

Digital Transformation in Human Resource Management: A Qualitative Study on Implementation, Challenges, and Impact on Employee Performance at BPS Surabaya

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Histori Naskah:

Submit: 99-00-9999
Accepted: 99-00-9999
Published: 99-00-9999



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Abstrak:The rapid advancement of digital technology has significantly influenced public sector institutions, including human resource management (HRM) processes. BPS Surabaya, as a government statistical agency, has adopted various digital platforms to improve efficiency, transparency, and data accuracy in employee management. This research aims to explore the forms of digital transformation implementation in HRM, identify its supporting and inhibiting factors, and analyze its impact on employee performance. A qualitative phenomenological approach was employed to gain a deep understanding of employee experiences. Data were collected through in-depth interviews with 28 respondents from different roles within BPS Surabaya. The data were analyzed using NVivo software to generate thematic coding and network visualizations that highlight key patterns and relationships. Findings show that digital tools such as SIMPEG, FASIH, KipApps, SRIKANDI, and digital attendance systems play a central role in reshaping HR practices. These applications contribute to increased efficiency, real-time monitoring, and data-driven decision-making. Supporting factors include infrastructure readiness, leadership commitment, responsive IT support, and adaptive employee attitudes. Inhibiting factors involve overlapping systems, lack of integrated platforms, limited training, and inconsistent digital literacy levels among staff. Digital transformation has improved data accuracy, accountability, motivation, and overall performance. Despite challenges, the transformation has created a more structured and transparent work environment. Sustainable success requires continued system integration, targeted training, and human-centered leadership strategies.

Keywords: digital transformation, human resource management, employee performance

Introduction

The rapid advancement of information and communication technology over the past few decades has reshaped how individuals and organizations operate, interact, and perform daily functions (Agustina,2024). Digital transformation has emerged as a strategic process that utilizes digital technologies to enhance operational efficiency, stimulate innovation, and facilitate adaptation to ever-changing environments(Asrul,2024). This transformation goes beyond adopting new tools; it entails a profound shift in organizational structures, workflows, and cultures to align with the digital age. Digital transformation encompasses various dimensions, including automation of routine tasks, integration of digital platforms into services and products, data-driven decision-making, and seamless digital interaction between institutions and their stakeholders. In the era of the Fourth Industrial Revolution (Industry 4.0), digitalization has become a global phenomenon that significantly affects the design and implementation of strategies, including human resource management (HRM) in both public and private sectors. The dynamic, competitive environment requires organizations to move beyond traditional paradigms and embrace technology-driven operations(Bernstein,2019).

Human resource management, being a critical component of organizational performance, is equally affected by digital transformation. The application of digital technologies in HRM includes electronic recruitment platforms, online training systems, digital attendance and performance evaluation tools, and integrated personnel databases. These systems aim to streamline administrative processes, enhance transparency, and support real-time performance monitoring (Busro,2018). Moreover, they enable continuous learning and upskilling of employees through e-learning platforms and virtual collaboration tools. Public sector institutions, traditionally known for bureaucratic rigidity, are also under increasing pressure to digitalize their services to ensure transparency, efficiency, and accountability (Destiana,2023). The integration of digital technologies in public service delivery has become a vital requirement to meet citizen expectations and improve institutional responsiveness. Government agencies are expected to implement digital tools that enhance governance, increase public trust, and accelerate administrative processes.

Badan Pusat Statistik (BPS), the Central Statistics Agency of Indonesia, is a non-ministerial governmental body mandated to provide statistical data for development planning and policy formulation. As a data-centric organization, BPS is expected to maintain accuracy, reliability, and timeliness in its data delivery. These expectations necessitate the adoption of advanced technological systems that support digital transformation at both central and regional levels. Law No. 16 of 1997 on Statistics reinforces BPS's strategic role in national development through accurate and accountable data (Feri,2020). BPS Kota Surabaya, operating under the BPS Provincial Office of East Java, faces considerable demands in supplying reliable data in a highly dynamic urban environment. Digitalization within the agency has been implemented across several key HRM functions(Nurhasanah,2024). The use of digital attendance systems, SRIKANDI (an integrated archival system), KipApp (a web-based performance management application), FASIH (a mobile-compatible survey management tool), e-learning platforms, and STATCALL (a digital data consultation service) represents the agency's commitment to technological integration. These tools are complemented by a comprehensive human resource information system (HRIS) that facilitates personnel administration.

