Journal of Professions and Organization, 2026, 13, 1–17
https://doi.org/10.1093/jpo/joag011
Published: 3 April 2026
Scholarly article

OXFORD

Making digital welfare work: conceptualizing digital compensatory work by frontline professionals

Julia S. Carlsson[1*], Teres Hjärpe[2], Petra M. Svensson[3]

[1]Department of Business Administration, University of Borås, Borås 501 90, Sweden
[2]School of Social Work, Lund University, Lund 221 00, Sweden
[3]School of Learning, Humanities and Social Sciences, Halmstad University, Halmstad 301 18, Sweden

[*]Corresponding author. Department of Business Administration, University of Borås, Borås 501 90, Sweden. Email: julia.carlsson@hb.se

Digital technologies in welfare organizations frequently generate gaps, ambiguities, and misalignments that require professional intervention. Yet prior research has tended to portray frontline workers mainly as resistant or adaptive actors, leaving under-examined their active contributions to sustaining broader digital infrastructures. This article introduces the concept of digital compensatory work to capture how professionals intervene when specific digital technologies fall short of their own standards for professional service delivery. Drawing on an exploratory literature review, we identify three forms of such compensatory work: complementing digital technologies, rectifying their shortcomings, and dismissing them when they conflict with professional judgment. By theorizing these practices, the article expands existing understandings of professional discretion in digital welfare services, shifting attention from resistance and adaptation to value-driven interventions that actively uphold service quality within digital infrastructures. In doing so, it contributes to debates on digital welfare and highlights the essential role of professional agency in sustaining human service organizations under conditions of digital transformation.

Keywords professional discretion, digitalization, human service organizations, digital coping, digital compensatory work, public service delivery

INTRODUCTION

Over the past two decades, digitalization has profoundly reshaped professional work in human service organizations (Hasenfeld 2010), including social services, healthcare, education, employment, and social insurance agencies (Bovens and Zouridis 2002; Buffat 2015; Gillingham 2015, 2019; Susskind and Susskind 2015; Goldkind et al. 2016; Lester 2020). Professionals in these settings engage directly with citizens and exercise discretion as they navigate individualized judgments shaped by multiple, sometimes competing, responsibilities, toward clients, organizational mandates, and legal frameworks. Their roles are characterized by close, personalized interactions that require sensitivity to diverse and often complex human needs, while simultaneously operating within institutional and regulatory constraints (Abbott 1988; Hasenfeld 2010; Lipsky 2010). However, the introduction of digital technologies has challenged these established modes of professional judgment, embedding standardized procedures and automated decision-making processes that may reconfigure how

© The Author(s) 2026. Published by Oxford University Press.
This is an Open Access article distributed under the terms of the Creative Commons Attribution License (https://creativecommons.org/licenses/by/4.0/), which permits unrestricted reuse, distribution, and reproduction in any medium, provided the original work is properly cited.

Downloaded from https://academic.oup.com/jpo/article/13/3/joag011/8586536 by University of Borås user on 13 April 2026

contextual, relational, and ethical considerations are taken into account in practice (Eubanks 2007; Parton 2009; McLoughlin et al. 2017; Pareliussen et al. 2022; Pugh 2024).

A substantial body of research highlights the tensions and contradictions that arise when rigid digital systems intersect with the discretionary nature of professional practice in human services (Wolf and Goldkind 2016; Pedersen 2019; Devlieghere et al. 2022). Historically, these tensions have contributed to portrayals of professionals as resistant or slow to adopt new technologies, framed in early research as "computer phobia" (Neugeboren 1996), and more recently as a continued depiction of street-level bureaucrats as obstacles to digital transformation (cf. Evans and Harris 2004; Gillingham 2015; De Boer and Raaphorst 2023). In contrast, recent scholarship questions narratives that frame professionals primarily in terms of resistance, coping, or adaptation to digital constraints. Instead, this work shifts attention to the active, yet often invisible, contributions through which professionals make digital systems function in practice (Tummers and Rocco 2015). Studies show how professionals intervene in automated systems, adjust or bypass standardized workflows, and customize digitally mediated interactions to accommodate clients' circumstances and uphold ethical standards (Pors 2015; De Witte et al. 2016; Devlieghere and Roose 2018; Jørgensen and Schou 2020).

From this perspective on the study of professions and digital technology, professional discretion is not framed as a "control problem." Instead, it is highlighted as a crucial mechanism for enabling professional judgment and responsive client service in increasingly digitalized organizational environments. This includes the ability to act in line with core professional values, where ethics is understood not only as a formal code, but as a situated moral practice exercised in everyday encounters with clients (cf. Evans 2011, 2016; Maynard-Moody and Musheno 2012; Zacka 2017). This view is supported by research showing that reforms inspired by New Public Management and performance measurement systems may reinforce, rather than reduce, the need for professional discretion (Brodkin 2011; Jacobsson et al. 2020) because standardized systems and performance metrics often fail to capture the complexity, ambiguity, and relational aspects of frontline work. Similarly, studies on digital governance demonstrate that standardized tools and processes often necessitate discretionary interventions by frontline professionals to ensure effective and context-sensitive service delivery (Bovens and Zouridis 2002; Buffat 2015). Within this body of work, discretion is increasingly understood not merely as a space for rule deviation, but as a form of advocacy: an effort by professionals to interpret and apply rules in ways that protect and support clients facing complex and often conflicting institutional demands (Lipsky 2010).

