

A Model for Improving Public Service Performance Through Strengthening Digital Competence and Employee Engagement in Local Government Agencies

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ABSTRAK

Penelitian ini mengkaji persoalan rendahnya kualitas pelayanan publik di pemerintah daerah yang dipengaruhi oleh terbatasnya kompetensi digital aparatur serta minimnya keterlibatan pegawai dalam proses kerja. Kondisi ini menyebabkan pelayanan berjalan tidak optimal, lambat beradaptasi dengan perkembangan teknologi, dan kurang responsif terhadap kebutuhan masyarakat. Penelitian ini bertujuan merumuskan model peningkatan kinerja pelayanan publik melalui penguatan kompetensi digital aparatur serta peningkatan keterlibatan pegawai sebagai faktor penggerak perubahan organisasi. Metode yang digunakan adalah studi literatur dalam rentang waktu 2018–2025 dengan analisis isi terhadap berbagai sumber ilmiah terbaru yang membahas pelayanan publik, transformasi digital, dan perilaku organisasi. Hasil penelitian menunjukkan bahwa kompetensi digital aparatur masih belum merata, sementara tingkat kematangan sistem pemerintahan elektronik sebagian besar berada pada kategori sedang. Daerah yang menerapkan digitalisasi secara terencana terbukti mengalami peningkatan signifikan dalam kualitas layanan. Selain itu, keterlibatan pegawai memainkan peran penting dalam mendukung adaptasi teknologi, mempercepat proses kerja, dan mendorong terciptanya inovasi layanan. Kesimpulannya, integrasi penguatan kompetensi digital dan peningkatan keterlibatan pegawai merupakan prasyarat utama bagi pemerintah daerah untuk mewujudkan pelayanan publik yang lebih efektif, cepat, akurat, dan responsif terhadap dinamika kebutuhan masyarakat. Kontribusi akademis penelitian ini terletak pada integrasi kompetensi digital dan employee engagement dalam satu kerangka konseptual yang komprehensif.

ABSTRACT

This study examines the issue of low-quality public services in local governments, influenced by limited digital competence of civil servants and minimal employee involvement in work processes. This condition results in suboptimal service delivery, slow adaptation to technological developments, and a lack of responsiveness to community needs. This study aims to formulate a model for improving public service performance by strengthening digital competence of civil servants and increasing employee engagement as a driving factor for organizational change. The method used is a literature study spanning 2018–2025 with content analysis of various recent scientific sources discussing public services, digital transformation, and organizational behavior. The results show that digital competence of civil servants is still uneven, while the maturity level of e-government systems is mostly in the moderate category. Regions that implement digitalization in a planned manner have been shown to experience significant improvements in service quality. Furthermore, employee engagement plays a crucial role in supporting technological adaptation, accelerating work processes, and encouraging service innovation. Conclusion, the integration of strengthening digital competence, increasing employee engagement is a key prerequisite for local governments to realize more effective, fast, accurate, and responsive public services to the dynamics of community needs. The academic contribution of this study lies in the integration of digital competence and employee engagement within a comprehensive conceptual framework.

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INTRODUCTION

Public service performance is a crucial element in strengthening effective regional governance, especially as the public demands fast and transparent services. In the rapidly evolving digital era, the requirement for technological adaptation is increasingly pressing, both in terms of human resource quality and the service systems used. Improving employee digital competency is one factor that can strengthen agencies' capabilities in delivering responsive public services (Pratama & Frinaldi, 2025).

The success of local governments in implementing digital transformation is mostly influenced by organizational readiness and the support of an innovative work culture. An organizational culture that encourages creativity, collaboration, and adaptability enables employees to optimally utilize technology. Therefore, strengthening digital competency is not only related to technical capabilities but also to the organization's ability to create an environment conducive to change.

Employee engagement is also a determining factor in improving public service performance, especially when employees are allowed to actively participate. When engagement increases, employee motivation and contributions to achieving organizational goals tend to be stronger. This aligns with findings that employee engagement significantly influences employee performance in various local government agencies (Bagasa et al., 2025).

The use of technology-based performance management applications and systems has demonstrated a positive impact on improving service effectiveness. Many local governments have begun integrating digital services as part of their performance improvement strategies, ranging from e-government to application-based reporting systems. This transformation not only requires adequate digital competency but also requires employee engagement to optimize the use of existing technology (Putra et al., 2025).