Digital systems in HRM have improved the efficiency of administrative tasks that were previously manual, time-consuming, and prone to errors. Processes such as attendance recording, document tracking, and performance reporting can now be conducted in real time with higher accuracy(Fika,2024). Digital transformation also supports employee development through access to remote training and self-directed learning resources (Hayati,2023). These advancements are designed to enhance overall organizational efficiency and individual employee performance. Despite the promising benefits of digitalization, the success of digital transformation does not solely depend on the availability of technology. Organizational readiness, employee willingness, and leadership support play critical roles in ensuring successful implementation. Several challenges have been identified, including resistance to change, limited digital literacy among staff, outdated infrastructure, slow internet connectivity, system fragmentation, and cybersecurity concerns(Pramitasari,2025). These issues can hinder the effective use of digital tools and create disparities in performance outcomes.

BPS Kota Surabaya, as a public institution, is expected to navigate these challenges effectively to avoid superficial implementation and instead achieve meaningful improvements in service delivery and employee performance. Comprehensive analysis is required to evaluate the current status of digital transformation in HRM, identify enabling and constraining factors, and assess its real impact on performance indicators(Krisnawati,2016). Such insights will inform better decision-making and strategic planning to strengthen the digital transformation agenda. The integration of digital tools into HRM has led to a reconfiguration of organizational routines, a shift in workplace culture, and the emergence of new expectations around employee accountability and agility(Sempo,2024). Employees are now required to adapt to transparent, measurable, and outcome-oriented performance systems. Managers are expected to leverage data analytics in decision-making and foster a culture of digital literacy and continuous improvement.

BPS Kota Surabaya provides a valuable case study to explore how public sector institutions in Indonesia are adapting to digital transformation. The agency's experience reveals both the potential and complexity of implementing digital tools in HRM. Feedback from staff indicates that while many aspects of their work have become more efficient and data-driven, challenges remain related to training, system usability, and integration across platforms. Additionally, the diversity in digital readiness among employees creates varying levels of engagement and effectiveness in using new systems. Understanding the nuanced impact of digital transformation requires a qualitative approach that captures the lived experiences, perceptions, and responses of employees across different levels of the organization(Suryono,2019). The role of leadership, infrastructure, institutional culture, and individual adaptability needs to be examined holistically to develop a more effective digital HRM strategy.

This research addresses a gap in existing studies that often focus on private sector digital transformation or limit the analysis to policy frameworks without assessing actual implementation outcomes. By focusing on BPS Kota Surabaya, the study offers contextualized insights into the realities of digital transformation in public HRM systems, highlighting specific tools, challenges, and implications for employee performance. The findings will contribute to both theoretical and practical understandings of digital transformation in the public sector. Theoretically, the study will expand existing models by integrating concepts of organizational

change, digital competency, performance management, and technology adoption. Practically, it will inform the development of targeted interventions such as comprehensive training programs, system integration strategies, and support mechanisms for digital inclusion.

Future transformation efforts must balance technological innovation with human-centered strategies that consider employee engagement, learning curves, and organizational values. Digital transformation in HRM should not merely aim for automation but should foster a culture of continuous improvement, collaboration, and innovation. Ensuring equitable access to digital resources and opportunities is essential to achieving inclusive and sustainable change. BPS Kota Surabaya's initiative reflects the broader imperative for government institutions in Indonesia to align with national digitalization goals. Through research, reflection, and policy refinement, digital transformation can serve as a catalyst for public sector excellence, transparency, and responsiveness in the 21st century.

Literature Study

2.1 Digital Transformation in Human Resource Management

Digital transformation refers to the comprehensive process of integrating digital technologies across all aspects of an organization, leading to fundamental changes in operational models, workplace culture, and value creation (Habsi,2024). Digital transformation is not limited to technological tools but encompasses shifts in organizational behavior, decision-making, and interaction patterns. Big data analytics, artificial intelligence (AI), cloud computing, and the Internet of Things (IoT) are among the most influential technologies driving this change in the public and private sectors alike. In human resource management (HRM), digital transformation manifests through the adoption of e-HRM practices(Hakim,2024). These practices include online recruitment platforms, digital performance appraisal systems, electronic attendance tracking, virtual learning modules, and integrated personnel databases. E-HRM enhances transparency, accelerates administrative processes, and allows real-time performance tracking. It also supports data-driven decision-making and reduces paperwork, contributing to improved organizational agility(Hasmawaty,2022). The adoption of digital HR systems transforms traditional HR roles. HR departments no longer function solely as administrative units but evolve into strategic enablers of workforce capability. This shift emphasizes the need for digital literacy among employees and the development of digital leadership competencies. Employee experience, self-service platforms, and automated workflows become central features of modern HR practices.

