

Communication Pathways in Multilevel Governance: A Review of Digital Innovation and Public Value

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ABSTRACT

This study reviews communication pathways in multilevel governance, focusing on the role of digital innovation in shaping public value. The purpose was to examine how political communication is mediated digitally, how media technologies support governance innovation, and how digital channels contribute to public value through legitimacy, accountability, and trust. A systematic literature review (SLR) was conducted using the PRISMA framework, narrowing an initial pool of studies to 12 recent, peer-reviewed articles. Thematic analysis identified three key areas: digital mediation of political communication, the role of media technologies in governance innovation, and public value creation. Findings indicate that digital tools enhance transparency, inclusiveness, and responsiveness but remain limited by structural capacity gaps, inequality, and weak feedback mechanisms. The results confirm that technology must be embedded within strong institutional frameworks to realize its full potential. The study contributes to theories of deliberative democracy, public value, and socio-technical systems by showing how digital communication reshapes governance relationships. Future research should expand cross-country and longitudinal comparisons to deepen understanding of evolving digital governance dynamics.

Keywords: Multilevel Governance, Digital Communication Pathways, E-Government Innovation, Public Value, Digital Innovation.

INTRODUCTION

Background of Research

Governance systems increasingly operate at multiple levels: local, regional and national levels, with the need for coordination among levels of government and among agencies. Multilevel governance requires effective communication pathways vertically between levels of government and horizontally across institutions (OECD, 2021). Digital government strategies and governance of digital government frameworks demonstrate how institutional arrangement and inter-agency coordination affect communication flow in government.

Digital innovation is changing how these communication pathways work. Integrated e-government, where services and administrative systems across different jurisdictions are linked and coordinated, has been shown to improve both service quality and equality of access (Edelenbos et al. 2025). In smart community and collaborative governance research, platforms, digital infrastructure, and participatory technologies contribute to more responsive communication and stakeholder engagement at local levels (Jimenez & Tuñón, 2024). These innovations enable new forms of citizen-government interaction and foster greater inclusivity in decision making (Chen et al. 2023).

Nevertheless, digital tools do not always lead to improved public value. Barriers such as resistance to data sharing, legacy bureaucratic silos, and disparities in digital literacy limit the reach of digital communication pathways (Molodtsov & Nikiforova, 2024). Moreover, analyses of e-government integration suggest that the

benefits for equality and quality are stronger under certain conditions, such as supportive institutional contexts and transparency (Edelenbos et al. 2025). Hence, understanding which communication pathways function well, how digital innovation changes them, and under what circumstances public value is enhanced is critical for governance scholarship and policy.

Problem Statement

Communication is a key requirement in multilevel governance. Yet, evidence shows that communication across levels and agencies often remains fragmented (OECD, 2021). Digital innovation has improved coordination through new tools of e-government integration and collaborative platforms in some contexts; however, results can be inconsistent (Edelenbos et al. 2025). Smart community platforms and participatory technologies foster local engagement, but it is not guaranteed that these tools scale across levels of governance (Jimenez & Tuñón, 2024). Institutional inertia, lack of interoperability, and inequitable uptake of digital continue to be barriers to effective communication (Molodtsov & Nikiforova, 2024). Ultimately, this demonstrates a lack of systematic understanding of how digital communication pathways operate in a multilevel system and in which situations they achieve public value (Chen et al. (2023).

Research Objectives

- 1.To explore how communication pathways are described and practiced within multilevel governance systems.
- 2.To examine how digital innovations influence and reshape these communication pathways across different levels of governance.
- 3.To analyze the conditions under which digital communication pathways contribute to public value, with attention to transparency, trust, participation, and responsiveness.

Significance of Study

This research is important as it begins to fill a systematic knowledge gap in understanding how communication pathways operate in multilevel governance processes in conditions of digitally influenced innovation. The evidence indicates that governments utilize digital tools to facilitate improved coordination, but this is often done in a de-coupled and often unpredictable manner. By applying the PRISMA framework, this review will synthesize findings across contexts and provide a structured account of how communication pathways are enabled or obstructed. The study will benefit policymakers by offering insights into how digital platforms can strengthen inclusivity, accountability, and transparency in decision making. It will also highlight risks such as digital divides, resistance to change, and weak interoperability. For scholars, the findings will advance theory by clarifying the link between communication, innovation, and public value. For practitioners, the review will support reforms aimed at building communication systems that are more resilient, equitable, and aligned with the goal of sustainable governance.

LITERATURE REVIEW

Political Communication in Multilevel Governance

Political communication coordinates action across tiers of government. Vertical pathways link local, regional, and national authorities. Horizontal pathways connect agencies and sectors. Citizen-facing channels transmit decisions and feedback. The multilevel governance literature shows that these pathways are structured by institutions and evolve over time (Papadopoulos et al., 2024). Clear pathways support legitimacy and coordination. Weak pathways create delays and ambiguity. Systematic mapping of the field also notes uneven concepts and mixed empirical evidence, which complicates assessment of communication quality (Papadopoulos et al., 2024).

