems of practice. For instance, in South Africa, people occasionally circumvent digital record-keeping systems by using email or WhatsApp to speed up decision-making, or manual registers are kept alongside electronic databases as “backup” (Mokgolo & Nkomo, 2023). These practices reflect not merely resistance but adaptive strategies shaped by institutional culture and resource constraints. Informal practices frequently cover the gaps left by strict bureaucratic procedures or inadequate technological systems, according to research conducted in African public institutions (Ayee, 2022). They may, however, also compromise accountability by opening the door to selective compliance and ineffective administration. For example, Ngoepe and Shibambu (2025) show how arbitrary protocol adherence undermines digital transformation in South African government by decreasing standardization and allowing for poor management. Therefore, ODT offers a useful lens through which to view the relationship

between employee behaviour in digital environments and disciplinary structures and rule adherence. It draws attention to how resistance, unofficial workarounds, and cultural legacies can moderate the effects of technological reforms.

Sociomateriality Theory

The inseparability of technology and human action is examined by Sociomateriality Theory, whereas NPM and ODT emphasize managerial and behavioural aspects. Sociomateriality, which has its roots in information systems research, asserts that human practices and digital tools are intertwined; technologies are not passive artifacts but actively influence and are influenced by social contexts (Orlikowski & Scott, 2008). When examining the digital transformation of public institutions, this viewpoint is especially pertinent. For instance, by establishing traceable digital footprints, workflow management systems not only organize the way workers complete tasks but also reinterpret accountability relationships. Employees, on the other hand, influence governance outcomes by selectively adopting, improvising, and resisting these technologies (Baxter et al., 2022). The sociomaterial nature of digitalization is highlighted by recent research conducted in South Africa. Ndevu (2024) demonstrates how municipal employees collaborate to create digital platforms for citizen engagement, incorporating informal practices and regional cultural norms into system operation. According to research on e-health information systems in South Africa, organizational cultures, staff digital literacy, and infrastructure deficiencies all influence how systems are actually used, frequently in ways that deviate from their formal design (Phakathi & Moyo, 2023). This study takes into consideration the co-production of digital transformation by utilizing sociomateriality: digital systems are not merely implemented; rather, they are negotiated and enacted in practice. As a result, this framework grounds both ODT's emphasis on rules and NPM's emphasis on efficiency in an understanding of how technology and behaviour are mutually shaped.

Integrative Value of the Three Frameworks

Individually, each framework provides valuable insights. Collectively, they form a multidimensional lens to analyse the intersection of digital transformation, employee behaviour, and governance outcomes:

- NPM Theory clarifies the governance imperatives, efficiency, accountability, and performance, that motivate digital transformation.
- ODT reveals how organisational rules, informal practices, and behavioural dynamics mediate technology adoption within bureaucracies.

- Sociomateriality Theory situates these dynamics within the co-constitutive relationship between technology and human behaviour.

When combined, the frameworks enable this study to examine not only the goals of digitalization (NPM), but also the cultural and behavioural realities of its application (ODT) and the ways in which technology and practice are co-shaped (sociomateriality). For post-colonial contexts like South Africa, where digital initiatives must be understood within the legacies of bureaucratic culture, inequality, and socio-technical negotiation, this triangulated theoretical foundation is crucial.

METHODOLOGY

This study employed a qualitative, desk-based research design to examine the interplay between digital transformation, employee behaviour, and governance outcomes in South African public institutions. A desk-based approach was considered appropriate as it allows for the systematic interrogation of existing knowledge without direct engagement with human participants, thereby avoiding the ethical complexities associated with field-based research.

Data Sources

Peer-reviewed journal articles, government reports, policy briefs, and digital transformation strategies published between 2020 and 2025 were among the primary sources of secondary data used in the study. Although comparative insights from other post-colonial settings were also included to enhance the analytical depth, special attention was paid to sources that specifically address the context of public administration in South Africa. Using academic databases like Scopus, Web of Science, and Sabinet as well as organizational repositories like the Department of Public Service and Administration (DPSA) and the Auditor-General of South Africa (AGSA), a systematic search procedure was used to gather the data.

Inclusion and Exclusion Criteria

The inclusion criteria targeted publications that addressed (1) digital transformation in public institutions, (2) employee behaviour or organisational culture in governance contexts, and (3) governance outcomes linked to technology adoption. Sources not directly engaging with these themes, or those published prior to 2020, were excluded to ensure both relevance and contemporaneity.