Method

This study adopted a qualitative research approach using a phenomenological design to explore how digital transformation in human resource management (HRM) affects employee performance at the Central Statistics Agency (BPS) of Surabaya. Phenomenology allows for an in-depth understanding of lived experiences and individual perceptions. This approach provides the opportunity to capture subjective meanings, attitudes, and emotional responses of employees who directly experience the transition from manual to digital systems within the institutional context. The objective of this research was to explore the implementation of digital HRM tools, identify supporting and inhibiting factors, and assess their impact on performance outcomes. The research was designed to address the complexity of organizational change by integrating individual, managerial, and technological dimensions through interpretive analysis.

Twenty-eight employees participated in the study, representing various functional roles, including statisticians, IT officers, administrative staff, and team leaders. The diversity of positions ensured that multiple perspectives were included, which enriched the findings. Participants were selected using purposive sampling based on their active involvement in using digital systems such as SIMPEG, SRIKANDI, KipApp, FASIH, and the digital attendance system. Data were collected through in-depth semi-structured interviews. Each session lasted approximately 45–60 minutes and was conducted face-to-face or virtually using secure platforms. Interview questions were designed to elicit detailed responses regarding experiences, challenges, perceptions, and outcomes of digital transformation in the workplace. Open-ended questions allowed participants to express their views freely while enabling the researcher to probe specific themes when necessary. All interviews were recorded with the participants' consent and transcribed verbatim. Field notes were also taken to capture non-verbal cues and contextual observations. In addition to interviews, supporting documents were reviewed, including institutional reports, internal guidelines, training modules, and digital application user manuals. Document analysis complemented interview data by providing contextual evidence about digital policy implementation and technological adoption.

Data were analyzed using NVivo, a qualitative data analysis software that facilitates systematic coding, categorization, and thematic synthesis. NVivo enabled the researcher to manage large volumes of textual data and identify recurring patterns across participant responses. Thematic analysis was employed as the primary method to extract core themes, subthemes, and relationships among them. The coding process began with an initial reading of all transcripts to become familiar with the data. Segments relevant to the research questions were labeled using descriptive codes. These codes were then grouped into broader categories that represented key themes, such as “ease of access,” “performance improvement,” “digital resistance,” and “infrastructure barriers.” Each code was grounded in the data and supported by direct quotations from participants.

Subsequent rounds of analysis involved refining themes, identifying relationships between nodes, and comparing data across participant roles. Visual tools in NVivo, such as node trees and matrix coding queries, were used to explore co-occurrences and thematic densities. The analysis generated several dominant themes, including efficiency gains, increased transparency, adaptation difficulties, leadership support, and system integration issues. Triangulation was applied by comparing interview data with documentation and secondary sources. This strategy enhanced the validity of findings and reduced the risk of bias. Member checking was conducted by sharing preliminary interpretations with several participants to verify accuracy and credibility. Feedback confirmed that the interpretations accurately reflected the participants' experiences and views.

Ethical considerations were upheld throughout the research process. Informed consent was obtained from all participants before data collection. Participants were informed of the study's objectives, confidentiality measures, and their right to withdraw at any point. Identifying information was anonymized, and all data were securely stored to protect privacy. Ethical approval was secured from the relevant institutional review board prior to the commencement of fieldwork. Trustworthiness was further strengthened by applying Lincoln and Guba's criteria of credibility, dependability, transferability, and confirmability. Credibility was achieved through

prolonged engagement with the research context and persistent observation of participant narratives. Dependability was addressed by maintaining detailed audit trails of the research process. Transferability was facilitated by providing rich descriptions of the organizational setting, participant demographics, and contextual factors. Confirmability was ensured by keeping reflective journals and memos that documented analytic decisions and researcher positioning.

The choice of qualitative methodology enabled a rich exploration of the sociotechnical dynamics involved in the digitalization of HRM. Quantitative methods would have limited the ability to capture subjective nuances, especially those related to emotional responses, personal values, and cultural perceptions of digital transformation. Phenomenology provided the lens to understand how individuals interpret and internalize organizational change based on their unique experiences. NVivo offered a robust platform for managing and analyzing qualitative data. Its capabilities in visualization, thematic clustering, and cross-case analysis enhanced analytic depth and clarity. The use of this software also supported transparency and reproducibility of the research process, aligning with academic standards for rigor in qualitative inquiry.

Findings from this study are expected to inform strategic decision-making at BPS Surabaya and other public institutions undergoing similar transformations. Insights from the lived experiences of employees provide practical guidance for designing digital systems that align with user needs, organizational culture, and policy objectives. Furthermore, this methodology offers a replicable framework for future studies exploring the intersection of technology, human behavior, and institutional performance. This research contributes to the growing body of literature on public sector digitalization by offering empirical evidence grounded in real-world organizational settings. Through a methodologically rigorous approach, it bridges the gap between technological implementation and human-centered adaptation processes.