Recent evidence from Europe during COVID-19 demonstrates both strength and fragility in these flows. Analysis of 40,000 tweets from elite actors across governance levels found high message consistency but low inter-level connectivity (Bélanger & Lavenex, 2023). Low connectivity signals coordination problems between levels. It also indicates fragmentation when roles and responsibilities overlap. Communication networks can be active yet weakly integrated. Such patterns reduce the effectiveness of multilevel responses.

Digital mediation further reshapes these pathways. Platforms accelerate dissemination but may centralize voice or amplify gaps in capacity. Research on European multilevel democracy shows that crises tend to recentralize authority and compress communication space, stressing coordination across tiers (Martinsen & Goetz, 2022). Citizen-facing effects matter as well. Higher social-media use is associated with lower trust in the European Union in high-information environments, which complicates government-citizen communication

(Kiratli, 2023). These findings show that digital tools change who speaks, who connects, and who trusts, with direct implications for multilevel coordination.

Digital Mediation of Political Communication

Information and communication technologies (ICTs) are central to modern governance. They enable data exchange, coordination, and messaging across levels. ICTs provide infrastructure for portals, dashboards, APIs, and backend systems. They also allow analytics and automation. Research on digital governance assesses system performance in multiple countries (Manoharan, 2022). Such studies document how ICT maturity correlates with service quality and citizen satisfaction.

Social media platforms transform government-citizen communication. Agencies use social accounts to broadcast updates, solicit feedback, and build legitimacy. Müller (2022) finds that European Union agencies differ markedly in social media attention, suggesting variation in communication strategies across institutions. Social media can shorten feedback loops and allow interactive messaging. But it also introduces noise, misinformation, and asymmetrical reach. Some voices dominate while others remain unheard. Governments must manage moderation, credibility, and digital norms.

E-government portals act as formal communication channels. They centralize public services, documents, and announcements. Portals integrate service delivery with messaging and data sharing. An integrated usability framework applied to open government data portals shows how portal design affects transparency and engagement (Molodtsov & Nikiforova, 2024). Usability, multilingual support, and interactive features determine whether users can navigate and trust portals. Portals that lack feedback capability or are hard to use undermine communication. Thus, portals can mediate or block pathways depending on design and institutional support.

Digital Innovation and Institutional Transformation

Digital innovation is transforming the way governance institutions operate at multiple levels. It changes structures, routines, and service delivery processes. Research shows that crises accelerate adoption by forcing agencies to reduce resistance and invest in digital tools (Moser-Plautz & Schmidhuber, 2023). These changes extend beyond technology. They involve training, reallocation of roles, and the redesign of workflows. In multilevel governance, such institutional shifts shape how coordination takes place across jurisdictions.

Efficiency gains depend on the ability to align interdependent units. Recent studies demonstrate that when agencies adopt interoperable systems and shared platforms, service delivery becomes more reliable and responsive (Yang et al., 2024). Yet, when institutional silos remain, digital tools reproduce fragmentation rather than solve it. Coordination mechanisms are therefore essential to translate innovation into performance improvements.

Evidence from different contexts highlights that outcomes are not uniform. In China, digital infrastructures in smart city initiatives have centralized oversight while improving local service delivery. In Europe, some systems show decentralization through open platforms, while others emphasize stronger national control (Eom & Lee, 2022). The literature indicates that institutional transformation through digital innovation is shaped by context. The balance between coordination and autonomy determines whether innovation enhances efficiency, inclusiveness, and resilience (Karkin, & Cezar, 2024).

Citizen Engagement and Participatory Platforms

Citizen engagement platforms are becoming central in digital governance. These tools, including online consultations and civic portals, allow governments to collect input and communicate decisions. Systematic reviews show that such tools increase opportunities for participation and create new channels for interaction (Shin et al., 2024). They expand inclusion beyond traditional forums and give diverse groups a chance to contribute.

Yet effectiveness depends on accountability. Research on European participation platforms demonstrates that citizen trust improves when governments provide clear feedback on how contributions affect outcomes (Escher & Rottinghaus, 2024). Where feedback is absent, engagement risks becoming symbolic. This undermines legitimacy and discourages further participation. Feedback loops are thus critical to translating digital interaction into real influence.

National evidence reinforces this point. In China, studies show that responsiveness is decisive. Prompt replies and high-quality responses on government portals increase both satisfaction and trust (Chen et al., 2023). But digital divides continue to exclude marginalized groups, limiting the democratic reach of these tools. Literature suggests that platforms succeed when they are accessible, transparent, and responsive. When coupled with institutional support, they can strengthen legitimacy and improve the quality of government-citizen communication.