Emphasized that improving the quality of public services is highly dependent on the synergy between employees' digital capacity and their active participation in the work process (Saputra & Wardana, 2025). Based on this, this study aims to formulate a model for improving public service performance by strengthening digital competencies and employee engagement in local government agencies. The research is purposed to identify key factors influencing performance improvement, analyze the relationships between variables, and produce a model that can be used as a basis for developing policies to improve public services at the regional level. Public service performance is a crucial element in strengthening effective regional governance, particularly when the public demands fast and transparent services.

Figure 1.
Queues at Public Service Offices



Source: Public Documentation (2025)

Practically, various regional government agencies still face problems such as long queues at service offices, shown in figure 1, which is sourced from Publid Documentation (2025), inefficient manual processes, and public complaints regarding service quality. This situation indicates a gap between public expectations and the agency's ability to provide responsive services. In the rapidly evolving digital era, the need for technological adaptation is increasingly pressing, both in terms of human resource quality and the service systems used. Improving employee digital competency is one factor that can strengthen agencies' ability to deliver more effective public services (Pratama & Frinaldi, 2025).

Public service performance is a central issue in public governance, particularly amid increasing demands for fast and transparent services. Digital transformation has therefore become a strategic approach to improving service efficiency; however, international studies emphasize that digital government success depends not only on technology, but also on institutional and human resource readiness (OECD, 2019).

Previous research on public services tends to focus either on digital systems and e-government or on employee engagement as separate determinants of performance. Technology-oriented studies often overlook behavioral factors, while engagement studies rarely link employee behavior to digital transformation processes. This fragmented approach leaves a conceptual gap in explaining how technological capacity and employee behavior jointly influence public service performance.

To address this gap, this study develops a conceptual model that integrates digital competence and employee engagement as complementary drivers of public service performance in local government contexts, contributing to a more coherent understanding of public service improvement in the digital era.

The purpose of this study is to describe and analyze how strengthening digital competencies and employee engagement can improve public service performance in local government agencies. This study also aims to formulate a conceptual model linking these two variables as a basis for improving the quality of public services.

Literature Review

1. Concept of Public Service

Public service is an activity initiated by the government to meet the requirements of the community through responsive, effective, and accountable service delivery. Public service focuses not only on administrative services but also on how the government can provide services that satisfy the public, both in terms of quality, convenience, and speed of service (Dwiyanto, 2018). In the modern context, public services face the challenge of increasing public expectations, particularly regarding transparency and the use of technology to expedite service processes.

Digitalization in the public sector has brought significant changes to service delivery models. (Marande & Akib, 2025) Explained that the use of digital technology enables the government to provide more accessible services, increase process efficiency, and strengthen communication between the government and the public. Therefore, the current concept of public service is closely linked to the government's ability to utilize digital technology to improve the quality of public services.

2. Public Service Performance

Public service performance refers to a crucial aspect of governance. It reflects the ability of government agencies to provide quality, timely services that meet public needs. Factors such as effectiveness, efficiency, responsiveness, and employee technology skills significantly impact the quality of service provided (Moynihan & Pandey, 2018).

Research indicated that public service performance can be improved by strengthening employee digital competencies and increasing employee engagement in the service process. (Espina-Romero, 2025) Emphasized that digital transformation in public institutions can improve coordination, strengthen workflows, and produce faster and more accurate services. Furthermore, Robiyandi et al. (2025) demonstrated that implementing digital performance systems such as e-performance can increase the efficiency and quality of public services at the village level. This demonstrates the importance of integrating digital systems, employee work culture, and management quality to achieve optimal public service performance.

3. Digital Competence of Government Employees

Digital competence of government employees refers to the ability of civil servants to

Understand, operate, and utilize information technology in carrying out their duties. This competence encompasses understanding digital devices, information processing, data security, digital communications, and the ability to adapt to new technologies. In the era of digital transformation, digital competence is a key factor influencing the quality of public services (OECD, 2019).

Demonstrated a strong positive relationship between digital competence and improved service quality and employee performance (Ingsih et al., 2024). Employees with strong digital competence can work more productively, minimize errors, and provide faster service. This aligns with (Rerung et al., 2025) findings, which stated that needs-based training can significantly improve employee technical skills, thus impacting public service performance.

Furthermore, digital literacy is also a crucial component of digital competence. Improving digital literacy helps employees use public service applications effectively and efficiently. With strong digital capabilities, employees are able to respond to changes in the work environment that increasingly demand the use of digital technology as a primary tool in public service.

4. Employee Engagement

Employee engagement is a psychological and emotional state that encourages employees to work enthusiastically, with dedication, and with commitment to the organization. Employee engagement is characterized by active participation, high motivation, and a sense of belonging to the work and institution. In public service delivery, employee engagement plays a strategic role because engaged employees tend to provide higher-quality and more responsive service (Schaufeli et al., 2017).