Data Analysis

The six-step framework developed by Braun and Clarke (2021) was used to thematically analyse the gathered documents. This required getting to know the data, creating preliminary codes, looking for themes, evaluating themes, defining and labelling themes, and creating the

final synthesis. Patterns of digital technology adoption, informal practices and resistance, institutional culture and leadership, and governance performance outcomes were among the major themes found.

Rationale for Approach

The qualitative, desk-based design was chosen because it acknowledges the sociopolitical context that influences governance dynamics and allows for a critical examination of the dispersed literature on digitalization and employee behaviour in South Africa. The study avoided an over-reliance on a single viewpoint by ensuring the breadth and credibility of its findings by triangulating insights from a variety of secondary sources.

Ethical Considerations

As the study relied exclusively on publicly available secondary data, no ethical clearance was required. Nonetheless, care was taken to acknowledge all sources appropriately and to critically evaluate the reliability, validity, and biases inherent in different types of documents.

RESULTS

Employee behaviour is a key mediating factor in the complex and interdependent relationship between digital transformation initiatives and governance outcomes in South African public institutions, according to the analysis. The full realization of governance goals is still dependent on employee practices being in line with institutional policies and technological systems, even though the introduction of digital tools has clearly improved procedural efficiency and accountability. These results imply that digital transformation is a socio-technical process that necessitates careful evaluation of organizational and behavioural aspects rather than being solely a technical endeavour.

Enhanced Procedural Efficiency and Accountability

Workflow efficiency, record-keeping accuracy, and procedural accountability have all improved noticeably as a result of public institutions implementing digital platforms and tools. Workflow automation software, digital reporting platforms, and electronic document management systems have simplified administrative procedures, cutting down on document circulation delays and allowing for more stringent oversight of adherence to set procedures. In particular, digital audit trails have improved transparency by giving supervisors and oversight bodies a transparent, up-to-date record of deviations from standard operating procedures. This reduces the possibility of data manipulation or omission (Heeks, 2020). In South African public institutions, these technological interventions have yielded tangible benefits where adoption has been comprehensive and aligned with organisational processes.

Departments that successfully integrate digital tools into routine operations report faster document processing times, lower administrative errors, and improved traceability of service delivery activities. For instance, the use of integrated digital workflows in municipal planning offices has reduced the turnaround time for permit approvals, ensuring that citizens experience more timely and accountable service delivery (Mokgolo & Nkomo, 2023). Such improvements also facilitate better performance monitoring, allowing managers to identify bottlenecks, enforce compliance, and optimise resource allocation in real-time. These outcomes align with the principles of New Public Management (NPM), which emphasise efficiency, accountability, and performance measurement as central pillars of effective public service administration (Christensen & Lægreid, 2023).

Digital tools have improved procedural accountability in addition to efficiency. More thorough oversight procedures are made possible by systems that log user actions, highlight unfinished work, and offer audit-ready logs. This lowers the possibility of malpractice and fosters a culture of accountability. To support managerial oversight and external audits, departments can use automated reporting systems to create compliance dashboards that show unprocessed requests or missed deadlines (Shibambu & Ngoepe, 2025). By proving that processes are open and regularly reviewed, the integration of such systems not only ensures compliance with standard operating procedures but also boosts public confidence. Despite these gains, the realisation of benefits remains uneven across departments and institutions. Several studies indicate that variations in leadership support, organisational culture, and employee capacity significantly influence the degree to which digital initiatives achieve their intended outcomes. Departments with leaders who actively model the use of digital platforms, provide guidance, and incentivise compliance tend to achieve higher adoption rates and more consistent governance outcomes (Shibambu, 2024; Nkosi & Chikandiwa, 2023). Conversely, in environments with weak leadership engagement or a culture resistant to change, digital adoption is often superficial. Employees may continue to rely on manual processes or informal practices, thereby undermining efficiency gains and accountability measures. In such cases, digital systems are underutilised, and the potential for real-time monitoring and auditability is diminished.