Public Value in Multilevel Governance

Public value refers to outcomes that citizens and institutions regard as beneficial and legitimate. In multilevel governance, these outcomes depend on communication pathways that connect government levels and link institutions with the public. Digital platforms can orchestrate these pathways by standardizing interfaces and roles. Orchestration supports coordination and transparency when agencies align incentives and routines (Cordella & Paletti, 2019). Value is not created by technology alone. It is produced when communication enables shared goals, credible information, and reliable interactions. Clear communication across levels reduces duplication and clarifies responsibilities, helping citizens evaluate performance effectively in complex systems.

Citizen trust also depends on responsiveness. Studies of Chinese e-government show that prompt and high-quality replies increase satisfaction and confidence in authorities (Chen et al., 2023). Use of digital services enhances trust indirectly by improving evaluations of service quality (Li & Shang, 2023). The design of communication matters. Timely and transparent responses strengthen fairness perceptions, while vague or delayed replies reduce confidence. These findings highlight that digital mediation generates value through interaction quality, not just access to platforms.

The institutional setting determines whether value is realized. Multilevel systems achieve better outcomes when platforms support feedback loops, publish decision rationales, and share data consistently across levels (Weigl et al., 2024). They falter when centralization limits local voices or when digital divides restrict participation. Institutions must balance standardization with autonomy to prevent exclusion. Clear roles, interoperable systems, and inclusive outreach convert digital communication into public value. Without these, innovation may accelerate processes without improving legitimacy.

Barriers and Risks in Digital Communication Pathways

Despite the growing use of digital tools in governance, communication pathways continue to face institutional barriers. Bureaucratic silos and resistance to organizational change remain major obstacles. Studies show that many agencies adopt digital platforms without redesigning internal processes, which results in duplicated efforts and fragmented communication flows (Scupola & Mergel, 2022). Institutional inertia prevents the alignment of incentives across levels, slowing down the integration of new technologies. This resistance undermines coordination in multilevel systems where consistency is essential.

Technical and infrastructure constraints create risks as well. Research demonstrates that poor interoperability between systems has negative implications for the organizational reliability of information exchange (Malik et al., 2023). In the absence of some normative landscape, the potential for outdated technology, or different capabilities creating jurisdictions only complicates the opportunities for data sharing. This is also complicated with security and privacy concerns. If governments don't present ways of assuring data security, either way, citizens won't be willing to use digital communications or communication platforms. This reduces the reliability in which these agents or agencies have control.

There are social and democratic risks that are not trivial. The fact that digital divide continues to exist is illustrated by users who cannot equally access communication platforms. Those users with unmet skills or the least level of connectivity are showing that participation for them was not feasible in those situations (van Deursen, 2020). Citizens who are invisible and excluded and believe that they are citizens, find it difficult to accept that they cannot access the opportunities of citizens who are luckier than citizens. Also, misinformation and data overload potential on digital platforms increases the risk of faulty decision-making and lower trustworthiness of governance communications (Vaccari & Valeriani, 2021). In addition, this is another risk showing that digital tools are not neutral.

Comparative Perspectives and Emerging Trends

Comparative perspectives reveal that multilevel governance systems adopt different approaches to digital communication. In Europe, supranational initiatives have prioritized common standards such as digital identity and interoperability frameworks, aiming to harmonize information flows across member states (Papadopoulos et al., 2024). These efforts reduce fragmentation and create more transparent communication pathways. By contrast, the United States follows a more decentralized approach. Federal guidelines exist, but states and agencies maintain autonomy in design and implementation, resulting in diverse communication practices (Scupola & Mergel, 2022). Such differences show how institutional traditions shape communication outcomes.

China illustrates a contrasting pattern, where smart government programs are strongly centralized. Digital platforms have streamlined service delivery and facilitated vertical coordination but also risk encouraging symbolic compliance at the local level (Zhang & Mora, 2023). Comparative evidence suggests that governance traditions influence whether digital communication fosters inclusiveness or central control. In contexts with stronger local autonomy, communication tools are more often used to broaden participation, while in centralized

states, the emphasis tends to be on efficiency and oversight.

Emerging technologies are reshaping these pathways globally. Artificial intelligence and big data analytics are increasingly applied to automate responses, optimize workflows, and support transparency in service delivery (Willems et al., 2023). At the same time, these innovations pose challenges of privacy, accountability, and unequal access. Looking ahead, hybrid models are likely to combine centralized infrastructure with decentralized engagement tools. The challenge for multilevel systems is to embed these technologies in ways that preserve legitimacy, inclusivity, and public value.