Result

Insights gathered from a series of in-depth interviews with staff members at BPS Surabaya confirm that the implementation of digital transformation in human resource management has had a notable impact on daily workflows, organizational culture, and employee performance. Respondents highlighted both the benefits and challenges of the transition, revealing a nuanced picture of technological adaptation within a government agency. One respondent, Nur Arsywati Huda, shared her personal experience on Wednesday, June 19, 2025, at 09.00 WIB. She expressed that digital transformation significantly streamlined daily activities, particularly in relation to attendance tracking and data access. She noted increased transparency and speed, although the initial phase posed difficulties due to uneven training provisions. Many employees had to independently navigate the systems without formal guidance, leading to varied adaptation speeds among staff.

Another perspective was offered by Retno Larasati, interviewed at 10.30 WIB on the same day. She acknowledged that applications like SIMPEG and KipApps made performance monitoring more efficient. Challenges remained, especially the overlapping functionalities across platforms, which caused confusion among users. The presence of multiple systems with similar purposes created inefficiencies and cognitive overload. Setyorini Indah P. reinforced the observation that digital tools increased operational efficiency. She emphasized the need for

structured assistance during the implementation phase. A significant number of employees lacked direct training and instead relied on peer learning. This informal support network compensated for gaps in institutional training programs, yet it revealed the absence of a standardized onboarding approach for digital tools.

Respondents consistently mentioned five primary applications SIMPEG, FASIH, KipApps, SRIKANDI, and the digital attendance system as the core instruments of transformation. These platforms have contributed to increased data accuracy, real-time reporting, and more agile decision-making. Despite the overall benefits, concerns regarding fragmentation and redundancy were frequently raised. Alfian Rosyadi, a Junior Computer Analyst, noted that previous workflows were entirely manual. Real-time system access improved information reliability and speed. Yet, the disconnected nature of digital systems forced employees to enter similar data into multiple platforms. Integration was proposed as a solution to reduce workload duplication and optimize efficiency.

Bilal Ali Maghshar Sri Muljono, a Junior Statistician, echoed this sentiment. While he acknowledged the advantages of digital applications, he highlighted inconsistent levels of digital literacy among employees. The variation in adaptability created disparities in system usage. Comprehensive training programs were recommended to ensure equitable engagement and system mastery. Cultural shifts were also observed. Bagus Wahyu Purnomo stated that work culture became more disciplined and structured. The requirement for every activity to be documented enhanced accountability but increased psychological pressure for some employees. Respondents reported elevated stress levels due to the constant demand for documentation and transparency. Norma Di Madya emphasized the role of leadership in fostering successful transformation. She reported that supervisors actively encouraged the use of digital systems and frequently provided technical guidance. Despite this support, she argued for the establishment of dedicated technical support teams at each unit to ensure continuous assistance and reduce reliance on ad hoc solutions.

Documentation demands emerged as a double-edged sword. While administrative workload decreased, the intensity of digital reporting sometimes caused mental fatigue. Nurcholis explained that administrative duties became less time-consuming, but the pressure to record every detail meticulously led to increased stress levels, especially when system failures occurred or deadlines converged. Motivational aspects were also widely discussed. Raden Rara Nurariza described a sense of increased motivation due to transparent performance evaluations. Knowing that performance was measurable and visible to management created a perception of fairness. The system allowed employees to see tangible recognition of their efforts, which in turn encouraged them to perform better.

Falah Hardiman offered a critical reflection. He pointed out that while systems could support motivation, they could not replace intrinsic drivers or a supportive work environment. Motivation, he argued, stems primarily from internal purpose and social dynamics within the team. Digital tools function best as complements, not substitutes. Infrastructure readiness emerged as another crucial determinant. Herlina Sri Martanti highlighted that adequate internet connectivity and updated devices are essential. Poor network quality disrupted workflow and reduced overall system effectiveness. Lilik Hariyanti confirmed this concern, stating that server

reliability and stable hardware are prerequisites for optimal application performance. Team dynamics also underwent transformation. Paramitha observed that increased interdependence required greater collaboration across units. Digital synchronization of tasks created a new structure of accountability. Interpersonal interaction, however, declined. Fewer spontaneous conversations and less face-to-face communication were reported, reducing informal bonding among colleagues.

Efficiency gains were among the most frequently cited benefits. Edwin Eriandi mentioned that supervisors could instantly monitor team achievements. Performance evaluations became faster and more accurate due to real-time system access. Delays in manual reporting were eliminated, streamlining decision-making processes. Not all employees shared the same level of comfort. Akhmad Dardiri noted that some colleagues experienced decreased productivity during the transition phase. Lack of familiarity with digital systems created anxiety and slower performance. Gradual acclimatization was necessary, especially for those with limited prior exposure to technology.