A key mediating factor in determining procedural efficiency is employee digital literacy. Employees who are unfamiliar with digital tools may find it difficult to use complex systems and may turn to selective engagement or workarounds that jeopardize system integrity and data accuracy. Digital competency is highly correlated with the speed and accuracy of service delivery, according to national surveys of public service ICT adoption. This

highlights the significance of focused training programs and capacity-building initiatives to supplement technological investments (Moyo & Dlamini, 2023). Institutional factors such as legacy IT infrastructure, interdepartmental coordination, and policy fragmentation can impede the effectiveness of digital interventions. Departments constrained by outdated systems or incompatible software platforms experience delays and errors even when staff are competent and motivated to use digital tools. Fragmented implementation strategies, often resulting from the absence of coherent legislative or policy frameworks, exacerbate these inefficiencies, highlighting the importance of coordinated, government-wide digital transformation plans (Shibambu & Ngeope, 2025). In conclusion, digital platforms have the potential to significantly enhance procedural efficiency and accountability in public institutions. Where adoption is comprehensive, aligned with workflows, and supported by leadership and digital literacy initiatives, measurable improvements in service delivery and governance are evident. However, uneven implementation, cultural resistance, and capacity gaps can dilute these benefits. Effective digital transformation, therefore, requires not only the deployment of technological tools but also strategic attention to leadership, organisational culture, employee competence, and institutional coordination.

Persistence of Informal Practices

Informal work practices are still widely used in many South African public institutions, despite the efficiency improvements provided by digital systems. When digital systems are viewed as unwieldy, unreliable, or technically complex, employees often adopt digital tools only partially, preferring offline communication methods like phone calls, handwritten notes, or in-person interactions. Employees have created these workarounds as adaptive strategies to deal with resource limitations, hierarchical organizational structures, and bureaucratic inefficiencies (Musekiwa, Lubinga, & Masiya, 2025). These unofficial methods act as coping strategies, allowing workers to continue working in settings where digital systems are not completely integrated, reliable, or easy to use. A common manifestation of informal practices is selective reporting; whereby digital systems are updated only partially or retrospectively. In these cases, official records fail to accurately capture operational realities, undermining the reliability of the data used for performance monitoring, decision-making, and accountability mechanisms. For example, municipal service delivery reports are sometimes backdated or partially completed to meet deadlines, resulting in discrepancies between recorded data and actual operations. This selective engagement reduces the effectiveness of digital systems for long-term strategic planning, policy evaluation, and

governance oversight, highlighting the risks of relying solely on technological solutions without addressing behavioural dimensions (Ndevu, 2024).

The continuation of informal practices in South African public institutions can be attributed to a number of factors. Historical and sociocultural legacies ingrained in post-colonial bureaucracies are important. Many workers still value traditional forms of communication, hierarchical approval processes, and interpersonal relationships more than formal digital processes, particularly in situations where previous governance structures did not place a strong emphasis on following formalized or digital processes (Ngobeni & Ojo, 2023). This supports findings from organizational behaviour research that, even in the face of advanced technology infrastructure, deeply rooted professional practices and cultural norms can supersede official regulations and policies (Chikandiwa, Nkosi, & Manyaka, 2022). Leadership dynamics and organisational culture further reinforce informal practices. In departments where supervisors tolerate, overlook, or implicitly endorse workarounds, employees are more likely to continue bypassing formal digital procedures. Conversely, where leadership actively models the use of digital tools, enforces compliance, and provides consistent training and support, the prevalence of informal practices diminishes (Shibambu, 2024). Thus, the effectiveness of digital transformation is not purely a matter of system design or technological availability but is intimately linked to managerial oversight, cultural reinforcement, and behavioural incentives. Informal practices are also shaped by digital literacy levels. Employees with limited skills or confidence in using digital tools often rely on colleagues for support, maintain paper-based records, or delay updates in electronic systems. Such patterns not only impede operational efficiency but also create unequal adoption rates across teams and departments, exacerbating the digital divide within institutions (Moyo & Dlamini, 2023). This phenomenon underscores the need for targeted capacity-building interventions, including tailored training programs and mentoring systems, to ensure that employees can confidently and consistently use digital platforms.