Theoretical Framework

This research utilizes four theories to conceptualize how communication pathways operate within multilevel governance. Multilevel Governance Theory underpins the premise of how authority and communication are distributed vertically national, regional and local, and horizontally across sectors (Marks, Hooghe & Blank, 1996). Institutional Theory is useful in outlining how organizational rules, norms and cultures impact the uptake of digital platforms, which may lead to resistance or inertia towards communication outcomes (March & Olsen, 1984). Public Value Theory frames the study as regards outcomes such as legitimacy, transparency, accountability and trust. The implications here is that communication pathways should produce value for citizens (Moore, 1995). Media Richness Theory denotes that richness of digital channels influences quality of communication; suggesting that interactive types of digital tools produce clearer communications and greater engagement than leaner opportunities (Daft & Lengel, 1986). Collectively, these theories provide an organized framework for observing the impact of digital innovations on governance communication and impact on communication path ways to produce public value.

Literature Gap

Despite increased scholarly focus on digital innovation and multilevel governance, several critical knowledge gaps exist. While there is a plethora of studies examining specific components, such as e-government portals or social media, these studies rarely take a comprehensive approach that examines vertical, horizontal, and citizen-facing communication in the same analysis. Some evidence has emerged on how these pathways create public value in legitimacy, transparency, accountability, and trust, but the evidence is limited and unevenly distributed across disciplines. Within the literature there remain inconsistencies: some studies find that digital tools enhance trust and inclusion, while other studies highlight the possible risks of exclusion and symbolic participation. Additionally, most of the research that has been conducted remains specific to context in a way that does not allow for comparative insights. These deficiencies demonstrate the need for a systematic review using the PRISMA framework.

METHODOLOGY

Research Method and Design

This study is using a Systematic Literature Review (SLR) method for the gathering, evaluation, and integration of the current research on communication channels in multilevel governance. The SLR method provides adequate rigor and transparency based on pre-established criteria for inclusion and exclusion. Applying the PRISMA framework provides the framework for the review and clearly follows the stages of identification, screening, and finally inclusion of studies. The implementation of SLR and the PRISMA framework of work provides a more robust and evidence-based understanding of how digital innovation might influence communication and impact the provision of public value.

Data Collection Method

Data was extracted by applying systematic search strategies in recognized academic databases and applying specific key term searches. Studies were screened for inclusion and exclusion based on certain criteria that were applied based on communication pathways, digital innovation, and public value in multilevel governance. Studies selected for inclusion within the final paper were guided by PRISMA framework to enhance transparency and rigor in the review process.

Searching Techniques

Keywords

Searching techniques included the use of defined keywords “Multilevel Governance,” “Digital Communication Pathways,” “E-Government Innovation,” “Public Value Creation,” “Citizen Engagement Platforms”.

Database

Databases selected for the research purpose is included as JSTOR, Web of Science (WOS), Google Scholar, and Research gate.

Boolean Operators

Boolean operators were used to refine the search strategy. AND was applied to combine different concepts, such as Multilevel Governance AND Public Value. OR was used to include synonyms or related terms, for example E-Government OR Digital Government. NOT was applied to exclude irrelevant results and narrow the scope of studies.

Inclusion and Exclusion Criteria

Following is the Inclusion and Exclusion criteria is used as shown in Table 1.

Table 1. Inclusion and Exclusion Criteria

Criteria	Inclusion	Exclusion
Publication	Peer-reviewed journal articles, books, and credible reports published in last 15 years.	Non-peer-reviewed sources, grey literature, and articles before year 2016.
Research type	Empirical and theoretical studies relevant to communication, pathways, studies in multilevel governance, digital innovation and its positive impacts on public value.	Studies with insufficient academic rigor, lacking relevance to the topic, or focusing solely on aesthetics.
Language	Articles written in English to ensure consistent analysis.	Articles written in languages other than English.
Focus	Studies addressing different communication pathways, digital practices in multilevel governance etc	Literature unrelated to communication pathways in government hierarchy, digital practices, etc.

Selection of Papers through PRISMA Framework

Selection of papers was carried out through the PRISMA framework as shown in the below figure 1. A total of 35 articles were identified through database searches, screened using inclusion and exclusion criteria, and after full-text assessment, 12 articles were finalized for the review.

