EMBEDDING ETHICS AND JUSTICE IN DIGITAL PUBLIC ADMINISTRATION: SAFEGUARDING PRIVACY, LEGITIMACY, AND PUBLIC TRUST

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ABSTRACT

Digitalization is transforming public administration, promising more efficient processes and transparent governance. However, this transformation has generated considerable ethical and procedural challenges, particularly regarding privacy, data security, and the moral use of technology by state actors. This study employs a qualitative literature review and thematic synthesis to critically assess how deficiencies in privacy protection and ethical digital literacy among public administrators affect public trust, perceptions of justice, accountability, and the integrity of governance. Findings indicate that weak data protection mechanisms and lack of clear recourse in the event of privacy breaches contribute directly to diminished trust and erode the legitimacy of public institutions. Similarly, insufficient ethical digital literacy amplifies the risk of opacity, impedes effective accountability, and reduces the perceived fairness of technology-driven public administration. These conditions foster systematic inequities and perpetuate alienation, especially among marginalized groups. The review underscores the need for public administrators to embed ethical reasoning, participatory approaches, and robust security measures into the architecture of digital governance. Government bodies are urged to prioritize ethical training, engage citizens in privacy policy design, and foster open communication to restore and sustain legitimacy in the digital era. Technological modernization can only fulfill its promise if ethics and justice are treated as foundational imperatives, not afterthoughts, within the evolving ecosystem of public administration.

Keywords: digital ethics, privacy, public trust, data protection, accountability, transparency, public administration.

INTRODUCTION

The advancement of digital technology within public administration has altered foundational paradigms of governance by infusing efficiency and transparency into public service delivery. Administrative digitization now orchestrates the allocation and provision of public resources, while simultaneously transforming the nature of public engagement and oversight. This ongoing transformation is inseparable from the evolving discourse on digital ethics and the challenges regarding privacy, data security, and ethical conduct in the realm of public technology utilization (Sharmin & Chowdhury, 2025; Balaji, 2025). The proliferation of e-governance and use of artificial intelligence in the public sector have fostered innovative administrative practices that enhance performance and responsiveness, yet also introduce unprecedented complexities surrounding the legal and moral responsibilities of institutions and civil servants.

In parallel with these advancements, the digitalization of public administration has created intricate data ecosystems that amplify both opportunities and vulnerabilities. The deployment of big data analytics, machine learning, and algorithmic governance not only improves the accuracy and scope of decision-making but intensifies exposure to privacy breaches and data misuse (Chandra & Feng, 2025; Beck & Ranchordas, 2025). As public institutions amass and process vast volumes of personal information, concerns relating to the adequacy of security frameworks and protection of citizen rights become more pronounced. Moreover, the absence of robust ethical guidelines risks eroding the public trust that underpins effective governance and social contract legitimacy.

A further dimension of this issue lies in the ethical ramifications of executive discretion and administrative autonomy afforded by digital transformation. The integration of technology in public services introduces not only a need for legislative adaptability and regulatory vigilance, but also an imperative for empathy, transparency, and inclusivity. Privatization of digital public goods, opaque decision-making enabled by algorithmic processes, and inconsistent ethical literacy among public administrators may give rise to circumstances where individual rights are marginalized or neglected (Shulz, 2025; Brandao Da Silva & Gani, 2022).

These developments necessitate a critical inquiry into the ethical foundations underpinning technological innovation in government administration. The synthesis of digital solutions with traditional governance structures calls for a robust interdisciplinary approach capable of systematically interrogating the interplay between technical innovation, ethical responsibility, and social justice (Vatamanu & Tofan, 2025; Şat, 2025; Mardikaningsih & Wardoyo, 2024). This scholarly analysis aims to advance understanding by illuminating the persistent challenges inherent to privacy, data protection, and responsible technology management within the sphere of public administration.

The proliferation of data-intensive systems in public administration has not been accompanied by robust protective mechanisms for personal data. While the digitalization of public services enables the consolidation and utilization of large-scale citizen data sets, studies indicate persisting weaknesses in data security infrastructure, resulting in high susceptibility to breaches and abuse (Sharmin & Chowdhury, 2025). Documented incidents involving unauthorized access or dissemination of sensitive information, such as electoral rolls and health records, exemplify the profound risks posed to individual privacy. These deficiencies undermine public confidence and authority legitimacy, creating a precarious intersection between technological advancement and citizen protection.