Revealed that active employee participation in policymaking and public service innovation can increase the success of service transformation (Pratama & Frinaldi, 2025). Employees who feel involved will be motivated to work more optimally and contribute to improving service performance. Digital systems that support performance transparency can increase employee motivation and engagement because they feel more valued and have the space



to contribute.

Employee engagement is also influenced by a collaborative work environment. Innovation forums and inter-agency collaboration, as part of an organizational culture, can drive employee engagement. (Robiyandi et al., 2025) emphasized that collaborative spaces enable employees to contribute ideas and solutions to improve the quality of public services.

Previous Research

Here is some literature that can be used as references:

1. Research from Azhary (2025) with the title: Development of digital competencies of MBKM intern students through an internship program at the Regional Civil Service Agency office of Central Kalimantan Province. Methods: This study implemented a qualitative descriptive approach by observing interns participating in the MBKM program. Data were collected through interviews, observations of internship activities, and documentation of participant activities within government agencies. Results: The study found that hands-on practical experience in a government work environment significantly improved participants' digital competencies. Interns learned to operate digital administration systems, personnel management applications, and technological devices used in public services. These findings confirm that improving digital competencies can be achieved through

Continuous training and learning-by-doing have important implications for improving the effectiveness of human resources in government organizations.

2. Research from (Pratama & Frinaldi, 2025) with the title: Organizational culture innovation and employee participation in improving public service performance: a case study at the Community and Village Empowerment Service of Agam Regency. Methods: The study employed a qualitative case study method through in-depth interviews, observations, and analysis of organizational documents. Respondents included employees, department heads, and relevant stakeholders. Results: This study indicated that an innovative organizational culture, combined with inclusive leadership, can increase employee participation in the public service process. This participation is evident in employee involvement in developing service ideas, innovation forums, and service digitalization. As a result, public service transformation can occur more quickly and be more responsive to community needs. These findings directly support the importance of employee engagement in improving local government service performance.
3. Research from (Manuain et al., 2025) With the title: Technology-Based Change Management: The Potential of Social Media in Public Sector Transformation. Methods: Using qualitative methods with a document analysis approach and interviews with government practitioners who use social media in policy communication. Results: The study found that social media plays a significant role in increasing public engagement and strengthening public trust in government. Platforms such as Facebook, Instagram, and Twitter help officials convey information quickly, educationally, and transparently. In addition, social media-based communication increases two-way interaction between the government and the public, thereby accelerating problem-solving and increasing public service

accountability. This strengthens the role of digital competence in managing government communication.

4. Research from (Jauhari et al., 2025) with the title: Design and Construction of Land Procurement Archive Application to Support Regional Land Management. Method: Using research and development (R&D) methods with a software engineering approach. The research stages include needs analysis, application design, implementation, and system testing. Results: The study indicated that the implementation of the e-archive application can increase the efficiency of land document management by up to 40%. The digital application simplifies the data search process, speeds up administrative flows, and increases transparency because each process is systematically documented in the digital system. These findings proved that the use of information technology contributes significantly to improving the quality of public services, especially in the field of land administration.
5. Research from (Novaria, 2024) With the title: Tracing the Success of QRIS Policy Implementation in Surabaya City's Parking Levy System. Method: A case study implemented a qualitative approach. Data were collected through interviews with field officers, service users, and policy analysis related to the implementation of QRIS in the parking retribution system. Results: The study found that the success of QRIS implementation in parking retribution services is highly dependent on inter-agency coordination, technological readiness, and the level of public acceptance. Digitalization of payments simplified the transaction process, increased transparency of regional revenues, and reduced budget leakage. However, this success requires support for digital training for employees and outreach to the public. These findings provided evidence that institutional collaboration and digital competence play a critical role in the effectiveness of e-government-based services.

Based on the literature review presented, this study has several important novelties. First, this study integrates two key variables: digital competence and employee engagement into a single conceptual model that is directly aimed at improving public service performance in local government. While many previous studies have addressed digital competence or employee engagement separately, few have combined the two as mutually reinforcing factors in the context of public sector digital transformation.

Second, this study offers a more comprehensive approach by positioning digital competence as a technical capacity and employee engagement as an employee's psychological capacity to cope with technological change. This perspective has not been widely explored in Indonesian public service literature.

Third, this study introduces an integrative model that can be used as a basis for developing policies to improve digital-based public services, particularly for local governments still at the intermediate level of Electronic-Based Government System (EBGS) maturity. This model provides a practical contribution in the form of a more measurable direction for strengthening human resources that is relevant to the current demands of digitalized public services.