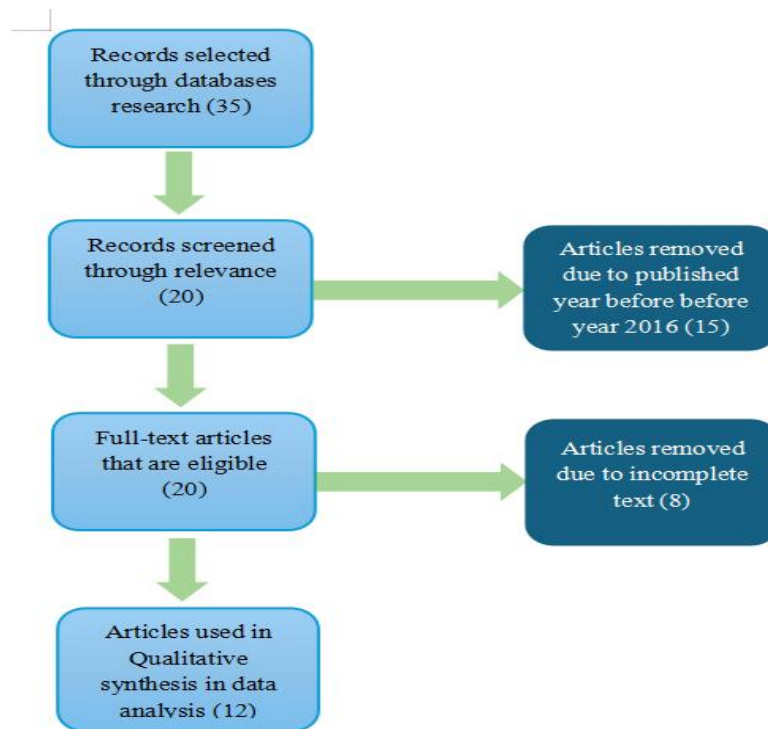


Figure 1. PRISMA Framework

Data Analysis Method

The study used thematic analysis to interpret the selected articles. Data was familiarized through repeated reading, initial codes were generated, and broader themes were developed as shown in Table 2. Themes were then reviewed, defined, and named before being applied in reporting, ensuring alignment with the research objectives.

Table 2. Thematic Analysis Steps

Steps	Description
Familiarization	It includes reading and re-reading of all the collected dated.
Initial codes	Generating initial codes from the data by highlighting key points, concepts, and ideas relevant to the research objectives.
Initial themes	Codes are then grouped to develop the broader themes.
Reviewing themes	Themes are reviewed to ensure that they are not distracted from original research focus and objectives.
Defining and Naming themes	According to the focus of the data collected, it include defining and naming themes according to the context of the content of the articles selected.
Producing the Report	Utilize these themes in data analysis and discussion

Ethical Considerations

This study is based on a systematic review of published academic research, and therefore it does not involve direct human participants or the collection of sensitive personal data. Ethical considerations focus on ensuring transparency, accuracy, and integrity in the review process. Only peer-reviewed and credible sources are included, reducing the risk of bias and misinformation. Proper citation and acknowledgment of all authors are strictly followed to respect intellectual property rights. The PRISMA framework is applied to provide a transparent and reproducible selection process. Any limitations or potential biases in study selection and interpretation are openly acknowledged. By adhering to these principles, the study maintains ethical rigor and contributes responsibly to the academic discussion.

((‘Artificial Intelligence’ OR ‘AI’ OR ‘Machine Learning’ OR ‘Deep Learning’ OR ‘Neural Networks’ OR ‘Genetic Algorithms’ OR ‘Fuzzy Logic’ OR ‘Natural Language Processing’ OR ‘NLP’ OR ‘Data Mining’ OR ‘Expert Systems’ OR ‘Computer Vision’ OR ‘Pattern Recognition’ OR ‘Classification Algorithms’ OR ‘Clustering Algorithms’ OR ‘Predictive Models’ OR ‘Robotics’ OR ‘Intelligent Agents’ OR ‘Chatbot’ OR ‘Language model’ OR ‘Conversational model’) AND (‘Risk Communication’ OR ‘Crisis Communication’ OR ‘Emergency Communication’

OR 'Disaster Communication' OR 'Risk Messaging' OR 'Hazard Communication'))

Our initial search yielded 143 results in the WoS database and 273 in Scopus, for a total of 416. In order to select the research papers to make up the final analysis sample of this systematic literature review, the authors established a series of criteria for inclusion and exclusion.

RESULTS

Thematic Analysis

The below Table 3 outlines the thematic analysis results, grouping reviewed studies into three themes. It shows how digital tools mediate political communication, how ICTs and innovations shape governance efficiency and risks, and how communication channels contribute to public value by influencing legitimacy, transparency, accountability, and trust, while highlighting possible inequalities.

Table 3. Thematic Analysis Steps

Themes	Description
Digital Mediation of Political Communication Pathways	Explores how communication between government levels and citizens is mediated through digital platforms, improving coordination but also showing gaps.
Role of Media Technologies in Governance Innovation	Examine how e-government systems, ICT tools, and social media shape governance communication, enabling efficiency but also creating risks.
Public Value Creation through Digital Communication Channels	Focuses on how digital pathways influence legitimacy, transparency, accountability, and trust, while also risking symbolic or unequal participation.

Theme 1: Digital Mediation of Political Communication Pathways

In the below Table 4 it presents the selected studies that illustrate how digital tools mediate political communication pathways across different governance contexts.