A subsequent concern emerges from the ethical opacity surrounding the adoption and integration of digital technologies within administrative processes. Policies pertaining to technological deployment are frequently conceived and implemented without comprehensive stakeholder engagement or public discourse (Balaji, 2025; Chandra & Feng, 2025). Decisions on algorithmic governance, automated decision-making, and the use of data analytics often proceed absent explicit consent or understanding from those affected. This imbalance in informational power, exacerbated by limited transparency, raises fundamental questions about procedural justice, democratic accountability, and the legitimacy of outcomes derived from automated or data-driven processes.

Additionally, there is a discernible gap in ethical digital literacy among public administrators, which further complicates the integrity of public technology usage. Civil servants across many jurisdictions exhibit inadequate awareness and understanding of the moral and social ramifications introduced by digital technologies (Beck & Ranchordas, 2025; Şat, 2025). This knowledge deficiency can facilitate ethical lapses, such as the amplification of misinformation, data manipulation, and discriminatory practices within digital platforms of public institutions. The absence of a prevailing ethical culture threatens not only the quality of public service delivery, but the preservation of democratic values in the administration of digital governance.

The penetration of digital technology in public sector institutions has therefore generated intricacies that extend beyond technical innovation, intersecting with questions of fairness, rights, and societal cohesion. The fragility of privacy protections, gaps in regulatory mechanisms, and ethical illiteracy collectively form a nexus of issues undermining both the efficacy and legitimacy of digital public administration (Brandao Da Silva & Gani, 2022; Mardikaningsih & Wardoyo, 2024). Without deliberate integration of moral and ethical frameworks, digitalization risks fostering asymmetries of power and eroding the principles of justice and dignity that should anchor the relationship between the state and its citizens.

The rationale for addressing these concerns is rooted in the fundamental duty of public administrators to ensure the just and equitable treatment of all citizens in the digital age. The absence of robust digital ethics in public institutions exacerbates societal divisions, while effective ethical oversight constitutes a foundational criterion for the legitimacy and sustainability of modern governance. The future trajectory of e-governance is poised to determine not merely the efficacy of public service provision, but the health of democratic norms and the social contract in the digital era.

Observation of ethical issues in the digital administration of public services is crucial not only for protecting the rights of individual citizens, but for reinforcing public confidence in government institutions. Increased scrutiny of digital ethics within administrative procedures helps preempt systemic risks and enhances resilience against future technological disruptions. By foregrounding ethical literacy and robust protection frameworks, the public sector can navigate the fine line between innovation and integrity, balancing the imperatives of efficiency with those of ethical stewardship.

The objective of this study is to critically assess the relationship between privacy safeguards, data security, and public trust, as well as to elucidate the ways in which limitations in ethical digital literacy among civil servants may compromise transparency and diminish the legitimacy of technology-driven innovations in governance. By systematically examining the current literature and anchoring findings in concrete empirical sources, this research aims to contribute original analytical perspectives on how ethical challenges in public administration technology impact the social fabric and operational integrity of state institutions.

RESEARCH METHODS

This research adopts a qualitative literature review approach, employing thematic synthesis to interrogate ethical issues arising from digital transformation in public administration. Such a design enables in-depth exploration of complex reality constructs that are difficult to measure

quantitatively, allowing for nuanced interpretation of the interactions between technological innovation, ethical conduct, and policy frameworks within the public sector. The qualitative orientation is particularly apt for mapping latent social processes and constructing a comprehensive narrative that incorporates diverse perspectives from the rapidly expanding corpus of digital governance literature (Creswell & Poth, 2018).

The review process commenced with systematic identification and selection of scholarly books and peer-reviewed articles using databases such as Scopus, Web of Science, and JSTOR. Eligibility criteria prioritized empirical studies and theoretical analyses focusing on privacy, data security, and digital ethics in public administration, especially materials published within the past decade to ensure contemporary relevance. The selection of literature was further refined through backward and forward citation tracking, facilitating the identification of seminal and highly-cited works that anchor ongoing scholarly debates (Booth et al., 2016).

Thematic synthesis was conducted in accordance with the principles described by Thomas and Harden (2008), proceeding through stages of initial coding, development of descriptive themes, and generation of analytical constructs. Rigorous coding and iterative cross-comparison of themes were employed to ensure reliability and traceability. Findings were then contextualized using established theoretical and conceptual models from social sciences, integrating methodological rigor with interpretative depth. This methodological stance not only adheres to the standards of qualitative inquiry, but also aligns with the necessity for critical reflection demanded by the contemporary challenges of digital governance.