Most respondents agreed that digital transformation improved work outcomes across the board. Increased accuracy, enhanced transparency, faster data access, and structured performance monitoring were repeatedly acknowledged. The consistency of these observations suggested a broad organizational impact, although challenges in integration, training, and system overload persisted. Integration was one of the most emphasized suggestions. Rizka Ayu Oktaviani proposed that all systems should be consolidated into a single master platform. Input duplication could be minimized, and employees would not have to navigate between multiple interfaces. Consolidation would also improve user experience and reduce the risk of data inconsistency. Overall, interviews demonstrated that digital transformation at BPS Surabaya had a profound effect on individual and institutional performance. Benefits were clear in terms of efficiency, transparency, and accountability. Implementation challenges were also evident, particularly concerning infrastructure, training, and system coherence.

Most employees acknowledged the value of the digital tools introduced. Yet, successful adoption was contingent upon organizational readiness. Investment in capacity building, infrastructure strengthening, and adaptive leadership were consistently cited as success factors. Interviewees also emphasized the need for psychological support to mitigate stress and enhance employee well-being during transitional periods. The interviews reaffirmed that digital transformation is not merely a technical shift but a comprehensive organizational change. It requires coordinated efforts in system design, employee empowerment, and cultural adjustment. Achieving long-term impact depends not only on technological sophistication but also on managerial sensitivity, collaborative learning, and inclusive implementation. The reflections of staff members at various hierarchical levels offered a holistic view of the transformation process. Their testimonies underscored that while digital tools provide structure and efficiency, human factors remain at the core of successful transformation. Sustainable change, therefore, relies on balancing technological advancement with human-centered leadership and systemic support mechanisms.

Discussion

4.3.1 Forms of Digital Transformation Implementation in Human Resource Management at BPS Surabaya

The implementation of digital transformation in human resource management at BPS Surabaya is identified through seven primary components: the FASIH application, SIMPEG, KipApps, digital presence system, SRIKANDI, interface learning curve, and adaptation processes. These components reflect a systemic and simultaneous transformation process across various work functions. Visualization using NVivo software illustrates a strong interconnection between digital applications, user experience, and adaptation responses of employees. FASIH is the main tool for strategic workforce planning (Maria, 2024). It enables real-time projection of workforce needs, workload distribution, and task allocation based on analytical data. Respondents indicated that the application supports managers in making informed decisions based on workload simulation and digital resource mapping. Workforce planning, previously conducted manually, has become more efficient and data-driven through FASIH. SIMPEG functions as a centralized personnel information system. It stores vital employment records including career history, training data, leave balances, and transfer documentation. Employees highlighted that SIMPEG simplifies personnel administration, providing accurate, instant access to essential records. It also includes reporting features that facilitate internal oversight and performance monitoring by supervisors (Melliasari, 2024). KipApps operates as a digital tool for recording and validating employees' daily work activities. Each task performed must be logged and verified by a direct supervisor. Respondents noted that this system fosters accountability, structure, and evidence-based performance evaluation. Employees described an increase in self-discipline and orderliness since their performance became more visible and measurable through the application.

The digital presence system replaces the traditional manual attendance method. It records exact check-in and check-out times, allowing for remote access under special conditions. Integration with the HR system provides seamless reporting, minimizing attendance fraud and enabling performance tracking based on punctuality. The automation of attendance has enhanced fairness and clarity in recording working hours. SRIKANDI facilitates digital correspondence and document archiving. Incoming and outgoing letters can be registered, tracked, signed electronically, and stored digitally. Respondents shared that the use of SRIKANDI expedites document distribution and reduces the risk of physical document loss. The system also supports environmental sustainability by reducing paper usage and enables traceable communication flows. The learning curve associated with digital systems emerged as a challenge and part of the transformation journey. Respondents explained that some systems required time and repeated exposure to master. Several digital applications were perceived as not immediately intuitive, demanding additional training and peer support. This learning process took place concurrently with daily work obligations, adding a layer of complexity to routine operations.

Adaptation processes encompass behavioral and cultural shifts. Employees accustomed to manual systems gradually transitioned toward digital platforms as primary work tools. Respondents admitted that adjustment required patience, perseverance, and cooperative work environments. Eventually, most staff members were able to adapt through consistent practice and assistance from colleagues, reflecting an evolving digital culture within the institution. NVivo visual analysis revealed that all digital components are highly interconnected. Interview

responses linked multiple systems, indicating that digital transformation was not confined to isolated units but rather influenced the entire HR ecosystem. Applications such as SIMPEG, KipApps, and digital presence featured most frequently in employee narratives, underscoring their daily operational significance. The implementation of digital transformation also triggered a shift in workplace culture. Employees became more conscious of data accuracy, documentation integrity, and timeliness. Each work action now leaves a digital footprint, fostering transparency and organizational accountability. Information flow has become faster and more accessible, supporting rapid decision-making and collaborative work.