Table 4. SLR for the Digital Mediation of Political Communication Pathways

Study	Objectives	Methodology	Data Analysis and Results	Conclusion
Li & Shang (2023)	To examine how e-government usage influences citizens' trust in government.	Quantitative survey study in China.	Found that higher e-government use improves perceptions of service quality, which strengthens trust in authorities.	E-government platforms mediate citizen-government communication and enhance trust when services are effective.
Edelenbos et al. (2025)	To assess how multilevel governance handled communication during COVID-19.	Comparative case analysis across European contexts.	Found that central governments dominated messaging, while local/regional channels lacked capacity.	Effective digital communication in crises requires stronger multilevel coordination and capacity sharing.
Jimenez Alcarria, F., & Tuñón Navarro, J. (2024)	To analyze stakeholder engagement in EU digital participation initiatives and their communicative impact.	Survey and participatory case analysis in EU projects.	Engagement processes improved visibility and inclusion, but inconsistent feedback loops limited citizen trust.	Digital participation strengthens communication, but institutional follow-through is key to sustaining legitimacy.

Study	Objectives	Methodology	Data Analysis and Results	Conclusion
Zhao, Y., Li, J., & Chen, X. (2025)	To examine how WeChat groups influence political trust in rural China through digital communication.	Quantitative survey of rural communities using WeChat groups.	Participation in local WeChat groups increased perceived responsiveness and trust in local officials.	Digital group communication can build trust in multilevel governance by bridging gaps between citizens and authorities.

Summary

Theme 1 synthesizes four studies on the digital mediation of political communication pathways. Li and Shang (2023) showed that e-government platforms enhance perceptions of service quality, thereby building citizen trust. Edelenbos et al. (2025) revealed that crisis communication in multilevel governance was dominated by central authorities, exposing coordination gaps at local levels. Jimenez and Tuñón (2024) found that digital participation improved visibility but lacked consistent feedback loops, limiting legitimacy. Zhao et al. (2025) demonstrated that WeChat groups in rural China fostered responsiveness and localized trust. Together, these findings highlight both opportunities and structural challenges in digital communication.

Theme 2: Role of Media Technologies in Governance Innovation

In the Table 5 below it summarizes the studies examining the role of media technologies and digital innovations in shaping governance communication, efficiency, and inclusiveness.

Table 5. SLR for the Role of Media Technologies in Governance Innovation

Study	Objectives	Methodology	Data Analysis and Results	Conclusion
Guenduez et al., (2025)	To explore strategies of digital innovation adopted in public sector organizations.	Qualitative case study across European public agencies.	Found three strategies: incremental improvement, co-creation, and disruptive innovation, each with different impacts on communication.	Innovation strategies shape how media technologies support governance, with co-creation showing strongest benefits.
Szedmak, Varga & Szabo, (2025)	To examine the digital transformation of public services in Hungary.	Mixed-methods combining policy analysis and stakeholder interviews.	Results show improvements in efficiency and access but highlight gaps in interoperability and citizen inclusiveness.	Digital transformation enhances communication flows but risks widening inequalities without inclusion strategies.
Ikromov (2023)	To analyze Estonia's use of digital platforms in public administration.	Case study of e-government systems and blockchain-based services.	Identified trust-building mechanisms in digital platforms but also noted vulnerabilities in security and data sharing.	Estonia shows platforms improve trust and efficiency but need safeguards against risks.
Kawabat & Camargo, (2023)	To review global innovation initiatives in e-government.	Systematic literature review of e-government innovation projects.	Found ICT integration and digital platforms improve communication, though results vary across contexts.	E-government innovation is essential but outcomes depend on institutional support and citizen engagement.

Summary

Theme 2 compiles four studies on the role of media technologies in governance innovation. Guenduez et al. (2025) identified three strategies of innovation that shape communication differently, with co-creation proving most inclusive. Szedmák, Varga, and Szabo (2025) emphasized that digital transformation enhances efficiency but exposes gaps in inclusiveness and interoperability. Ikromov (2023) highlighted Estonia's e-government model, showing trust-building benefits alongside security vulnerabilities. Kawabata and Camargo (2023) reviewed global initiatives, concluding that outcomes vary depending on institutional support and citizen engagement. Collectively, these studies underscore that technological innovation alone is insufficient without equity, safeguards, and institutional readiness.

Theme 3: Public Value Creation through Digital Communication Channels

In the below Table 6 this highlights the studies focusing on how digital communication channels contribute to public value creation through trust, accountability, and responsiveness.

Table 6. SLR for the Public Value Creation through Digital Communication Channels

Study	Objectives	Methodology	Data Analysis and Results	Conclusion
Weigl et al (2024)	To assess how user-centric design in e-government aligns or conflicts with broader public values.	Systematic literature review.	Found tensions where prioritizing usability conflicted with transparency and accountability goals.	Digital services must balance user needs with safeguarding public value principles.
Palmisano & Sacchi, (2024)	To analyze links between digital interaction, trust in institutions, and inequality in Europe.	Quantitative analysis using Eurobarometer data.	Digital engagement correlated with higher institutional trust but effects varied across socioeconomic groups.	Digital pathways can build public value through trust, but inequality moderates outcomes.
Cordella & Paletti (2019)	Explain how platform models enable public value creation.	Explanatory case (Italy's GaaP reform).	Orchestration and shared components improve transparency and coordination.	Orchestration and shared components improve transparency and coordination.
Chen, Liang, Yi, & Chen (2023)	Test how responsiveness in e-government affects support.	Large-N analysis of Chinese e-gov interactions.	Timely, substantive replies increase satisfaction and public support.	Responsive digital communication strengthens perceived legitimacy.