It's important to remember that informal practices are not always harmful. In some situations, these procedures offer adaptive flexibility, enabling organizations to continue operating even when there are system failures, unfinished digital workflows, or infrastructure limitations. When routine operations are disrupted by software or connectivity issues, for instance, handwritten notes and interpersonal coordination can serve as temporary buffers. But when informal methods take the place of formal procedures and become ingrained, they run the risk of compromising the very accountability, transparency, and efficiency that digital transformation aims to attain (Nkosi & Chikandiwa, 2023). From a governance perspective,

these findings highlight the critical importance of socio-technical approaches to digital transformation. Technology implementation must be accompanied by interventions that address human behaviour, cultural norms, leadership practices, and digital literacy. Policies that recognise the inevitability of informal practices while incentivising compliance with formal digital protocols are more likely to succeed. For instance, hybrid reporting systems, phased digital rollouts, and continuous capacity development can bridge the gap between existing practices and desired technological outcomes. Technology by itself cannot ensure better governance results, as evidenced by the continued use of informal practices in South African public institutions. Employees' interactions with digital systems are mediated by a combination of leadership behaviours, digital literacy, hierarchical organizational structures, and cultural norms. To ensure that efficiency, transparency, and accountability are realized in practice, policymakers and administrators must embrace integrated strategies that take into account both the technological infrastructure and the human factors that influence its adoption in order to achieve meaningful digital transformation.

Determinants of Adoption Success

The successful adoption of digital systems in public institutions is influenced by multiple interrelated factors, with leadership support, organisational culture, and digital literacy emerging as the most significant determinants. These elements operate both independently and interactively, shaping how employees engage with digital platforms and, ultimately, how governance objectives are realised.

Leadership Support

In order for digital systems to be adopted and used consistently, leadership is essential. Greater employee compliance, digital tool engagement, and organizational alignment with transformation goals are all facilitated by strong leadership commitment. Adoption rates were significantly greater in departments with leaders who actively modelled the use of digital systems, provided funding for infrastructure and training, and implemented accountability measures (Shibambu, 2024). Workers in such settings are encouraged to actively use new tools because they view digital initiatives as strategic priorities that management has approved and supported, rather than just administrative requirements. Conversely, weak leadership oversight undermines digital transformation efforts. When senior managers fail to prioritise digital adoption, provide insufficient resources, or do not enforce accountability for compliance, employees are more likely to resist change or continue informal practices, such as paper-based reporting and selective updates (Nkosi & Chikandiwa, 2023). The absence of executive support can result in fragmented adoption,

where some units engage with systems while others revert to legacy workflows, diminishing both efficiency and data reliability. This observation aligns with broader research in public sector ICT adoption, which highlights leadership engagement as a critical enabler of organisational change and behavioural alignment (Chikandiwa, Nkosi, & Manyaka, 2022). Leadership support also extends to the strategic communication of digital transformation objectives. When leaders articulate a clear vision, link system adoption to tangible benefits for employees and citizens, and provide ongoing feedback, employees are more likely to internalise the importance of digital compliance. Additionally, leaders who address resistance constructively, through training, incentives, and participatory decision-making, create an environment conducive to sustained adoption (Shibambu & Ngeope, 2025).

Organisational Culture

Another important factor influencing the adoption of technology is the culture of the organization. Digital system integration is frequently hampered by bureaucratic, inflexible, and hierarchical cultures. Employees are trained to adhere to traditional workflows, decision-making is centralized, and approvals are delayed in such settings, which restricts the use of new technologies. The persistence of informal workarounds reduces the efficacy of digital initiatives and reinforces legacy practices (Musekiwa, Lubinga, & Masiya, 2025). On the other hand, companies with innovative, cooperative, and flexible cultures have a higher chance of successfully implementing digital technology. Employees are encouraged to share knowledge, try out new digital tools, and help each other learn new systems in these environments. Such cultures value continuous improvement, tolerate calculated risks, and recognise employee contributions to digital innovation. Research indicates that institutions with such characteristics experience higher rates of system utilisation, better data integrity, and improved service delivery outcomes (Moyo & Dlamini, 2023). Organisational culture also interacts with leadership behaviours. Even technically competent leaders may struggle to drive adoption in cultures resistant to change, highlighting that cultural transformation must accompany digital investments. Mechanisms such as participatory decision-making, recognition programs for digital compliance, and the promotion of innovation champions can facilitate cultural shifts that enhance adoption and integration of digital platforms (Nkosi & Chikandiwa, 2023).