Collaboration patterns have improved through shared access to data platforms. Applications serve as real-time communication bridges across departments. Managers can monitor team performance, assign tasks efficiently, and provide timely feedback using standardized dashboards. Employees are empowered to understand expectations, track progress, and align with institutional goals more effectively. A clearer role distribution has emerged from the digital workflow. Employees understand their responsibilities through assigned digital tasks, while managers hold access to monitor and evaluate outputs using system-generated evidence. Performance management has transitioned from subjective judgment to data-backed assessments, promoting meritocracy and performance-based recognition. A paradigm shift in HR management has become evident. Digital tools now form the foundation for workforce planning, process documentation, and output assessment. Decisions are supported by real-time data rather than assumptions or manual interpretation. This reinforces a data-centric culture where accuracy and efficiency guide managerial practices. Despite significant progress, certain challenges persist. Respondents expressed concern about overlapping functions across multiple applications. Redundancy and confusion may arise when systems are not harmonized. Employees also cited issues such as slow networks, unresponsive servers, and insufficient post-launch training. These technical and human barriers require ongoing attention to ensure transformation goals are met.

NVivo data analysis identified SIMPEG, KipApps, and the digital presence system as the most frequently mentioned tools. These applications directly influence day-to-day operations and are thus central to employees' transformation experiences. The more an application is integrated into daily tasks, the more likely employees are to recognize its impact positively or negatively. Digital transformation has reshaped how employees engage with their duties. Individuals are now required to navigate multiple systems, understand interfaces, and respond to real-time inputs. Digital competency has become an implicit requirement. Employees without prior exposure to such systems often experience slower adaptation, prompting the need for continuous training. Leadership support plays a pivotal role in facilitating digital transition. Respondents acknowledged that consistent guidance, encouragement, and responsiveness from supervisors significantly influenced their willingness to adopt new systems. Where leadership engagement was lacking, employees reported frustration and uncertainty, especially when confronted with system errors or unclear instructions.

Team dynamics also experienced a transformation. Interpersonal communication shifted from informal conversation to platform-mediated exchanges. While some appreciated the clarity and efficiency this brought, others noted a decline in spontaneous collaboration. Restoring team cohesion in digital environments requires intentional efforts such as blended communication strategies and peer-learning forums. Digital tools also reinforced the culture of documentation.

Every activity is now recorded and archived. Employees are held accountable not just for output but also for the process. The transparency embedded in the system allows for easier audits, performance reviews, and organizational learning. Historical data is readily available for forecasting, benchmarking, and strategic planning.

System integration remains a key area for improvement. Reducing fragmentation across digital tools would enhance user experience, minimize duplication, and optimize system performance. Employee feedback strongly suggested the need for a unified dashboard that consolidates all applications into a single access point. In summary, the implementation of digital transformation in human resource management at BPS Surabaya is characterized by the integration of multiple applications, progressive adaptation by employees, and structural changes in work culture. Applications like FASIH, SIMPEG, KipApps, the digital presence system, and SRIKANDI serve not only as tools but as pillars for new organizational practices. Digital transformation has moved beyond technical upgrade to become a fundamental shift in how public sector HR functions shaping work processes, enabling strategic decision-making, and driving organizational accountability.

4.3.2 Supporting and Inhibiting Factors in the Implementation of Digital Transformation in HR Management at BPS Surabaya

The implementation of digital transformation in human resource management at BPS Surabaya is significantly influenced by both enabling and constraining factors. These elements emerge from organizational dynamics, technological infrastructure, employee readiness, and leadership engagement. Qualitative data processed through NVivo reveals a complex interaction between these factors, emphasizing their role in either facilitating or hindering the adoption process. Availability of basic infrastructure is a primary enabler. Employees consistently reported the presence of adequate equipment such as computers, stable internet connections, and internal servers. Regular system maintenance also supports seamless application functionality. These conditions ensure that digital platforms including SIMPEG, KipApps, FASIH, SRIKANDI, and the digital attendance system can operate effectively, without major technical disruptions. Leadership commitment is another critical factor. Respondents emphasized that active involvement from supervisors, clear directives, and visible support accelerated system adoption. Leadership presence created a work environment that encourages digital engagement, especially during the early stages of transformation. Employees expressed a stronger sense of responsibility and motivation when leaders demonstrated seriousness in implementing technological changes.