RESEARCH METHODS

This study uses a literature review approach to analyze a model for improving public service performance through strengthening digital competence and employee engagement in local government agencies. Data collection techniques were conducted through searching various scientific sources, such as accredited national journals, international journals, proceedings, official government reports, and books relevant to the research topic. Literature selection was carried out systematically by considering the most recent publication year, relevance to the research variables, and theoretical contributions of each source. The data sources in this study consist of secondary data, namely data obtained from scientific publications related to digital competence, employee engagement, and public service performance. The literature used was selected based on the criteria of content suitability, suitability to the local government context, and relevance to the research objectives. Data obtained from various literature were analyzed using content analysis (content analysis), a technique for identifying conceptual patterns, variable relationships, and key findings that can form the basis for developing a research model. The analysis was conducted by grouping the literature into key themes: digital competence, employee engagement, and public service performance.

This research uses literature review approach by utilizing data seconds to analyze the model for improving public service performance through strengthening digital competency and employee engagement in local government agencies.

Data collection was carried out systematic through searching for scientific articles originating from accredited national journals, reputable international journals, scientific proceedings, official government reports, and reference books that are relevant to the research topic. The literature search process uses keywords such *as digital competence, employee engagement, public service performance, And e-government*.

Source selection is done based on several things. inclusion criteria, that is:

1. Relevance to research variables (digital competence, employee engagement, and public service performance);
2. Focus on the public sector or local government context;
3. Relatively recent year of publication (last five to seven years); and
4. Theoretical and empirical contributions to the development of digital-based public service models.

The collected data was analyzed using content analysis. The analysis is carried out in several stages, namely:

(1) read and understand all selected literature in depth;

(2) coding of relevant concepts, findings, and key variables;

(3) grouping codes into major themes that reflect the relationship between digital competence, employee engagement, and public service performance; and

(4) synthesize the findings to formulate conceptual model which explains the integrative role of digital competence and employee engagement in improving public service performance.

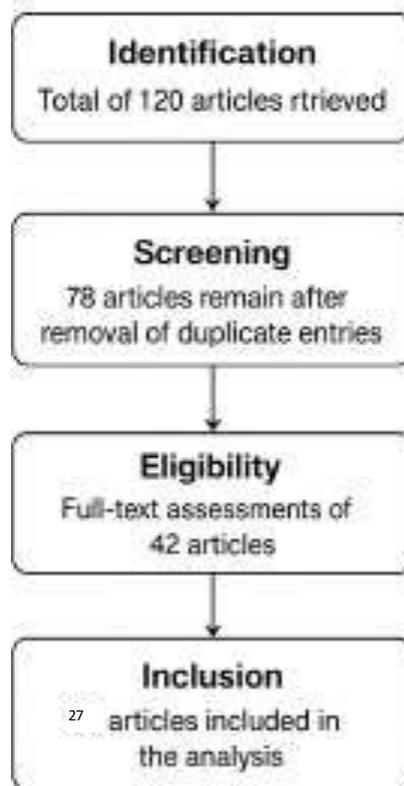
To ensure traceability and transparency of the literature selection process, this research also follows the principles PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) in the stages of identification, screening, eligibility, and inclusion of library sources.

Content Analysis Procedure

The content analysis was conducted through several systematic stages. First, all selected literature was read thoroughly to identify key concepts, definitions, and theoretical perspectives related to digital competence, employee engagement, and public service performance. Second, relevant statements, findings, and conceptual patterns were coded using thematic categories that align with the research variables. These codes were then grouped into broader analytical themes reflecting the relationships between the concepts being studied. Third, the themes were compared across different sources to identify similarities, differences, and emerging trends. This comparative process enabled the identification of recurring patterns and the synthesis of findings that support the development of the proposed conceptual model. Finally, the results of the content analysis were interpreted to conclude the role of digital competence and employee engagement in improving public service performance.

PRISMA Flow Diagram (Literature Screening Process)

Figure 2.
Literature Screening Process



Source: Processed by researchers based on the 2020 PRISMA guidelines (2025)

The literature screening process in this study followed the general principles of the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) framework. The steps included:

1. Identification:

A total of 120 articles were retrieved from journal databases, proceedings, and official reports based on keyword searches related to digital competence, employee engagement, and public service performance.

2. Screening:

After removing duplicate entries, 78 articles remained for further evaluation. Titles and abstracts were screened for relevance to the research topic.

3. Eligibility:

Full-text assessments were conducted on 42 articles to ensure alignment with the inclusion criteria, such as relevance to local government contexts and theoretical contributions.

4. Inclusion:

A final set of 27 articles that met all criteria was included in the analysis to support the formulation of the conceptual model.