Digital Literacy

Meaningful adoption requires digital literacy, which is the capacity to use digital tools and platforms with competence and assurance. Employees' varying levels of digital proficiency frequently lead to differences in how they interact with new systems. Employees with

adequate technical proficiency use digital tools regularly, record data precisely, and take advantage of system features to optimize workflow. On the other hand, workers who lack digital literacy might selectively update systems, rely on coworkers, or switch back to manual procedures, which would lead to inconsistent data and decreased system effectiveness (Moyo & Dlamini, 2023). Digital literacy is specifically acknowledged as being crucial for the transformation of the public sector in the Digital Government Policy Framework (2024). To improve employees' abilities, it suggests mentorship, continuous professional development, and organized, context-specific training programs. Such initiatives ensure that digital tools are not merely installed but actively utilised to improve service delivery and governance outcomes. Additionally, digital literacy programs can bridge generational and educational divides within institutions, reducing disparities in adoption and promoting inclusivity (Nkosi & Chikandiwa, 2023).

Interplay of Determinants

Leadership support, organisational culture, and digital literacy do not operate in isolation; they interact to influence adoption outcomes. For instance, even highly digitally literate employees may underutilise systems in the absence of leadership endorsement or in rigid, hierarchical cultures. Similarly, adaptive organisational cultures can encourage learning and experimentation, but without adequate digital skills, employees cannot fully leverage the capabilities of new platforms. This interplay underscores the need for integrated approaches to digital transformation, where technological deployment is synchronised with behavioural, cultural, and capacity-building interventions (Chikandiwa et al., 2022; Shibambu & Ngope, 2025).

Interplay of Behavioural and Technological Factors

The examination of South African public institutions demonstrates that better governance outcomes cannot be ensured by digital tools alone. Although technology platforms can improve data management, increase transparency, and streamline workflows, their effects are mediated by how well employee behaviour and system protocols align. Regardless of how advanced or accessible digital systems are, intended outcomes, like accountability, efficiency, and procedural compliance, remain jeopardized in environments where informal practices predominate (Phakathi & Moyo, 2023). The study shows that employees engage with digital platforms in ways shaped by historical bureaucratic norms, organisational hierarchies, and socio-cultural practices. For instance, selective reporting, reliance on face-to-face interactions, and partial adoption of systems often coexist alongside formal digital processes. These behaviours, while adaptive in some instances, can significantly diminish the benefits of

digital transformation by producing inconsistent data, delaying decision-making, and undermining auditability (Musekiwa, Lubinga, & Masiya, 2025; Ndevu, 2024). Such patterns reflect the enduring influence of post-colonial administrative cultures, where interpersonal networks and hierarchical approval channels historically took precedence over formal procedural compliance (Ngobeni & Ojo, 2023). Conversely, the research identifies contexts in which behavioural and technological factors are synergistically aligned. Strong leadership, supportive organisational culture, and adequate digital literacy collectively enhance the adoption and effective utilisation of digital systems. In these environments, employees not only comply with system protocols but also engage proactively, providing feedback, suggesting improvements, and using platforms to optimise service delivery. Such alignment has been associated with higher compliance rates, more accurate record management, and measurable improvements in service delivery outcomes (Shibambu & Ngoepe, 2025).

These results are in line with the Sociomateriality Theory, which holds that human behavior and technology are mutually constitutive (Orlikowski & Scott, 2008). Technologies are not neutral instruments; user behavior, perceptions, and interpretations all influence how effective they are. Employees influence how digital systems work through improvisation, informal adaptations, and selective engagement, proving that technological prowess and human behavior interact to co-create governance outcomes. This viewpoint is supported by recent research on digitalization in the public sector, which demonstrates that in order to comprehend adoption dynamics and impact, system design, organizational context, and user behavior must all be taken into account simultaneously (Moyo & Dlamini, 2023; Nkosi & Chikandiwa, 2023). Leadership emerges as a particularly critical factor in aligning behavioural and technological elements. Leaders who actively model system use, communicate strategic objectives, and provide training and support create an environment where employees perceive digital adoption as legitimate and necessary. By contrast, absent or inconsistent leadership fosters resistance and reinforces informal practices, demonstrating that technological sophistication alone cannot compensate for managerial deficiencies (Shibambu, 2024). Organisational culture similarly mediates the interaction between behaviour and technology. Institutions that promote collaboration, experimentation, and learning tend to achieve greater integration of digital tools, as employees feel empowered to explore functionalities and adapt processes without fear of sanction. Conversely, rigid bureaucratic cultures, characterised by hierarchical control and low tolerance for deviation, inhibit experimentation and reinforce reliance on legacy processes, reducing the impact of digital systems on governance outcomes (Musekiwa et al., 2025). Digital literacy acts as a