Employee adaptability emerged as a valuable asset. Staff members who showed a willingness to learn, openness to innovation, and enthusiasm toward digital tools were more likely to integrate the systems into their workflows. Younger employees were frequently identified as digital facilitators who supported peers and contributed to knowledge transfer across teams. This collaborative learning dynamic contributed to smoother adoption of new systems. Responsiveness of the internal IT team was repeatedly acknowledged by participants. The team provided essential support, addressing technical issues, clarifying features, and offering user guidance. Their accessibility and proactive engagement strengthened user confidence in the system. Fast response times and clear communication helped minimize user frustration and ensured continuity in daily operations. Ongoing training efforts further supported the

transformation. Both formal and informal learning activities helped bridge knowledge gaps and enhanced digital literacy. Respondents recognized that although initial training may have been limited, supplementary sessions and peer mentoring were instrumental in helping them understand system operations and functions.

Despite these supportive factors, five major inhibitors challenged the transformation process. Adjustment to new workflows presented a significant barrier. Employees accustomed to manual routines experienced difficulty in aligning with system-based processes (Nafal, 2024). The mental and behavioral shift from traditional to digital work methods required time, internalization, and consistent reinforcement. System accessibility presented another obstacle. Respondents highlighted issues such as unstable network connections, slow server responses, and unavailability of applications during high-traffic periods. These technical limitations reduced work efficiency and caused delays in task completion (Nikmah, 2023). System reliability was identified as a fundamental requirement for successful transformation. Reduction in face-to-face communication was also perceived as a drawback. The shift to digital interaction diminished spontaneous conversations and informal coordination among employees. Respondents noted that interpersonal dynamics, previously supported by physical presence, were replaced by formal, system-based messages. This change impacted team cohesion and reduced opportunities for collaborative problem-solving.

The learning curve for mastering digital interfaces was steep for some employees. Complex terminology, multi-step login procedures, and unfamiliar layouts made it difficult for certain users to operate the systems efficiently. Those less experienced with technology spent more time navigating the applications, which affected task performance and increased anxiety. High system load during peak hours frequently caused performance bottlenecks. Respondents reported data input delays, system crashes, and session interruptions. These challenges disrupted workflows and sometimes resulted in loss of progress, requiring tasks to be repeated. The lack of system scalability was cited as a significant technical issue that needs resolution. NVivo network visualization indicated that the themes “adequate infrastructure” and “leadership commitment” were the most frequently associated with positive experiences. Conversely, “steep learning curve” and “unstable access” appeared prominently in descriptions of challenges. These findings affirm the dual nature of transformation as both a technical and human process (Vernia, 2020). Several respondents proposed improvements including tiered training tailored to different competency levels and regular system evaluations to prevent overlap in application functions. Suggestions also included upgrading servers and bandwidth capacity to support the increasing demand for digital services. Organizational communication strategies were recommended to rebuild social cohesion and support informal collaboration in digital contexts. The success of digital transformation at BPS Surabaya rests on the organization's ability to leverage enabling factors while addressing inhibiting ones. Awareness of both dimensions is critical to sustaining meaningful, inclusive, and efficient digital HR practices.

4.3.3 Impact of Digital Transformation in HR Management on Employee Performance at BPS Surabaya

The impact of digital transformation on employee performance at BPS Surabaya is evident across multiple dimensions. Insights from 28 respondents, supported by NVivo data mapping, reveal substantial changes in accuracy, accountability, efficiency, and motivation.

These changes reflect both operational improvements and cultural shifts in the workplace. Data accuracy significantly improved. Automated systems reduced manual input errors and increased consistency in records. Respondents stated that digital platforms helped eliminate discrepancies that were common in paper-based processes. The reliability of data supports better decision-making and enhances the integrity of administrative functions.

Work culture underwent transformation. Standardized procedures, data-driven evaluations, and traceable activities cultivated a professional and disciplined work environment. Employees became more accountable, aware of the transparency embedded in each task. The transition to a structured digital framework encouraged critical thinking and continuous self-monitoring(Wahyudi,2023). Ease of access to personal and organizational information was repeatedly cited as a major benefit. Employees could independently view attendance records, performance metrics, and task assignments without bureaucratic delays. Systems like SIMPEG, FASIH, and KipApps provided real-time dashboards, enabling prompt responses to administrative needs.