Yet, despite their importance, these practices remain under-theorized in research on professions and digitalization. While prior studies offer valuable empirical insights, no systematic effort has been made to synthesize them into a coherent, overarching framework that captures the broader professional contribution to digitalized human service organizations. Although many studies focus on professionals' engagement with specific digital tools or systems, this article adopts a broader perspective by conceptualizing these technologies as part of a wider digital infrastructure. We use the term digital infrastructure to refer to the multiple, interconnected systems that professionals must navigate in their everyday work, such as case management systems, communication platforms, and assessment tools (cf. Henman 2010). This infrastructure structures, mediates, and sometimes complicates core aspects of professional practice: client encounters, organizational routines, and decision-making processes increasingly built upon digital platforms, algorithms, and automated procedures. The lack of conceptual clarity around how professionals contribute to these infrastructures limits our understanding of their active role in upholding professional values in digitalized welfare settings. Against this backdrop, the article explores how frontline professionals engage with digital technologies as components of this broader infrastructure, particularly when they perceive them to fall short of their standards for appropriate service delivery.

Through a synthesis of twenty-six qualitative studies from digitalized welfare settings, we introduce and conceptualize the notion of "digital compensatory work." This concept captures the discretionary practices through which professionals seek to align service delivery with core professional values. By doing so, the article advances the literature on professional discretion and digitalization by presenting a framework that conceptualizes frontline professionals' engagement with digital technologies as value-driven compensatory work within broader digital infrastructures. Against this background, the article addresses the following research question: *How do frontline professionals in human service organizations compensate for the limitations of digital infrastructures in ways that uphold their professional values of good public service delivery?*

To investigate this phenomenon, we conducted an exploratory literature review. Unlike systematic reviews that rely on predefined search terms and structured databases, our approach followed a snowball sampling

Downloaded from https://academic.oup.com/jpo/article/13/3/joag011/8586536 by University of Borås user on 13 April 2026

strategy (Wohlin 2014), particularly suited to fragmented or emerging fields where relevant insights are inconsistently indexed. This methodology aligns with our aim of tracing recurring patterns across studies situated in various human service organizations allowing for a deeper understanding of how professionals work to uphold their own standards of what constitutes good and appropriate service in digitalized human service organizations.

The article continues with a description of the review method and analytical approach. This is followed by the findings, structured around three forms of digital compensatory work: complementing, rectifying, and dismissing digital systems. We then develop the concept of digital compensatory work in dialogue with existing theories of discretion. The article concludes with future research and implications for policy.

METHOD AND ANALYTICAL APPROACH

This study is based on an exploratory literature review aimed at identifying and synthesizing conceptual patterns in how frontline professionals engage with digital technologies in human service organizations (cf. Gough et al. 2012). We used snowball sampling (Wohlin 2014) as the primary search method, supported by a constrained citation network strategy (Lecy and Beatty 2012). This approach enabled us to follow citation trails beyond the limits of keyword-based database searches, which is crucial given that many relevant studies do not frame their findings in terms of "compensatory work" or digital infrastructures in human service organizations. Instead, they often focus on professionals' interactions with specific tools, systems, or platforms. Rather than striving for completeness, we prioritized conceptual relevance and empirical richness across diverse welfare contexts.

Article selection and inclusion criteria

The review began with a start set of three empirical, peer-reviewed articles:

- Pors (2015),
- Tummers and Rocco (2015), and
- De Witte et al. (2016).

These articles were selected for their clear focus on how frontline professionals compensate for shortcomings in digital technologies, and because they were among the earliest to highlight this phenomenon. Their insights provided a strong foundation for our snowballing review. Backward snowballing involved systematically screening the reference lists of the start articles, while forward snowballing was performed through Google Scholar (search date: 8 January 2025), identifying newer publications citing the start articles. The search returned 120 citations for Pors (2015), 126 for Tummers and Rocco (2015), and 110 for De Witte et al. (2016). Each citation was initially screened based on title, authorship, and source. Articles that appeared relevant were then reviewed at the abstract level, and if relevant, in full text. To maintain conceptual focus and avoid the uncontrolled expansion typical of classical snowballing, we followed a constrained strategy as outlined by Lecy and Beatty (2012). This meant limiting inclusion at each iteration to studies deemed most relevant for addressing the aim and purpose of the review. Throughout the process, we documented decisions regarding inclusion and exclusion to ensure transparency and methodological rigor.

The snowballing process was continued until redundancy was reached, that is, when additional searches no longer contributed new theoretical perspectives, empirical insights, or conceptual variations relevant to the study's focus. We interpreted this point as theoretical sufficiency rather than empirical saturation. As with all interpretive syntheses, our analysis is shaped by subjective judgments involved in selecting, interpreting, and comparing studies. Because the review relies on published qualitative research, the material may reflect publication biases and dominant conceptual framings in the field. We addressed these limitations through iterative team discussions, transparent inclusion criteria, and collective decisions about borderline cases in both backward and forward snowballing.

The review resulted in a set of empirical qualitative studies. This outcome reflects the focus of our study: to investigate how professionals act in relation to digital technologies in their everyday occupational practice. In the analytical phase, we conceptualized these technologies as components of broader digital infrastructures. Because such questions are typically examined through qualitative designs, the studies that emerged as relevant were qualitative. Primary qualitative studies offer conceptually rich and detailed accounts that are particularly well suited to capturing the subtle, value-laden, and context-dependent dimensions of professional discretion (Flemming and Noyes 2021). Consequently, the final sample consisted of only qualitative research, which provided the depth and contextualization necessary to explore compensatory practices, while also ensuring methodological coherence across the material. Table 1 presents the number of relevant articles identified.

Downloaded from https://academic.oup.com/jpo/article/13/3/joag011/8586536 by University of Borås user on 13 April 2026

Table 1 The number of relevant articles found via snowballing.