RESULTS AND DISCUSSIONS

The literature review reveals that digital competence among local government employees remains uneven, particularly in the areas of information literacy and data management. Several studies indicate that digital communication skills and technology understanding are still developing, especially in regions with limited infrastructure and low digital readiness. Meanwhile, employee engagement consistently emerges as a critical behavioral factor that strengthens the adoption of digital systems, influencing motivation, adaptability, and proactive work behavior.

Furthermore, the synthesis shows that public service performance significantly improves when both digital competence and employee engagement are present. Local governments that implement structured digitalization programs—supported by training, leadership involvement, and clear digital policies—report faster service delivery, reduced errors, and higher citizen satisfaction. These findings collectively highlight the digital transformation in the public sector.

Institutions rely not only on technological capacity but also on human readiness and involvement.

Based on the literature search process, several studies that are most relevant to the focus of the study, namely digital competence, employee engagement, and public service performance, are summarized in the following table:

Table 1.
Summary of Literature Studies Related to Digital Competence, Employee Engagement, and Public Service Performance

No	Researcher & Year	Research Focus	Key Findings	Relevance to Research Model
1	(Dyastari, 2025)	Employee competence and quality of public services	Digital competence is a determining factor in the effectiveness of public services	Strengthening the digital competence variable as a performance

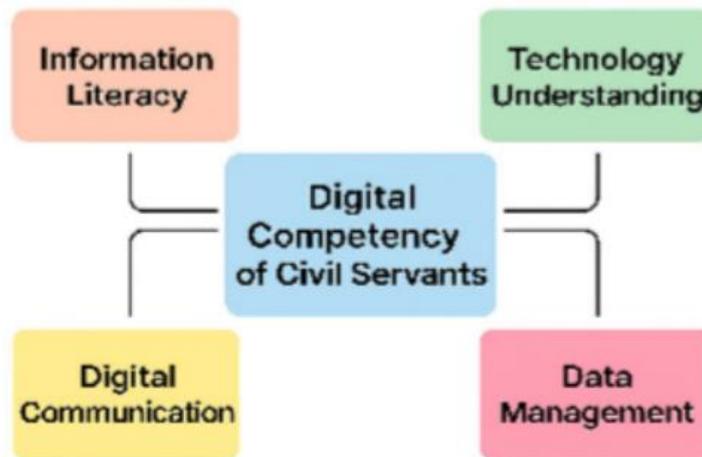
No	Researcher & Year	Research Focus	Key Findings	Relevance to Research Model
				improvement factor
2	(Ingsih et al., 2024)	The role of digital competence in improving service quality	Digital competence has a direct impact on employee performance	Affirming the relationship between digital competence → service performance
3	(Usman et al., 2025)	Digital transformation at the sub-district office	Digitalization increases the accessibility and speed of the public Services.	Supporting the importance of digital transformation as a research context
4	(Bagasa et al., 2025)	Self-efficacy, competence, and employee performance	Competence is significant to performance; employee engagement strengthens its effect	Strengthening the relationship between employee engagement and performance
5	(Pratama & Frinaldi, 2025)	Organizational culture, employee participation and performance	Employee participation improves service quality	Supporting the role of the employee engagement as a key variable
6	(Panggabean et al., 2025)	Effectiveness of the JAKI application in supporting public policy communication	JAKI improves communication efficiency and supports faster, more accurate information delivery	Shows that digital systems enhance work effectiveness, reinforcing the link between digital competence and Service performance
7	(Situmeang et al., 2025)	Digital transformation in application-based public services	Digital systems improve service efficiency but depend on the employee digital skills	Strengthens the link between digital competence and service performance
8	(Bahrum et al., 2025)	The role of the sub-district leaders (camat) in improving ASN performance	Leadership support, supervision, and motivation significantly enhance employee performance	Supports the importance of employee engagement as a driver of improved

No	Researcher & Year	Research Focus	Key Findings	Relevance to Research Model
9	(Hernawati et al., 2025)	ASN competency development strategies	Competence improves through structured training	performance Supports the need for strengthening digital competence
10	(Juniasih et al., 2025)	Public service innovation	Innovation improves service satisfaction	Supports improved public Service performance

Source: Processed Data, 2025

Table 1, Summary of Literature Studies Related to Digital Competence, Employee Engagement, and Public Service Performance, explains that Employee digital competence is a key factor in determining the effectiveness of public services in the digital era. (Dyastari, 2025) pointed out that the quality of public services is highly dependent on employees' ability to operate digital devices and systems that support the services. A similar opinion is expressed by (Ingsih et al., 2024), who emphasized that digital competence not only influences technological understanding but also increases productivity and service accuracy. Digital transformation in local government agencies increasingly emphasizes that technological demands require digitally literate employees. (Usman et al., 2025) Provided an example of how digitalization of services at a sub-district office can accelerate public service processes. Thus, digital competence can be categorized as a key asset in optimizing e-government systems and supporting service innovation.