Adaptation processes were perceived as manageable by most employees. While initial learning posed challenges, interfaces were described as user-friendly after continued use. Peer collaboration and repetition facilitated understanding of system features. The shared learning journey helped foster solidarity and mutual support across teams. Team collaboration improved through digital transparency. Shared access to goals, deadlines, and task updates enabled synchronized work and collective accountability(Witri,2022). Real-time visibility into performance fostered open communication and mutual responsibility, enhancing coordination within and across units. Timeliness of task completion increased. Reminders and status indicators embedded in the systems helped employees stay on schedule. Manual delays caused by physical forms were eliminated. Digital submissions ensured faster validation and documentation, streamlining reporting and reducing backlogs.

Automation accelerated task completion. Data entry, approval processes, and report generation required less time and effort. Repetition of information across formats was eliminated due to integration. Employees focused more on core responsibilities, leading to better task prioritization and outcome orientation. Performance assessments became more objective. Applications like KipApps recorded work activities and outputs in real time. Supervisors could evaluate performance based on actual data rather than subjective impressions. This transparency promoted fairness and motivated employees to demonstrate measurable results. Systematic recording of goals and outcomes became easier. Digital platforms enabled structured planning, monitoring, and evaluation of targets. Employees gained clarity on expectations and timelines(Norliani,2024). This clarity enhanced strategic alignment between individual and organizational goals. Administrative workload decreased significantly. Tasks such as leave requests, attendance logging, and reporting were simplified. Respondents reported time savings that allowed greater focus on analytical and strategic tasks. Reduced paperwork also improved accuracy and reduced the risk of document loss.

Motivation increased. Employees felt acknowledged and validated as their work became visible through the system. Awareness of being monitored and evaluated based on evidence instilled a sense of accountability and pride. Some employees noted an increased sense of

purpose in achieving tangible contributions. Organizational transparency improved. Managers accessed data dashboards to review unit-level performance, identify issues, and intervene promptly. Real-time reporting reduced reliance on delayed manual updates, supporting data-informed leadership practices (Utamy, 2020). Documentation integrity was strengthened. Work histories, communications, and performance records were archived systematically. These records support performance audits, succession planning, and institutional memory, contributing to long-term organizational resilience.

NVivo coding analysis confirmed strong convergence across themes of efficiency, transparency, accuracy, and motivation. Nodes such as “faster performance,” “objective evaluation,” “digital documentation,” and “increased morale” were frequently referenced by respondents. These patterns demonstrate that transformation is not limited to technology, but extends to mindset, behavior, and institutional values. The digital transformation at BPS Surabaya has demonstrably improved employee performance. The integration of digital systems fostered a culture of discipline, accountability, and strategic alignment. Transformation was not merely technological but deeply human, reshaping how individuals perceive, perform, and progress within the organization.

Conclusion

The implementation of digital transformation in human resource management at BPS Surabaya has demonstrated a significant structural shift in the way employee administration, monitoring, and collaboration are conducted. Digital systems such as SIMPEG, FASIH, KipApps, SRIKANDI, and the online attendance platform collectively reflect a systematic approach to modernizing HR functions. These tools have replaced manual procedures, introduced automation, and enhanced transparency and accountability in daily operations. Employee engagement with these platforms illustrates that digital transformation is not merely a technological change, but a reconfiguration of organizational behavior and culture. Several enabling factors were identified as crucial in supporting the success of digital transformation. These included the availability of essential infrastructure, strong leadership commitment, adaptive employee attitudes, responsive IT support, and ongoing training efforts. Together, these elements created an environment conducive to digital adoption and continuous improvement. Conversely, challenges such as inconsistent system accessibility, overlapping application functions, steep learning curves, decreased face-to-face interaction, and increased pressure from documentation were recognized as inhibitors that could hinder the full realization of transformation benefits.

The impact of digital transformation on employee performance was evident across key domains. Employees experienced increased data accuracy, greater efficiency, improved transparency, and enhanced motivation. The ability to track, evaluate, and document performance in real time supported a more structured, accountable, and data-driven work culture. Digital tools enabled both employees and supervisors to align their efforts with institutional goals, leading to faster decision-making and higher productivity. Nonetheless, disparities in digital literacy and infrastructure readiness emphasized the need for ongoing capacity building and system integration.

Thanks to

The author would like to express sincere gratitude to all parties who have supported and contributed to the completion of this research. Special appreciation is extended to the staff and management of BPS Surabaya for their openness, participation, and valuable insights throughout the data collection process. Their willingness to share experiences has been instrumental in providing depth and relevance to the findings. Grateful acknowledgment is also due to academic supervisors and colleagues whose guidance, feedback, and encouragement greatly enriched the research process. The support from family and friends has also been a source of strength and motivation during the completion of this study. Every contribution, whether academic, technical, or emotional, has played a meaningful role in bringing this work to completion. Thank you for your unwavering support.

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