Start article	Backward snowballing	Forward snowballing
Pors (2015)	1	5
Tummers and Rocco (2015)	0	5
De Witte et al. (2016)	1	14

The final set of twenty-six articles covers diverse national contexts, including Denmark, Norway, Belgium, the Netherlands, Sweden, and the United States. Yet all focus on human service organizations within broadly comparable welfare state regimes. A likely explanation for the predominance of Nordic and BENELUX cases is that these countries are widely recognized as frontrunners in digitalization. Indices such as DiGiX 2024 place Denmark and the Netherlands among the leading European countries (Cámara 2024), while the European Commission's Digital Decade country reports (2025) indicate that Belgium, Denmark, and Sweden consistently perform above the EU average in terms of digital skills, infrastructure, and digital public services (European Commission 2025a, 2025b, 2025c).

Inclusion criteria were as follows: (1) the article examines frontline professionals' interaction with digital infrastructures; (2) it demonstrates how professionals contribute to supporting the functioning of those digital infrastructures; (3) the article demonstrates that professional practices reflect value-driven efforts to uphold professional service quality; and (4) the article is published in peer-reviewed academic journals. While the digital technologies studied vary, from e-government platforms to online applications and case records, they all form part of broader digital infrastructures that structure and mediate client-facing welfare service delivery. These infrastructures not only include digital technologies, but also the embedded routines, workflows, and logics that shape how services are organized, accessed, and experienced. For a full overview of the articles included, see Supplementary Appendix S1.

Although the articles include different terms, such as social workers, case handlers, welfare professionals, or frontline staff, we will throughout the article use the concept of frontline professionals to capture the shared characteristics of the groups studied. Drawing on Lipsky (2010) and Hasenfeld (2010), we understand frontline professionals as those who work in direct interaction with clients, exercise discretion, and navigate conflicting demands under conditions of organizational and technological constraint. While the reviewed studies describe the motives behind professionals' actions in varying ways, referring to ethical reasoning, professional norms, relational engagement, or client-centered care, we interpret these as expressions of a broader orientation toward professional values of good public service delivery. These values encompass commitments to fairness, dignity, responsiveness, and procedural justice, reflecting an understanding of professionalism that goes beyond compliance with rules or technical performance. Rather, they represent a normative framework through which frontline professionals make sense of their work and justify their discretionary actions in the face of digital constraints.

Notably, several of the reviewed studies serve a dual purpose in this article: they inform both the theoretical discussion on discretion and the empirical analysis of professional practices. This reflects the interpretive and exploratory character of the review, in which conceptually rich studies are treated as both theoretical contributions and empirical material.

To summarize the review and selection process, Fig. 1 presents an overview of the steps undertaken, from the initial identification of start articles to the final set of studies included for analysis. This visual representation of the workflow clarifies the iterative and interpretive nature of the review strategy.

After selecting the relevant studies, we conducted a thematic, interpretive analysis of their content.

Analytical process

Following Ogawa and Malen (1991), we treated the literature as a dataset to be analyzed and interpreted, rather than merely summarized. The analytical process was informed by hermeneutic reading strategies (Smythe and Spence 2012), viewing the literature as a dialogical partner through which to explore how frontline professionals engage with and contribute to the functioning of digital infrastructures in human service organizations. Our interpretations were shaped by prior empirical and conceptual work, and emerging patterns guided subsequent sampling and analysis. The material offered a coherent basis for identifying recurring conceptual patterns across diverse contexts. Thus, we derived patterns from the literature itself rather than imposing predefined categories. We approached the texts as sites of meaning-making, allowing themes to emerge through iterative engagement. As with all snowball sampling, some relevant studies may have been missed due to limitations in citation or indexing, but the approach yielded a rich and analytically useful

Downloaded from https://academic.oup.com/jpo/article/13/3/joag011/8586536 by University of Borås user on 13 April 2026

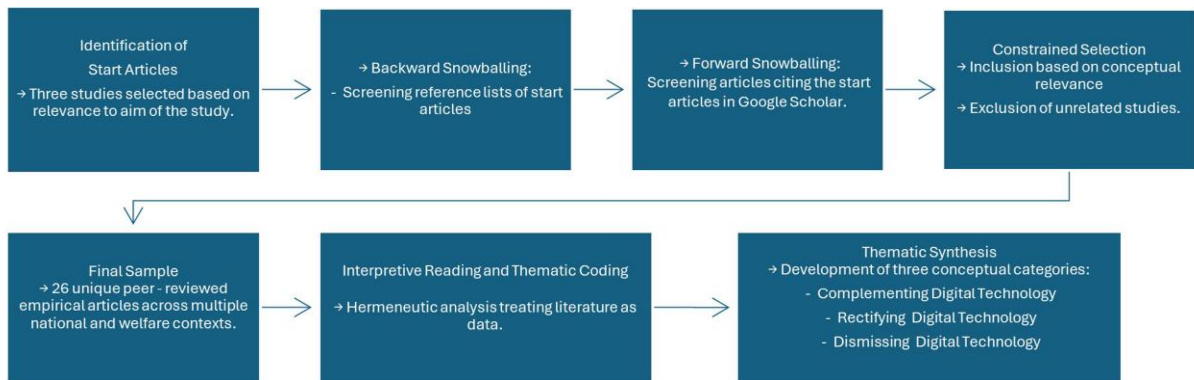

Figure 1 An overview of the steps undertaken—from the initial identification of start articles to the final set of studies included for analysis.

sample. The selected articles were systematically coded to identify recurring forms of professional engagement with digital infrastructures. The analysis examined how professionals intervene to make specific digital technologies work in practice, according to their own professional judgments of what is required for appropriate service delivery. These interventions were synthesized into three overarching modes, complementing, rectifying, and dismissing, which underpin the framework of digital compensatory work presented in the second half of the article.