RESULTS AND DISCUSSION

Privacy Protection and Public Trust in Digital Administration

Deficiencies in privacy safeguards and data protection frameworks have emerged as critical determinants of citizen trust and perceptions of justice in contemporary digital public administration. The rapid expansion of e-government and digital platforms has enabled governments to collect, store, and process unprecedented volumes of citizen data, but the machinery that should secure this data often remains rudimentary and fragmented. Weaknesses in privacy safeguards not only heighten the risk of unauthorized access or breaches, but also shape public perceptions of fairness, legitimacy, and the integrity of state institutions (Cantens, 2025). Empirical findings indicate that when public agencies fail to demonstrate competence in ensuring data privacy, citizens are less inclined to place their trust in digital administrative systems and more likely to become skeptical of government motives and accountability.

The iterative development of digital administration, as documented by Babšek et al. (2025), underscores the dialectical relationship between technological sophistication and public reassurance. Digital modernization requires more than operational upgrades; it demands ethical stewardship manifested in comprehensive data protection policies, robust implementation of security standards, and transparent incident reporting. When these frameworks are lacking, the resulting vacuum fosters a sense of exposure and vulnerability among citizens. The literature reveals that public confidence is especially susceptible to erosion when data breaches are underreported, mishandled, or inadequately addressed by authorities, leaving citizens questioning whether justice and procedural fairness can be expected from digital administrative channels.

The tendency for citizens to view digital public administration through a justice lens is further accentuated by the personal and societal ramifications of privacy failures. Dei (2025) notes that privacy violations—such as unauthorized surveillance, misuse of personal identifiers, or data sharing without consent—injure more than individual autonomy; they shape broader perceptions of distributive and procedural justice in the relationship between government and governed. Perceptions of justice are constructed not merely from the presence or absence of technical security, but from the visibility of institutional commitment to redress, reparative actions, and adherence to legal norms. Inadequate data protection thus becomes not simply a technical failing, but an ethical breach that can destabilize the legitimacy of digital governance.

Digital trust is contingent upon the clarity, enforceability, and socialization of data protection norms. Pakpahan et al. (2022) argue that justice in the digital public realm is rooted in citizens' confidence that their rights to privacy will be safeguarded impartially, regardless of social status or political standing. Institutional asymmetries—where certain groups receive more vigorous protection or redress than others—underline latent injustices and reinforce systemic inequalities within public administration. Transparency in data handling, accessibility of effective complaint procedures, and the establishment of clear ethical boundaries serve as bulwarks against declining public trust.

Existing scholarship further reveals that public skepticism is fueled by both the occurrence of data breaches and the perception of opacity in government response. When communication surrounding data incidents lacks candor or timelines for remediation are ambiguous, trust quickly deteriorates (Criado et al., 2025). The absence of participatory mechanisms in shaping privacy policies can leave citizens feeling alienated and subject to decisions unaligned with their own values, thus undermining the foundational principle of justice as fairness.

The managerial implications of these findings demand the institutionalization of privacy as an organizational value, integrated into all stages of digital transformation. Putra and Mardikaningsih (2022) highlight the necessity of continuous capacity building for public servants on the ethics and practicalities of information management. Where educational programs and internal audit systems are insufficiently prioritized, weak ethical cultures allow minor lapses to become systemic vulnerabilities. Sustaining citizen trust requires visible and consistent investments in privacy frameworks, accompanied by the cultivation of a culture where ethical lapses are neither excused nor ignored.

Addressing privacy deficiencies is further complicated by the complex interplay between technical standards and socio-political realities. Regulatory regimes often struggle to keep pace with technological advances, leaving grey zones in accountability and enforcement. Fariz and Issalillah (2021) emphasize that the legal ambiguity surrounding data sovereignty and cross-border data flows exacerbates uncertainty among citizens, as conflicting jurisdictions hinder effective oversight. This regulatory lag can foster regulatory arbitrage, empowering actors to exploit privacy loopholes and manipulate administrative outcomes in ways that compromise justice and public interest.

A review of international comparative studies illustrates that perceptions of justice are strongly associated with visibility and accessibility of protection mechanisms. In settings where citizens have reliable access to data remediation processes, such as the European Union's General Data

Protection Regulation (GDPR), public trust is generally higher (Babšek et al., 2025). Conversely, jurisdictions lacking comprehensive recourse tend to experience greater skepticism, with concerns not only about privacy, but the integrity of all government processes touched by digital technologies.

Beyond legalistic frameworks, psychological and sociological research points to the importance of symbolic assurances—and their translation into practical reality—in shaping citizen attitudes. Broad-based public education campaigns, inclusive policy deliberations, and co-creation of ethical codes with civil society actors signal institutional commitment to justice (Nur et al., 2023). As digital administration transforms citizen-government interactions, the assurance of privacy protection and justice is both a foundation for, and a product of, an ongoing dialogue between state and society.