third key enabler in this interplay. Employees with higher digital competencies engage more confidently and consistently with systems, improving data quality, operational efficiency, and accountability. Conversely, low digital literacy contributes to workarounds, delays, and uneven system utilisation, highlighting the need for targeted capacity-building programs as an integral component of any digital transformation strategy (Digital Government Policy Framework, 2024).

Crucially, there is dynamic rather than static interaction between behavioural and technological factors. Informal practices may decline and system effectiveness may rise as staff members learn new procedures, observe peer compliance, and become more accustomed to the systems. The constant balancing act between technology and human behaviour is demonstrated by the resurgence of informal workarounds in response to technological disruptions, subpar system design, or leadership changes (Phakathi & Moyo, 2023). The study concludes by emphasizing the need for a comprehensive strategy to meet the goals of digital transformation in South African public institutions. Strategies that address employee behaviour, organizational culture, and digital literacy must be implemented in tandem with technological investments. Public institutions can only achieve improved service delivery outcomes, dependable record-keeping, and increased compliance when these factors are in harmony. This integrated perspective contributes to public administration scholarship by highlighting the socio-technical nature of governance in post-colonial contexts and provides actionable insights for policymakers seeking to optimise digital transformation initiatives (Orlikowski & Scott, 2008; Shibambu & Ngope, 2025; Phakathi & Moyo, 2023).

DISCUSSION

The findings of this study highlight the complex, interdependent relationship between digital transformation, employee behaviour, and governance outcomes in South African public institutions. While the adoption of digital tools has demonstrable benefits, improving procedural efficiency, record-keeping accuracy, and accountability, these advantages are not automatically realised without careful consideration of human and organisational factors.

Behaviour as a Mediating Factor

The study affirms that employee behaviour is a critical mediator in the success of digital transformation initiatives, which is in line with previous research (Shibambu & Ngope, 2025). Despite the availability of sophisticated technology, informal practices such as selective use of digital systems, reliance on offline communication, and partial adherence to reporting protocols continue to exist. Technical innovation alone cannot overcome

institutional inertia or ingrained hierarchical practices, as these behaviours reflect ingrained cultural norms and bureaucratic legacies (Musekiwa, Lubinga, & Masiya, 2025). The persistence of informal practices aligns with Organisational Discipline Theory (Sitkin & Bies, 1993), which posits that employees actively negotiate between formal rules and practical exigencies. In the South African context, this negotiation often manifests as adaptive workarounds designed to manage inefficiencies or fill gaps left by incomplete digital infrastructures (Ndevu, 2024). While these strategies may facilitate day-to-day operations, they inadvertently undermine governance objectives, particularly in areas such as data integrity, transparency, and standardised service delivery.

Leadership, Organisational Culture, and Digital Literacy

According to the study, digital literacy, organizational culture, and leadership support are important factors that influence successful digital adoption. While weak leadership leads to a continued reliance on informal practices, strong, visible leadership that supports digital tools encourages compliance and lowers resistance (Shibambu, 2024). Organizational culture also influences adoption; collaborative and adaptable cultures encourage experimentation and system use, while hierarchical and inflexible bureaucracies impede digital integration (Mokgolo & Nkomo, 2023). Echoing findings from the Digital Government Policy Framework (2024), digital literacy emerged as a critical factor. Higher digitally competent employees are more likely to use digital systems to their full potential, whereas less proficient employees are more likely to rely on coworkers or unofficial networks, which leads to inconsistent data collection and partial adoption. These findings reinforce the argument that capacity-building and training are not ancillary but central to the effectiveness of digital transformation initiatives (Phakathi & Moyo, 2023).