THEORETICAL FRAMEWORK: STREET-LEVEL BUREAUCRACY, PROFESSIONAL DISCRETION, AND DIGITALIZATION

Since Lipsky (2010, p. 3) introduced the concept of street-level bureaucracy, defining street-level bureaucrats (SLB) as "public service workers who interact directly with citizens in the course of their jobs, and who have substantial discretion in their work," the role of frontline professionals has attracted sustained scholarly attention. Street-level bureaucrats (SLBs) typically work under demanding conditions. Their work is shaped by limited resources (Hupe and Buffat 2014), by complex and often unpredictable client situations that cannot be fully captured by standardized policies (Bovens and Zouridis 2002), and by direct, face-to-face interactions with citizens that make the consequences of decisions immediately visible (Maynard-Moody and Musheno 2000). Within these constraints, professionals must continuously balance organizational demands with clients' needs. As Brodkin (1997, p. 24) observes, SLBs often "do what they can," relying on discretion, ethical judgement, and practical improvisation to make their work feasible in everyday practice.

While rooted in the policy implementation tradition, the SLB framework resonates strongly with research on professions, particularly in its focus on discretion, situated expertise, and responsibility (cf. Trappenburg et al. 2020). In this article, we adopt the term frontline professionals to emphasize their position not only as street-level implementers of policy, but also as skilled and ethically guided professionals.

Reframing discretion: from control problem to contribution

Professional discretion has long been characterized by a central tension: while it is often framed as a source of inconsistency, bias, and managerial concern, it is also indispensable for enabling responsive and context-sensitive service delivery. As Maynard-Moody et al. (2003) note, attempts to narrow or control street-level discretion are driven by concerns for transparency and legal certainty, yet a substantial body of research demonstrates that discretion is necessary to address the complexity, uncertainty, and situational variability of human service work (Maynard-Moody and Musheno 2012; Evans 2016). Importantly, discretion does not operate in a normative vacuum. It may be shaped by managerial priorities, legal frameworks, and institutional norms (Evetts 2009), while simultaneously functioning as a site of ethical agency in which professionals actively interpret and balance competing responsibilities in specific situations. Tensions between control and autonomy, system logic and client needs therefore constitute the practical conditions under which street-level professionals navigate their work.

A key concept in explaining how SLBs manage such tensions is coping. Originally introduced by Lipsky (2010), coping refers to the behavioral strategies professionals use to "master, tolerate, or reduce external and

Downloaded from https://academic.oup.com/jpo/article/13/3/joag011/8586536 by University of Borås user on 13 April 2026

internal demands and conflicts they face on an everyday basis" (Tummers et al. 2015, p. 1100). Traditionally associated with self-protective behavior and negative consequences for clients (Soss, Fording et al. 2011; Caswell and Høybye-Mortensen 2015), coping has been reconceptualized in more recent research as potentially client-oriented and ethically motivated. Tummers et al. (2015) propose a typology of coping strategies, distinguishing between moving away from, against, or toward clients. Of particular interest here is "moving towards clients," which describes how SLBs adjust their actions pragmatically to better serve client needs, an orientation that reflects coping in the client's benefit (Tummers et al. 2015, p. 1103).

This form of client-oriented coping resonates with other theoretical perspectives that similarly highlight ethical agency in frontline practice. For instance, Maynard-Moody and Musheno's (2012) citizen-agent narrative offers an alternative to the state-agent model, depicting SLBs as moral actors who interpret and apply rules flexibly in light of clients' needs. Likewise, the literature on advocacy has explored how SLBs use their discretion to secure better outcomes for clients, particularly when standardized procedures or institutional shortcomings create barriers to adequate service (Lipsky 2010). In such cases, SLBs draw on their professional judgment and authority to act within or around organizational constraints often informally or "under the radar" (Trappenburg et al. 2020).

Both the citizen-agent perspective and research on professional advocacy highlight that SLBs often engage in coping rooted in professional values. Rather than following externally imposed definitions of "good practice," decisions are guided by normative understandings of what clients need and deserve, shaped by professional values. In this article, we understand professional values not as a fixed code, but as a situated practice grounded in the profession's task, knowledge, and client relations (Maynard-Moody et al. 2003). Professional reasoning unfolds in everyday encounters and is closely tied to discretion: the practical judgment professionals exercise when navigating complex situations. We build on this view to explore how such value-driven discretion is reconfigured in digitalized settings, particularly when SLB professionals step in to compensate for the shortcomings of digital infrastructures.

Digitalization and its impact on discretion

As digital technology becomes embedded in human service organizations, SLBs must adapt their coping strategies to new forms of client interaction, institutional expectations, and technological constraints. Breit et al. (2021) suggest that digitalization introduces additional pressures, prompting new types of coping strategies alongside existing dilemmas in frontline service work. While some scholars argue that digital systems constrain professional discretion and reshape the premises of frontline work (Bovens and Zouridis 2002; Parton 2009), others highlight how discretion continues to operate, albeit in more informal or adaptive ways, within digital environments (Jorna and Wagenaar 2007; Røhnebæk 2013).

In this context, the concept of "digital coping" highlights how professionals use their discretion to move toward, away from, or against clients (Tummers and Rocco 2015; Breit et al. 2021). Particularly relevant are studies showing how professionals move toward clients when they are disadvantaged by technological systems, for example, by adapting rigid procedures, compensating for flawed outputs, or bypassing automation (Tummers and Rocco 2015). In such situations, professionals may take on a reparative role, intervening when systems fail to safeguard clients' rights and needs.