Figure 3.
ASN Digital Competence (source: KemenPANRB, 2020)



Source: Processed Data, 2025

Figure 3, the ASN Digital Competency Diagram (KemenPANRB, 2020) describes the four main pillars that form the digital capabilities of civil servants, namely information literacy, understanding of technology, digital communication, and data management. These four aspects

demonstrate that digital competence is not only related to technical skills in using applications, but also encompasses the ability to understand, process, and convey information effectively in a digital-based work ecosystem. Information literacy is the foundation for sorting and utilizing data appropriately, while technological understanding reflects ASN's ability to operate digital devices and systems. Digital communication supports faster and more efficient coordination, while data management ensures public services are run based on accurate information. The findings in this diagram align with this study, which emphasizes that strengthening digital competence is a crucial prerequisite for improving public service performance, especially when integrated with employee engagement as a driver for optimizing technology utilization in local government agencies.

Employee involvement plays a crucial role in public service performance. (Bagasa et al., 2025) Noted that employee engagement is a factor that improves the quality of work output and motivates employees to provide the best service. High employee engagement creates commitment to organizational goals and encourages employees to take the initiative in the service process. (Pratama & Frinaldi, 2025) also emphasized that employee participation in decision-making increases innovation and service effectiveness. Actively engaged employees demonstrate more adaptive work behaviors to change, including the transition to digital service systems. Employee engagement becomes increasingly important when government agencies implement new technologies. Without strong engagement, technology adoption often faces obstacles such as employee resistance or adjustments to work procedures.

The reviewed studies collectively highlight the crucial role of digital systems, employee capability, leadership support, and innovation in strengthening public sector performance. (Panggabean et al., 2025) demonstrated that the use of the JAKI application enhances communication efficiency and accelerates information delivery within government agencies. Similarly, Situmeang et al. (2025) showed that digital, application-based public services improve service speed and accuracy but rely heavily on employee digital competence.

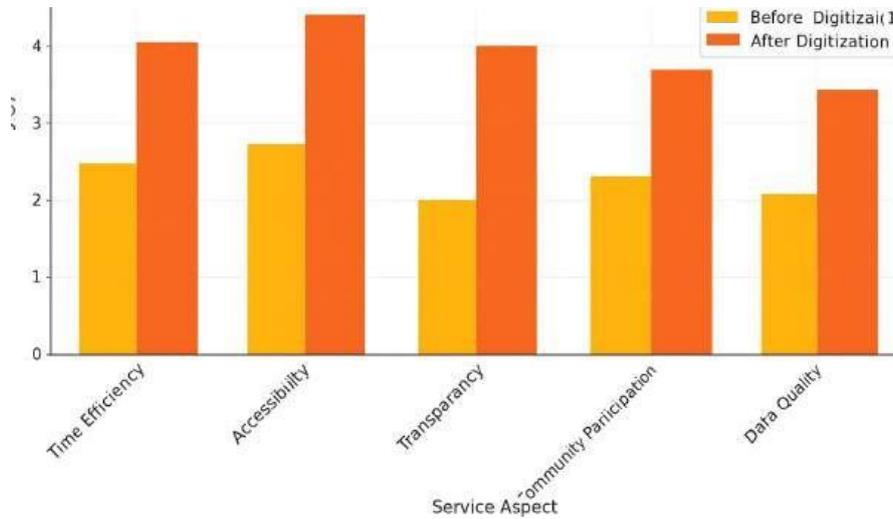
From a human resource perspective, Bahrum et al. (2025) emphasized that leadership involvement and motivation are essential for improving ASN performance. (Hernawati et al., 2025) indicated that competency development—through structured and continuous training—is key to enhancing employee skills, including technical and digital abilities.

Lastly, (Juniasih et al., 2025) highlighted that public service innovation contributes directly to greater citizen satisfaction and improved government performance. Together, these studies underline that digital competence, employee engagement, institutional readiness, and Innovation is an interconnected driver of effective public service delivery.

The integration of two key variables: digital competence and employee engagement, is key to building a model for improving public service delivery. (Putra et al., 2025) Pointed out that a technology-based performance management system requires employee readiness in terms of both competence and work motivation. (Dyastari, 2025)(Espina-Romero, 2025) similarly affirmed that digital transformation requires human resources who are not only capable of operating technology but also committed to participating in the change process.