Summary

Theme 3 brings together four studies on public value creation through digital communication channels. Weigl et al (2024) highlighted tensions between usability-focused design and broader accountability principles. Palmisano and Sacchi (2024) found that digital engagement increased institutional trust, but outcomes were uneven across socioeconomic groups. Cordella and Paletti (2019) showed that Italy's GaaP reform improved transparency and coordination through orchestration and shared components. Chen et al (2023) demonstrated that timely and substantive government responses boosted citizen satisfaction and legitimacy. Together, these studies reveal that digital communication generates public value when responsiveness, inclusiveness, and accountability are carefully balanced.

DISCUSSION

Digital Mediation of Political Communication Pathways

Li and Shang (2023) found evidence suggesting that e-government usage led to enhanced perceptions of service quality which in turn increased trust in authorities. This finding is consistent with the prior literature which placed central importance on the role of ICTs and portals in improving transparency and efficiency in communication (Scupola & Mergel, 2022). However, the literature also cautioned that ICTs do not inherently provide legitimacy unless citizens perceive responsiveness and fairness (Moser-Plautz & Schmidhuber, 2023). Compared to the previous studies, the study has shown that effective political communication is about more than just the provision of technology, but also reliant on citizens experiencing service reliability and trustworthy service.

Edelenbos et al. (2025) found evidence in crises when the multilevel governance communication was more dominated by central government agencies when regional governments lacked sufficient capacity. This would run

contra to studies discussed in the review which highlighted the strengthening of coordination capacity across the levels of government. However, consistent with earlier warnings on fragmentation present in multilevel European systems (Papadopoulos et al., 2024), the results from the theory indicate that digital technologies cannot intervene alone on structural imbalances. This evidence thus highlights the absolute necessity of institutional preparedness, and balanced capacity-sharing, between national and local government.

Jimenez and Tuñón (2024) found that digital engagement in EU initiatives improved inclusiveness and visibility; however, weak feedback loops undermined the legitimacy of those initiatives. This reinforces the previous studies we reviewed in the literature that identified the essential need for transparency and two-way communication to maintain trust (Chen et al., 2023). While past studies have often used e-government primarily as a means of quickly dispensing information (Bélanger & Lavenex, 2023), the degree of inclusiveness experienced without responsiveness illustrated a potential degradation of outcomes.

Zhao et al. (2025) found that engagement in local WeChat groups led to greater responsiveness and political trust among rural communities in China. This supports the earlier studies in the literature review which suggested social media as a way for citizens to directly engage with government (Kiratli, 2023). Most of the surveyed studies concentrated on higher-level or large-scale e-government portal structures. Zhao et al. (2025) provides evidence for less formal, community structured alternative communication methods. In conclusion, these findings further develop the previous evidence of local, bottom-up methods working separately but alongside, formal methods that helped develop trust and urgency for governance communication when formal structures were too far or not operational.

Role of Media Technologies in Governance Innovation

Guenduez et al. (2025) observed that public sector organizations have embraced strategies for incremental, co-creation, and disruptive innovation, with each motivating different communication structures. This complements previous observations that digital innovation is nonuniform among higher education institutions and must be considered relative to organizational culture and capacity (Scupola & Mergel, 2022). Previous studies have outlined efficiency and cost reduction as the main benefits of ICT adoption (Chen et al., 2023), while also focusing on the transformative role of co-creation as a deliberate strategy for inclusion. The value of the study lies in the espoused belief that innovation strategies not only modernize governance but also reshape relationships, shifting from hierarchies of communication to participatory models.

Szedmák, Varga, and Szabo (2025) have shown that digital transformation increases efficiency and better access, albeit revealing interoperability and inclusion gaps. Previous studies had already warned that digital reforms may increase inequity when inclusion is not designed into them (Müller, 2022). This comparison makes it clear that although transformation initiatives may result in greater improved communication flows, they may also create new gaps when citizens are more than others based on need. The study recognizes that governance innovation must take the form of a systematic approach to the efficiency dimension, identifying principles of equity to ensure efficiency.

Ikromov (2023) looked at Estonia's e-government systems and found that using digital technology helped build greater trust between citizens and their government. This lines up with earlier research that praised Estonia's forward-thinking leadership, which earned trust not just from citizens but also from businesses (Moser-Plautz & Schmidhuber, 2023). While past ICT studies offer some detail, Ikromov adds a key point: transparency alone isn't enough strong security measures are just as important.