Pedersen and Pors (2023) examine discretionary practice in the context of increasing standardization and managerial control in Danish social services, where digital systems form an important part of these developments. Drawing on ethnographic studies, they identify three modes through which frontline professionals respond to such conditions: adaptive handling, attentive compensation, and affective encouragement. These practices are not merely pragmatic adjustments to system constraints, but ethically grounded forms of discretion rooted in a Weberian ethics of office, expressing responsibility toward both organizational mandates and citizen needs. Together, the modes illustrate how discretion is not eroded by digitalization, but reoriented toward mediating between client needs, organizational standards, and digital infrastructures.

Taken together, these studies offer valuable empirical insights into how frontline professionals respond to digital pressures and exercise discretion in ways that can be understood as an ethics of office. Yet these accounts remain tied to specific contexts and conceptual framings, and tend to emphasize coping, adaptation, or adjustment to digital systems. As a result, the broader picture of how professionals actively intervene to make digital technologies function in practice remains less fully developed. In this article, we take a wider perspective by synthesizing evidence across studies to conceptualize how professionals not only cope with digital constraints but actively intervene to uphold professional quality and secure workable service delivery. We capture this

Downloaded from https://academic.oup.com/jpo/article/13/3/joag011/8586536 by University of Borås user on 13 April 2026

interventionist dimension through the concept of digital compensatory work, which directs attention to practices of complementing, rectifying, and dismissing digital infrastructures as part of professional discretion.

FINDINGS: DIGITAL COMPENSATORY WORK IN HUMAN SERVICE ORGANIZATIONS

While the studies included in our literature review did not have the primary aim of investigating how professionals compensate for digital technologies as part of broader digital infrastructures, they nonetheless provide valuable insights into such practices. In some cases, professional interventions into digitally mediated routines are implicitly acknowledged, yet these actions are rarely conceptualized in terms of infrastructural support or compensation. Instead, the practices observed are more commonly framed through other, but closely related, conceptual lenses, such as emotional labor (Løberg and Egeland 2023), ethics-of-office (Pedersen and Pors 2023), or moral agency (Pors and Schou 2021). Others interpret them as subtle forms of resistance (Røhnebæk 2013), coping strategies in response to digital demands (Tummers and Rocco 2015), or emergent signs of a redefined professional role (Pors 2015). Taken together, these perspectives suggest that while the enabling contributions of professionals to digital infrastructures remain under-theorized, they are nonetheless empirically evident and deserving of further conceptual development.

Drawing on Lipsky's (2010) notion of discretion and subsequent work on coping as moving toward clients in digitalized environments (e.g., Tummers and Rocco 2015), as well as Pedersen and Pors's (2023) conceptualization of ethical discretion in standardized systems, we approached the empirical material by focusing on how professionals compensate for shortcomings in digital infrastructures in order to safeguard standards of professional service delivery. Through our thematic coding, we identified recurring dimensions of what we call digital compensatory work, which we organized into three primary categories: complementing digital technologies, rectifying their limitations, and dismissing digital technologies when necessary.

Table 2 provides an overview of the identified dimensions, structured around professional practices, categories of work, and the forms of compensation that emerged from our synthesis of the literature. To illustrate these dimensions, we use examples drawn from the selected studies.

The table illustrates how professional discretion is exercised through a range of situated practices aimed at managing and adapting digital technologies in order to uphold professionals' own standards of adequate service delivery. Although our empirical categories refer to specific tasks or decisions, they also reflect professional responses to the broader digital infrastructure of welfare work, comprising case management systems, communication tools, and automated decision support systems. In the following sections, each dimension and its associated categories are described in more detail and illustrated with examples from the selected studies. While several articles could exemplify more than one dimension, we have chosen to present the examples we find most analytically compelling for each category. For a full overview, see Supplementary Appendix S1.

Complementing digital technology

"Complementing work" refers to activities through which frontline professionals actively add to digital infrastructures to ensure that systems and tools function in ways that are responsive to clients' needs. This type of contribution became visible across several studies included in our review, where professionals engage in *bridging gaps in digital access, humanizing digital interaction,* and *filtering complex cases for appropriate use*.

One of the clearest expressions of complementing work is *bridging gaps in digital access*, where frontline professionals use their discretion to enhance digital services and support clients. This type of work involves assisting clients in navigating digital systems, a practice documented by Pors and Schou (2021), who investigate how frontline workers address moral tensions in digitalized welfare contexts. They describe how professionals navigate the intersection of political expectations, professional standards, and clients' lived realities by acting as moral mediators between these often conflicting demands. Particularly noteworthy is how their findings show that frontline workers provide not only technical assistance but also emotional support and reassurance to vulnerable citizens experiencing difficulties or anxiety related to digital technologies. In doing so, these professionals extend their roles beyond mere technical support, actively assisting some of the welfare state's most vulnerable groups, individuals who might otherwise risk exclusion. For instance, they guide clients through government websites, offering encouragement and tailored support to those with limited literacy or digital confidence.

Similar patterns are evident in studies by Tummers and Rocco (2015); Jørgensen and Schou (2020); Pors (2015), and Höglund Rydén and Hofmann (2024). These studies show how frontline professionals are

Downloaded from https://academic.oup.com/jpo/article/13/3/joag011/8586536 by University of Borås user on 13 April 2026

Table 2 Dimensions of digital compensatory work: practices through which frontline professionals complement, rectify, or dismiss digital technologies or infrastructures to uphold professional public service.