Sustained trust in digital public administration is therefore intrinsically linked to the perception that privacy is respected not as a technocratic addendum, but as a justice imperative embedded in institutional DNA. Organizations that prioritize transparency, empower citizens to participate in data governance, and take visible action to address privacy failures can arrest the erosion of trust and rebuild legitimacy in the face of rapid technological change. It becomes apparent that safeguarding privacy and reinforcing the justice dimension of digital administration are not isolated technical exercises, but holistic governance responsibilities that demand perpetual adaptation and moral clarity.

As this synthesis demonstrates, the prevailing challenge is neither static nor easily resolved; it evolves with the introduction of novel technologies and changing societal expectations. Trust and justice in digital administration depend on adaptive frameworks that can withstand both technological shocks and normative shifts, reaffirming the importance of ethical reflexivity at the heart of public sector modernization.

The process of restoring faith in digital administration, once damaged by privacy lapses, can be protracted and arduous, especially in pluralistic societies where memories of data misuse are long and collective. The currency of trust must be minted in everyday administrative practice—through transparency, dialogue, and uncompromising ethical vigilance—lest digital innovation be consigned to the status of yet another instrument of social division rather than social progress.

Ethical Literacy and Accountability in Technological Innovation

The paucity of ethical digital literacy among public administrators directly shapes accountability, transparency, and the public perception of legitimacy within technologically advanced governance systems. As governmental adoption of complex digital tools accelerates, ethical digital literacy transcends technical competence and instead becomes an imperative foundation for principled action, interpretation, and decision-making. The underdevelopment of ethical knowledge amplifies the risk of poor judgment in data management, algorithmic application, and interpersonal digital engagement, thus corroding the foundations of responsible governance (Darmawan & Eddine, 2024). Without robust ethical grounding, civil servants may inadvertently perpetuate opacity, propagate biases, and compromise the very process of equitable service delivery.

A significant consequence of ethical illiteracy is the prevalence of uncritical technology adoption, often devoid of an adequate assessment of downstream social and moral impacts. Rojak (2025) points out that while technological solutions are frequently portrayed as inherently neutral or progressive, their deployment without the mediation of ethical reasoning fosters a climate where errors, oversights, or abuses persist unchecked. Lack of digital ethics education leaves administrators ill-equipped to interrogate or mitigate risks related to privacy, discrimination, fairness, or social inclusion. The resulting knowledge gap impairs the ability of public officials to identify conflicts of interest, flag algorithmic bias, or anticipate negative externalities, diminishing the quality of both process and outcome in public administration.

Transparency is also profoundly affected by the absence of ethical digital literacy. Barodi and Lalaoui (2025) demonstrate that transparency in digital governance is not achieved solely by publishing data or disclosing decisions, but by ensuring that information flows are readily interpretable and justifiable to all stakeholders. Administrators who lack a nuanced understanding of digital ethics may default to opaque practices, such as failing to explain algorithmic outputs, obscure decision-making rationales, or withhold information about systemic vulnerabilities. This informational asymmetry not only restricts public scrutiny but also precludes meaningful participation in the shaping of institutional norms or redress mechanisms.

Accountability mechanisms are rendered largely symbolic in the face of ethical illiteracy. As Haesevoets et al. (2025) assert, holding officials to account in a digitally mediated environment presupposes a basic competency to anticipate, recognize, and articulate the justice dimensions of digital action. Ignorance or disregard for ethical principles enables the normalization of "inadvertent misconduct," whereby accountability lapses are excused as innocent mistakes arising from ignorance rather than deliberate malfeasance. Repeated failure to hold actors accountable erodes institutional credibility, undermining the deterrent effect of oversight and weakening the scaffolding of representative governance.

The legitimacy of digital innovation is, at its core, a function of perceived procedural fairness, rectitude, and stewardly conduct in administrative practice. As Aneta et al. (2025) argue, if public administrators cannot demonstrate a working grasp of digital ethics, the outcomes of technical innovation—regardless of intent or efficiency—will be viewed through a lens of suspicion or skepticism. Unethical conduct or oversight, whether manifesting as misuse of personal data, insufficient consent processes, or algorithmic opacity, signals to citizens a worrying lack of alignment between innovation goals and public values. Over time, the cumulative impact of these lapses may delegitimize not only specific programs but the broader paradigm of digital governance.