Kawabata and Camargo (2023) conducted a review of innovations in e-government, finding ICT integration improved communication, but that the context of institutional support and citizen participation mattered. This finding appeared consistent with earlier studies showing governance innovation was contextually layered in complexity (Karkin, & Cezar, 2024). Because the review did not have the same depth in each case as we see in single countries, it would be able to only broadly confirm that communication will happen with technology, and it is endorsed in an organizational culture. The key findings were related to governance, firmly establishing that governance innovation cannot occur in absence of social and political conditions.

Public Value Creation through Digital Communication Channels

Weigl et al (2024) identified the tension between user-centric digital services and public value goals, with user-centered design prioritizing usability conflicting with user transparency and accountability. This is aligned with the earlier body of literature about digital governance that discussed this trade-off: namely that citizen-centered design can cause systemic accountability to be explicit (Willems et al., 2023) rather than implicit. In comparison with earlier literature talking about efficiency gains (Scupola & Mergel, 2022), this research explores the balance between user delight and institution legitimacy. Research findings of this study show that while digital communication finds a place to include usability, usability focuses on customer satisfaction.

Palmisano and Sacchi (2024) found the link between digital engagement and institutional trust to be present, although it varied by socioeconomic status. This finding reinforces the conclusion of the previous studies that digital inclusion is a way of ensuring communication tools have equitable results (Müller, 2022). Unlike broad assertions that ICT ultimately enhances trust, this study emphasizes that inequality contingent subsequent outcomes, which precludes public value generating for marginalized groups. This example illustrates the importance of being intentional about inclusiveness through governance communication, as trust generated by the digital communication that is inequitable.

According to Cordella and Paletti (2019), Italy's GaaP reform analyzed orchestration and shared components enhanced transparency and coordination; this offers corroboration of earlier results above that indicated institutional collaboration was an essential aspect of ensuring legitimacy. Like earlier studies that only focused on technological capacity, this study exemplifies that governance structures are important to value creation of public value (Moser-Plautz & Schmidhuber, 2023). The evidence supports that digital platforms can create value if facilitated in a coordinated framework, reinforcing that pathways of communication implemented only succeed, when institutional mechanisms provide shared accountability.

Chen et al (2023) found audience responses expedient, verifiable, and trustworthy for Chinese citizen satisfaction and legitimacy. This supports an earlier finding that creating responsiveness is critical to public trust (Moser-Plautz & Schmidhuber, 2023). In comparison to the much-cited earlier findings surrounding transparency and access (Willems et al., 2023), this study emphasizes immediacy as a main driver of legitimacy in traditional media. The results highlight that digital engagement channels do not provide equal value by providing access to information, but that value is created when actively engaged with audience concerns and if ensured through guaranteed consistency in communication.

Theoretical Implications

The results across the three themes demonstrate several theoretical implications for digitally mediated communication in multilevel governance. First, the study supports and extends deliberative democracy theory by indicating that digital tools, when providing reciprocity and responsiveness, enhance citizen engagement. Additionally, institutional capacity theories are supported, as the results indicate that effective communication requires balance between centralized authority and local responsiveness, especially in crisis situations. Additionally, the studies modify public value theory by revealing tensions between usability, inclusiveness, and accountability, suggesting that value creation is contingent rather than universal. Finally, the integration of digital innovation strategies into governance highlights the applicability of socio-technical systems theory, illustrating that technological pathways reshape institutional practices and legitimacy in new and evolving contexts.

CONCLUSIONS

This study reviewed communication pathways in multilevel governance and examined how digital innovation shapes their effectiveness in generating public value. The evidence confirms that digital mediation strengthens citizen-government interaction, but outcomes depend on institutional capacity, inclusiveness, and responsiveness. Media technologies enable efficiency and coordination, yet risks of inequality, fragmentation, and weak feedback loops remain. Public value is enhanced when digital pathways support legitimacy, transparency, and trust, but these effects are not automatic. By synthesizing findings through the PRISMA framework, this review clarifies that technology must be embedded within supportive institutional and cultural contexts. While the study highlights barriers such as digital divides and organizational resistance, it also points to opportunities for co-creation and participatory governance. Future research should expand comparative and longitudinal analyses to better understand evolving communication dynamics across governance levels.

LIMITATIONS AND FUTURE DIRECTION

This study has several limitations. The review is limited to a selection of peer-reviewed articles published after 2016, which may exclude relevant earlier studies. The focus on English-language publications restricts insights from non-English contexts, potentially narrowing the global applicability of findings. Additionally, the thematic synthesis is based on qualitative interpretation, which introduces subjectivity in coding and analysis. Future research should expand the scope by including longitudinal studies to assess how digital governance

pathways evolve over time. Cross-country comparative analyses are also needed to examine variations across political systems. Further integration of mixed-methods approaches could provide stronger empirical grounding for the observed themes.

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