Practices	Categories of work	Dimensions of professional compensatory work
Providing digital instruction and encouragement so that clients can access welfare services. Adjusting language, tone, and format to make digital communication more empathetic and understandable. Using professional discretion to identify when a case is too complex, urgent, or sensitive to be handled through automated or standardized processes.	Bridging gaps in digital access Humanizing digital interaction Filtering complex cases for appropriate use	Complementing *Adding* to digital technology and infrastructures to enhance their function.
Take over and complete clients' applications. Gathering relevant client data outside the automated workflow, through phone calls, meetings, and other data sources during or prior to meetings. Add information through hidden fields, marginal notes, or parallel documentation. Identifying and correcting errors generated by automated tools. Using strategic and anticipatory recordkeeping. Using parallel documentation if the system crashes.	Performing on behalf of the client Reviewing digital outputs Supplementing incomplete digital information Adapting documentation Maintaining analog safeguards	Rectifying *Stepping in to fill gaps* left by inadequate or failing technology or infrastructure.
Using analog documentation instead of digital. Reject algorithmic decisions or support—instead use professional judgment. Turning a blind eye or overshooting data. Delaying system use to establish trust or reflect with colleagues before entering case data.	Deprioritizing digital tools to preserve the relational core of professional practice Ignoring algorithmic recommendations Manipulating system inputs	Dismissing *Rejecting or bypassing* digital technology or infrastructure deemed unhelpful or counterproductive.

both expected to and actively do guide citizens through self-service systems, support those who struggle with digital technologies, and complement digital infrastructures, for example, by offering guidance, developing supportive resources, and arranging face-to-face meetings for citizens with lower digital literacy.

Another expression of complementing work is termed *humanizing digital interaction*. This practice concerns how professionals enhance system outputs, making them more accessible to clients. For example, Løberg and Egeland (2023), in their study of how digital interfaces affect frontline communication at NAV in Norway, find that professionals actively enhance client accessibility in system-generated output. They do this by adjusting their language, tone, and style, simplifying texts, using emojis, and expressing empathy to foster relationally attuned communication instead of relying solely on impersonal system-generated messages. Similarly, Thunman

Downloaded from https://academic.oup.com/jpo/article/13/3/joag011/8586536 by University of Borås user on 13 April 2026

et al. (2020) examine how digitalization affects relational aspects of frontline work at the Swedish Social Insurance Agency, showing that professionals make informal "offers of assistance" to support clients in navigating digital processes. This involves providing explanatory support beyond standardized responses to help clients better understand rules and navigate requirements. The study highlights how professionals offer direct personal contact via phone, provide additional clarifications to simplify complex rules, and outline available options for clients. Consequently, these practices add to the functionality of digital systems by humanizing digital interactions.

A further dimension of complementing work involves *filtering complex cases for appropriate use*. Hofmann et al. (2024) analyze the challenges vulnerable citizens face when using digital self-services and how these challenges are addressed at the NAV office. The study shows that professionals divert complex or urgent cases away from automated systems toward manual handling, thereby ensuring that vulnerable clients receive appropriate and context-sensitive support. Similarly, Germundsson et al. (2024), in their study of Swedish municipal social services, explore whether and how the adoption of Robotic Process Automation (RPA) shapes the dynamics of social assistance casework. Their findings show that professionals intervene when they consider that the RPA system would fail to accommodate unstable or nuanced client situations. One concrete example is that frontline workers flag cases requiring manual oversight, thereby ensuring that the complexity of such cases is not lost or oversimplified.

Through several studies, our analysis identified practices through which professionals complement digital technologies by adding effort to make them function in ways that support professional ideals of public service. These practices appear value-driven: professionals are not merely following prescribed procedures or managing workload, but actively working to uphold ethical standards of accessibility, care, and fairness, thereby sustaining the broader digital infrastructure within which welfare services are delivered.

Rectifying digital technology

"Rectifying work" refers to the professional practices through which professionals step in to fill the gaps left by malfunctioning, inadequate, or overly standardized digital systems. Thus, these examples show how frontline professionals engage in corrective actions to ensure that digital services do not fail the clients they are meant to support.

One form of rectifying work visible in our sample of studies is *performing on behalf of the client* when digital participation is not feasible. In such cases, professionals do not merely extend or support a functioning digital process but temporarily substitute for it because the system fails to accommodate the client's situation. In the previously mentioned study by Jørgensen and Schou (2020), which examines how frontline–citizen interactions are affected by digital reforms, the authors find that although workers strive to promote independence, they frequently must complete digital forms and applications directly for clients who are unable to manage them, thereby ensuring access to welfare services.

A second example of rectifying work is when professionals *review digital outputs* to identify errors or ethically questionable recommendations. Two studies from the Swedish context, show frontline professionals in financial assistance services routinely review and correct automated decisions, adding supplementary information and evidence to ensure adequate outcomes (Ranerup and Henriksen 2022; Germundsson et al. 2024). Similarly, Høybye-Mortensen and Ejbye-Ernst (2018), in their study of digital case management systems at a Danish disability office, describe work performed by professionals in the process of transforming casework registrations into reliable information. They show how staff cross-check digital outputs, clarify annotations, and correct inaccuracies to safeguard the quality of services. This includes ensuring that information in the case management system is accurate and correct, providing essential context, such as the "if, but, and maybe," that digital systems often fail to capture.