Furthermore, Djatmiko et al. (2025) underscore that ethical digital literacy is crucial for building inclusive and resilient public services, particularly in pluralistic societies. The digital divide is no longer merely a matter of access but extends to disparities in knowledge and awareness. Administrators lacking ethical training may inadvertently design systems that reinforce social exclusion, marginalize vulnerable groups, or privilege efficiency over equity. This perpetuates a cycle where technological innovation serves the interests of the few, rather than acting as a facilitator of social justice and democratized service delivery.

Compounding this problem, the normative frameworks that should guide ethical conduct in digital governance are often underdeveloped or inconsistently applied. Secchi et al. (2025) illustrate how even well-intentioned reforms to digitize bureaucracy may falter when implementation is not grounded in a coherent ethical doctrine. Lack of shared values and guidelines produces a patchwork of standards, encouraging interpretive discretion that can easily be bent towards expediency or self-interest. Public administrators then face challenges in harmonizing organizational routines with evolving ethical expectations, increasing the risk that trust in public institutions will continuously erode.

Training and professional development programs, when they exist, frequently focus on technical upskilling while ignoring broader ethical or societal implications. Gonzalez-Mingot and Marín (2025) note that technology-centric curricula do little to foster reflective practice or critical inquiry. The absence of continuous, institution-wide investment in ethical literacy creates structural inertia, making it difficult for new ethical norms to take root. In effect, innovation becomes divorced from its foundational ethical moorings, leaving public administrators ill-prepared for the evolving expectations of citizens and civil society.

The interdependence between ethical knowledge and collective engagement is further evidenced by the pivotal role of participatory governance in modern digital states. Mardikaningsih and Hariani (2023) emphasize that civil servants adept in digital ethics are better positioned to facilitate inclusive dialogue, address issues of consent, and adapt policies to shifting societal needs. When this capacity is absent, top-down mandates supplant co-creative processes, constraining avenues for redress and diminishing perceived legitimacy.

Meanwhile, Darmawan and Gani (2024) warn that the erosion of psychological well-being among public administrators, exacerbated by the pressures of rapid digitalization, can further compromise ethical vigilance. Administrators under significant stress may default to routinized or expedient choices, disregarding ethical reflection in favor of managing immediate institutional demands. This risk is amplified by leadership cultures that prize output over integrity, normalizing the pursuit of digital innovation regardless of its social or ethical costs.

An enduring solution to these challenges involves cultivating a collective consciousness around digital ethics: a recognition that technological change must be anchored in the pursuit of justice, equity, and the protection of citizen rights. Resilient governance requires not only technological upskilling, but also the embedding of moral reasoning, critical inquiry, and participatory oversight throughout public sector organizations. This requires deliberate, organization-wide commitment and reinforcement through ongoing professional development, transparent policy frameworks, and inclusive discourse.

Only by centering ethical digital literacy as a non-negotiable element of governance can public institutions achieve the dual aims of technological advancement and social legitimacy. Where ethical discernment is weak, technological progress is likely to be perceived as a source of new injustice; where it is strong, innovation can serve as an authentic vehicle for trust, transparency, and democratic renewal.

CONCLUSION

Digital transformation in public administration, while promising enhanced efficiency and improved service delivery, simultaneously introduces pressing ethical responsibilities. The collected analysis highlights that without thorough privacy safeguards and comprehensive data protection frameworks, public trust becomes fragile and easily eroded. The lack of ethical digital literacy among administrators further undermines both transparency and the legitimacy of technology-based innovations in governance. These deficiencies propagate not only technical challenges but also widespread perceptions of injustice, marginalization, and loss of confidence in public institutions. The demand for privacy is now inseparable from the citizen's expectations of justice and accountability; thus, digital innovation must be directly linked to principled ethical conduct.

These findings imply an evolving imperative for public administration to center digital ethics as a pillar of governance. Institutions must invest in cultivating ethical digital literacy, mandating continuous training and embedding ethical reasoning into daily administrative routines. Establishing strong protection mechanisms for personal data, accompanied by transparent and participatory policy-making, will help reinforce both public trust and perceptions of justice. The adoption of technology in the public sector, therefore, cannot be seen as merely an operational upgrade, but as part of a transformative process in which morality, justice, and rights-protection are inseparably integrated.

Based on these syntheses, it is recommended that governments urgently review and strengthen their privacy and data security measures, designing mechanisms that allow for public engagement and transparent recourse in the event of data violations. Structured, ongoing ethical training must be institutionalized for all public administrators to ensure that decisions regarding technology are informed by a strong sense of justice and responsibility. Only by building an ecosystem founded on ethical vigilance, collective awareness, and accountable leadership will digital public administration become a force for equitable, trustworthy, and resilient governance.

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