In the case of local governments, technology adaptation without employee support will result in suboptimal services. Therefore, the literature shows that improving public service performance cannot be achieved through digitalization alone; it also requires high employee engagement (Saputra & Wardana, 2025). This integrative model demonstrated that digital competence provided technical capacity, while engagement provided psychological capacity and motivation, a crucial combination in driving service effectiveness.

Figure 4.
The Quality of Public Services in Subang Regency before and after Digitalization



Source: (Natika, 2025)

Figure 4 The Quality of Public Services in Subang Regency Before and After Digitalization (Natika, 2025) demonstrated significant improvements in time efficiency, accessibility, transparency, public participation, and data quality following the digitization of public services in Subang Regency. These improvements confirm that digital transformation can reduce long queues, accelerate service processes, and improve data transparency and accuracy. These findings aligned with this study, which highlights that strengthening employee digital competencies and high employee engagement play a crucial role in optimizing technology-based services. In other words, the success of digitalization, as described by Natika (2025), can only be achieved when employees possess adequate digital skills and are actively involved in the work process, thus directly supporting the developed model for improving public service performance.

Figure 5.
Comparison of Maturity Levels of Electronic-Based Government Systems (SPBE)



Source: Goodstats, KemenPANRB (2021)

The Figure 5 Comparison of Maturity Levels of Electronic-Based Government Systems (SPBE) (Source: Goodstats, KemenPANRB 2021) shows that the majority of government agencies are still in the "adequate" (44.1%) and "good" (29.01%) categories, while the "quench" category is still 0%, which means the level of technology utilization in public services is not yet optimal. This condition confirms the findings of this study that improving the digital competence of civil servants and high employee engagement are essential to encourage a more mature digital transformation. The low level of SPBE maturity in most agencies indicates a persistent gap between the availability of technology and employees' ability to maximize it, in line with the results that public services only improve significantly when digital competence is strengthened, and employees are actively involved in the service innovation process. Thus, this graph provides empirical evidence that improving the quality of public services is highly dependent on the readiness of human resources and a work culture that supports digitalization.

The maturity level of the Electronic-Based Government System (SPBE) which is still dominated by the "sufficient" and "good" categories shows that the digitalization of public services in most local government agencies not yet fully optimal. These data reflect institutional and system conditions, but does not directly describe individual employee behavioral factors.

However, various studies in the literature confirm that the success of SPBE implementation is not only determined by the availability of technology, but also by employee readiness and involvement as the main users of digital systems. In this context, employee engagement is positioned as behavioral mechanisms that bridge system capacity with public service performance, where the level of employee engagement influences the extent to which technology is effectively utilized in daily service practices.

Thus, the SPBE data in this study is not intended to measure engagement directly, but rather is used as structural indicators which strengthens the argument that improving public service performance requires integration between system readiness and employee behavioral factors.

Numerous studies describe classic public service issues in Indonesia, such as long queues, manual processes, and low public satisfaction (Azahari, 2025; Waloni et al., 2025). These problems generally arise from a lack of digitalization and low employee competency in managing modern systems. Service digitalization and increased employee engagement have been shown to mitigate these issues by accelerating service processes, improving data accuracy, and eliminating reliance on manual procedures (Krishna et al., 2025).

Table 2.
Synthesized Findings

Variable	Key Findings	Evidence from Literature
Digital Competence/e-Government Implementation	Regional governments using the SIMPEG system have shown accelerated administrative transformation and increased efficiency of Personnel services.	(Dionisia S Wijaya, 2025)
Employee Engagement	High employee engagement strengthens adaptability, supports digital transformation, and improves the effectiveness of technology-based public Service delivery.	Azhary (2025); Dyastari, 2025); (Rahmadi S Rusmiati, 2025)
Public Service Performance & E-Government	The development of an e-government system at the MPP (Public Service Mall) improves the quality of service and public Participation.	(Rajamemang et al., 2025)

Source: Author, 2025

From Table 2, the Synthesized Findings conclude that Digital Competence, Employee Engagement, and Public Service Performance. The literature synthesis indicates a mediating role of engagement, showing that employees with strong digital competence are more likely to engage in adaptive and innovative behaviors, which in turn increases public service effectiveness.

The research synthesis results show a strong link between digital competence, employee engagement, and improved public service performance through e-government implementation. These findings can be understood by comparing them with relevant theories.