Linking Technology and Behaviour in Post-Colonial Contexts

By clearly tying behavioural aspects to the use of technology in post-colonial public administration, the study adds to the body of existing literature. Prior studies have mostly concentrated on technical adoption or policy frameworks, frequently underestimating the socio-historical, cultural, and behavioural factors that influence results (Heeks, 2020; Ncube & Manyika, 2022). This study shows that governance goals are only partially met if digital initiatives are not in line with employee incentives, cultural norms, and practical capacity. By emphasizing how technology and human behaviour are co-constituted, sociomateriality theory offers a helpful lens through which to view these dynamics (Orlikowski & Scott, 2008). The design, implementation, and use of digital systems are inextricably linked to

organizational norms, human practices, and sociopolitical realities; they do not function in a vacuum. The study shows that employees actively shape digital systems through selective use, improvisation, and informal adaptations, which can either reinforce or undermine intended governance outcomes (Baxter, Jack, & Thapa, 2022).

Policy and Practice Implications

The results have a number of applications. To improve staff members' digital literacy and system confidence, digital initiatives must first be supported by focused capacity-building programs. Second, to promote adherence to digital protocols, organizations should put behavioural alignment strategies into place, such as reward and recognition programs. Third, developing digital champions who reinforce accountability and set an example for system use should be the main goal of leadership development in order to generate cultural momentum for change. Lastly, it is important to strategically incorporate informal practices into formal processes whenever possible, utilizing employees' adaptable behaviours to improve operational resilience.

Theoretical Contributions

The study contributes to public administration scholarship by bridging three previously siloed perspectives: governance-focused efficiency (NPM), behavioural compliance and rule negotiation (ODT), and socio-technical entanglement (Sociomateriality). By demonstrating how these frameworks interact, it provides a richer understanding of why digital transformation outcomes vary in post-colonial public institutions.

Conclusion of Discussion

The study concludes by emphasizing that digital transformation is a socio-technical endeavour, meaning that technology by itself cannot produce better governance results. The effectiveness of digital initiatives is mediated by employee behaviour, which is influenced by organizational, historical, and cultural factors. To fully realize the potential of technology in improving public sector performance, digital transformation strategies must be in line with behavioural incentives, capacity-building initiatives, and adaptable organizational cultures.

CONCLUSION

This study examined the interplay between digital transformation, employee behaviour, and governance outcomes in South African public institutions. The analysis demonstrates that while digital technologies, such as e-governance platforms, workflow automation, and digital record-keeping, enhance procedural efficiency, transparency, and accountability, their

effectiveness is significantly mediated by human and organisational factors. Employee behaviour, shaped by legacy bureaucratic norms, informal practices, leadership influence, and digital literacy, emerged as a decisive determinant of whether governance objectives are realised. Findings indicate that informal practices, including partial adoption of digital systems, reliance on offline communication, and selective reporting, persist despite technological advancements. These behaviours, while often adaptive in contexts of resource constraints or infrastructural challenges, can undermine the potential benefits of digital transformation. Leadership support, organisational culture, and capacity-building initiatives were identified as critical enablers of successful adoption, highlighting the socio-technical nature of public sector digitalisation.

The study contributes to public administration scholarship by explicitly linking behavioural dimensions with technology implementation in a post-colonial context. While prior research has largely focused on technical adoption or policy frameworks, this study demonstrates that employee behaviour and institutional culture are central to achieving governance outcomes. Applying a triangulated theoretical framework, comprising New Public Management (NPM), Organisational Discipline Theory (ODT), and Sociomateriality Theory, provides a multidimensional understanding of how digital initiatives interact with human and organisational factors to influence efficiency, accountability, and service delivery. Based on these insights, the study recommends five key strategies for enhancing digital transformation in the public sector: implementing targeted digital literacy and training programs; developing incentive structures to encourage adherence to digital protocols; integrating informal work practices into governance strategies; strengthening leadership support for digital initiatives; and establishing ongoing monitoring and evaluation mechanisms. Collectively, these measures promote a socio-technical approach, recognising that technology, behaviour, and culture are inseparable in shaping public sector outcomes.

In conclusion, digital transformation in post-colonial public institutions is not merely a technological endeavour but a complex socio-technical process. Effective governance outcomes require alignment between digital initiatives and human behaviour, organisational culture, and leadership support. By integrating these dimensions, South African public institutions can realise the full potential of digital tools, enhancing operational efficiency, accountability, and citizen-centred service delivery, while providing a model for other post-colonial contexts navigating similar challenges.

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