A third rectifying practice found in the review is *supplementing incomplete digital information*. Løberg (2021) shows how frontline staff at NAV manage intensified communication demands by prioritizing urgent cases and gathering additional client information through multiple channels. In a later study, she describes this as "disobedient text consumption," where professionals actively seek information beyond system outputs to construct richer and more nuanced client narratives (Løberg 2023). In a study by Pedersen and Pors (2023), professional practices such as filling gaps left by standardized systems, often through manual notes, hidden fields, or parallel documentation outside formal ICT (Information and Communication Technology) channels, are called "attentive compensation." Pedersen and Pors reflect on how discretion becomes a necessary buffer against reductive digital categorizations. In studies by Røhnebæk (2013), Kersing et al. (2022), and Jørring (2025), we also see how professionals take on the task of enriching or verifying digital

Downloaded from https://academic.oup.com/jpo/article/13/3/joag011/8586536 by University of Borås user on 13 April 2026

data, by scheduling additional meetings, collecting case material, or supplementing system outputs, ensuring that automated representations of clients are meaningful and ethically defensible in practice.

A fourth example of rectifying work is the *strategic adaptation of documentation*. Erisman et al. (2024), studying Dutch child protection services, examine how professionals interact with digital tools while remaining acutely aware that their records will be read not only by families but also by evaluators and performance monitoring systems. They argue that professionals must actively ensure that these instruments support practice and promote client well-being. Introducing the notion of "traveling meanings," the authors show how professionals strategically formulate digital records to avoid misinterpretation across diverse audiences. Rather than merely ticking binary boxes (e.g., "child abuse: yes/no"), they use narrative fields or informal notes to retain relational and ethical nuance. Similar practices are reported by Gillingham (2013) and Schmidt (2024). Gillingham shows how child protection workers in the UK and Australia craft extended narrative summaries to justify difficult decisions or preserve space for relational judgment, while Schmidt demonstrates how social workers in Danish job centers strategically delay digital documentation, using handwritten notes or collegial discussions, to ensure that final records capture essential relational and contextual nuances.

Finally, some workers resort to *maintaining analog safeguards* to protect service continuity during technical failures. Røhnebæk (2013), in her study of NAV, investigates how digitalization and standardization affect practitioners' ability to provide individualized support in welfare services. She introduces the concept of "tinkering" to describe how employees actively navigate and adjust to the system's limitations while maintaining a client-oriented approach. One such strategy involves bypassing system failures: when the digital infrastructure crashes or becomes unresponsive, frontline professionals temporarily revert to analog methods, such as using pen and paper, to ensure that critical services are not disrupted and that client information is still recorded. Likewise, the earlier mentioned study by Høybye-Mortensen and Ejbye-Ernst (2018) reveals a similar pattern, as the authors document how staff in Danish disability offices maintain Excel backups alongside official systems to safeguard data integrity.

These empirical examples collectively demonstrate how rectifying work is not merely a matter of technical troubleshooting, but a value-driven professional response to the limitations, errors, or failures in digital infrastructures. Frontline professionals engage in these practices not because they are asked to, but because digital tools or systems often fall short in supporting the nuanced, ethical, and relational dimensions of a professional service.

Dismissing digital technology

"Dismissing" refers to practices in which digital technologies are actively bypassed or rejected because professionals judge them to be unhelpful, counterproductive, or even harmful to client welfare provision. In these cases, technology is not seen as a viable tool for improving service delivery. Instead, professionals rely on their own expertise and judgment to uphold service quality, even when this means working in direct contradiction to digital procedures.

A clear form of dismissing involves *deprioritizing digital tools to preserve the relational core of professional practice*. De Witte et al. (2016), in their study of child welfare, show how professionals develop strategies to protect the relational dimension of their work when using ICT. Rather than completing every field in the digital system, social workers focus on home visits and direct client engagement. In some cases, they abandon the official digital system altogether, opting for personal, paper-based records, which they argue better capture the complexity of clients' lives. A similar pattern is found in Schmidt's (2024) study of Danish job centers, where social workers consciously reorder their workflows to prioritize face-to-face interaction before engaging with digital documentation. Rather than starting client meetings with system-based checklists or form-filling, professionals first focus on building relationships and understanding clients' situations. Some even take handwritten notes or discuss cases informally with colleagues before recording them in digital systems. These behaviors represent an intentional rejection of system-led routines, emphasizing instead the value of professional judgment and human connection.

A second example of dismissing, *ignoring algorithmic recommendations*, is found in Busch et al. (2018) study of how frontline professionals respond to digitized discretionary practices in Norway's court and tax administrations. Their research highlights how professionals engage in what the authors term "micro-level agency," which includes appropriating, resisting, or entirely defying digital tools. For instance, professionals may interpret outputs from decision-support systems in ways that preserve professional judgment or dismiss recommendations outright when they conflict with contextual knowledge or ethical standards. Overall, the study demonstrates how professionals act as watchdogs for professional values in the face of increasing digitalization.

Downloaded from https://academic.oup.com/jpo/article/13/3/joag011/8586536 by University of Borås user on 13 April 2026

The same pattern of ignoring system recommendations is found in studies by Ranerup and Henriksen (2022), Germundsson et al. (2024), and Delpierre et al. (2024).

A third example of dismissing involves the *manipulation of system inputs* to circumvent rigid digital logics. This form of digital compensation includes practices such as "turning a blind eye" to certain data points or intentionally exaggerating entries in order to secure support for clients. Such behavior is, for example, illustrated in Devlieghere and Roose's (2018) study of Belgium's social service sector, where social workers develop strategies to reintroduce relational dimensions into digitized social work. The study highlights how professionals deliberately ignore or overshoot system-generated data to ensure that clients receive adequate assistance. A similar pattern is described in Devlieghere et al. (2018), where child protection workers manipulate or downplay digital records to protect clients or ensure just outcomes. Likewise, Busch's (2020) study of how digital technology affects decision-making in Norwegian courts and tax administration offices shows how professionals engage in "crafting" by adjusting decision-support system recommendations to better align with clients' individual needs.