First, on the variables Digital Competence / e-Government Implementation, findings show that local governments using the SIMPEG system experienced accelerated administrative transformation and increased efficiency in personnel services. This aligns with the theory that digital competence is the primary foundation for effectively implementing digital transformation. (Dionisia & Wijaya, 2025) This strengthened the concept by demonstrating that digital systems operated by competent human resources can improve bureaucratic processes and increase internal efficiency. Thus, the research findings support the theory and provide empirical evidence that digital competence has a significant impact on the success of e-government implementation.

Second, on the variable Employee Engagement, findings show that high employee engagement strengthens adaptability, supports digital transformation, and increases the effectiveness of technology-based public services. Engagement theory explains that engaged employees are more willing and able to adapt to change, including technological change. Findings from Azhary (2025), Dyastari (2025), Rahmadi & Rusmiati (2025). This is in line with this theory. All three sources confirm that employee competence, motivation, and engagement play a crucial role in the success of digital-based innovation. Therefore, these results strengthen employee engagement theory by adding context that engagement not only improves individual performance but also enhances the effectiveness of digitalized services.

Third, for the variables Public Service Performance & e-Government. The findings show that the development of e-government systems, such as the Public Service Mall (PSM), can improve service quality and public participation. This supports the theory of modern public service, which states that technology plays a crucial role in increasing transparency, accessibility, and public satisfaction. (Rajamemang et al., 2025) strengthened the theory by providing field evidence that the integration of digital systems in public services can directly improve service quality.

The literature indicates that uneven digital competence aligns with the generally moderate level of SPBE (e-government) maturity in local governments. Although digitalization improves service efficiency, technology alone is insufficient to enhance public service performance. Employee engagement emerges as a key behavioral factor that strengthens the impact of digital competence, indicating that effective service improvement requires the integration of technological readiness and human engagement.

Overall, this discussion demonstrates that the research findings are consistent with previous theories and supported by empirical evidence from the available literature. The three analyzed variables—digital competence, employee engagement, and e-government-based public service performance—complement each other and form a robust framework for understanding the dynamics of digital transformation in the government sector.

CONCLUSIONS

Based on the literature synthesis, this study produces a conceptual model that emphasizes that improving public service performance can only be achieved through integration between the digital competence of civil servants and employee engagement. Findings on the Digital Competence/e-Government Implementation variable indicate that strengthening the digital competence of civil servants can accelerate administrative transformation and improve service efficiency (Dionisia & Wijaya, 2025). At the same time, literature on Employee Engagement shows that high employee involvement encourages better adaptation to technological change, strengthens innovation, and increases the effectiveness of digital-based services (Azhary, 2025; Dyastari, 2025; Rahmadi & Rusmiati, 2025). These findings are reinforced by the results on the Public Service Performance & e-Government variables, which show that the development of e-government systems has a direct impact on improving service quality and public participation (Rajamemang et al., 2025). Thus, the resulting conceptual model concludes that digital competency provides technical capacity, while engagement provides psychological and motivational capacity, and these two factors simultaneously determine the success of e-government implementation and the improvement of public service performance. From this synthesis, three main propositions are formulated: (1) strengthening digital competence directly improves service quality, (2) employee engagement strengthens the success of technology adoption, and (3) the combination of these results in significant improvements in public service performance.

In practical and policy terms, this model offers several important implications for local governments. Governments need to strengthen digital competency enhancement policies through systematic training programs, certification mechanisms, and periodic evaluations, along with the development of a work culture that supports employee engagement in innovation and digitalization processes. Furthermore, agencies need to implement more participatory change management strategies to empower employees to feel empowered in the digital transformation process, while ensuring optimal e-government infrastructure and systems. At the implementation level, improving public service performance requires support in the form of adequate digital facilities, technology-based monitoring mechanisms, and performance measurement that incorporates indicators of employee digital capabilities.

For further research, this conceptual model can be empirically tested using a quantitative approach to more measurably assess the strength of the relationships between variables. Comparative research across regions is also needed to understand how differences in digital readiness influence the relationship between digital competence, engagement, and service performance. Furthermore, an in-depth study of the dynamics of employee engagement in the context of public sector digitalization could provide additional contributions, particularly regarding factors that encourage or hinder technology adoption. Future research could also expand the model by adding other variables, such as innovation culture, transformational leadership, or level of technology readiness, to enrich our understanding of the success of public service transformation.

This study offers an integrative conceptual model in public administration and digital governance by linking digital competence and employee engagement in improving public service performance under SPBE (e-government). Digital competence provides technical capacity, while employee engagement acts as a behavioral mechanism that strengthens technology use. The findings emphasize that SPBE maturity alone is insufficient without human engagement, highlighting the importance of a socio-technical approach to digital transformation.

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