In sum, dismissing digital technology refers to deliberate professional actions in which digital technologies are actively rejected or bypassed because they are judged to offer no meaningful benefit, or even to pose risks, to clients. This is not passive neglect but a conscious and ethically grounded decision to opt out of the digital pathway when it is seen as misaligned with professional standards or the best interests of the client.

Discussion: toward a synthesis of digital compensatory work

The analysis shows that when digital infrastructures in human service organizations fall short, frontline professionals do not merely adapt or endure; they actively intervene to ensure that service delivery aligns with their understanding of what constitutes professional practice. Across diverse welfare settings, we identify recurring practices in which professionals compensate for shortcomings in digital infrastructures in ways that reflect and protect their profession-specific conceptions of quality.

Discretionary practices in digitalized human service organizations

First, the reviewed literature supports and expands earlier research suggesting that digitalization does not simply reduce discretion but rather reshapes how it is enacted in practice (Jorna and Wagenaar 2007; Burton and Van den Broek 2009; Buffat 2015; Pors and Schou 2021; Pedersen and Pors 2023). While earlier accounts warn that automation and standardization might constrain or eliminate discretion (e.g., Bovens and Zouridis 2002; Busch et al. 2018), more recent scholarship has challenged this "curtailment thesis." Instead, digital infrastructures appear to transform discretion in context-dependent ways. This reframing becomes particularly evident when we attend to micro-practices through which professionals engage with digital technologies and infrastructures, not as passive users or rule-followers, but as active mediators. Discretion emerges in new locations: making automated outputs available, deciding when to override digital workflows, or determining whether and how technologies should be used at all.

While studies in our review describe similar practices under labels such as client support (Hofmann et al. 2024), mediation (Höglund Rydén & Hofmann, 2024), adaptive discretion (Løberg 2021), or coping strategies (Jørring 2025), we bring these strands together under the broader concept of digital compensatory work.

"Digital compensatory work refers to discretionary practices in which professionals actively intervene when digital technologies or infrastructures fail to support service delivery in line with their professional standards."

We organize these practices into three overarching forms: complementing, rectifying, and dismissing. Complementing refers to situations where digital systems function as intended but require human enhancement, for example, by adding relational, contextual, or clarifying elements. Rectifying captures practices where systems malfunction or provide incomplete, misleading, or ethically problematic outputs, prompting professionals to correct, supplement, or safeguard against errors. Dismissing applies when systems technically function but are judged misaligned with professional standards, leading practitioners to bypass, override, or work outside the digital environment. These distinctions capture different ways in which the functionality of digital systems, professionals' use of discretion, and their intentions to uphold good service delivery intersect, and they form the analytical basis for the categories presented above.

The three forms differ in terms of (1) the functionality of the system being compensated for, (2) the compensatory actions performed by professionals, and (3) the purpose behind their interventions in relation to the digital infrastructure. To clarify these distinctions, Table 3 summarizes the conditions that differentiate complementing, rectifying, and dismissing.

Downloaded from https://academic.oup.com/jpo/article/13/3/joag011/8586536 by University of Borås user on 13 April 2026

Table 3 Defining features of complementing, rectifying, and dismissing practices.

Forms of compensatory work	The functionality of digital technologies and infrastructures	Professional action	Purpose
Complement	Functions as intended but require human enhancement.	Adding relational, ethical, or contextual elements (e.g., adapting communication, guiding clients).	Adding value
Rectify	Malfunctions or is incomplete.	Correcting errors, supplementing missing information, and creating safeguards.	Repairing failures
Dismiss	Functions technically (but is misaligned with professional standards).	Bypassing, rejecting, or overriding the system in favor of professional judgment	Bypassing incompatible systems

Downloaded from https://academic.oup.com/jpo/article/13/3/joag011/8586536 by University of Borås user on 13 April 2026

EXTENDING THEORIES OF DISCRETION AND DIGITAL COPING

What, then, does the concept of digital compensatory work offer analytically? We argue that it builds on but also extends existing frameworks such as digital coping (Tummers and Rocco 2015) and Pedersen and Pors's (2023) typology of discretion as ethics-of-office. While these perspectives are valuable for highlighting how professionals act in the client's interest when digital technology falls short, we argue that they remain limited in their ability to conceptualize the full scope of this work.

The existing concept of digital coping (Tummers and Rocco 2015) is instructive but remains conceptually limited. While the empirical examples they describe resonate with our findings, they are framed primarily as reactive strategies through which frontline professionals manage stressful work situations marked by contradictory demands from organizational, professional, and client perspectives, often at the cost of self-sacrifice. By contrast, several of the practices identified in our review go beyond such reactive coping. They include not only reactive adjustments but also proactive and interventionist actions, where professionals deliberately reshape or override digital systems to ensure ethically adequate service delivery. In this sense, the empirical examples from our synthesis extend beyond what is typically captured under the notion of digital coping.

Moreover, while our analysis builds on the typology offered by Pedersen and Pors (2023), important differences remain. In their account, discretion is conceptualized through the categories of adaptive, attentive, and affective responses, framed primarily as reactions to existing system pressures. Also, their framework is grounded in an ethics-of-office, that is, the role-specific ethical responsibilities and institutional obligations tied to holding public office. From this perspective, discretionary judgment is duty-bound and shaped by the institutional context, rather than by professional values as such. In contrast, our analysis suggests that many of the practices identified in the reviewed studies cannot be fully captured within this framing. While we recognize similar empirical examples, we interpret them less as duties tied to office and more as expressions of professional ethics, anchored in the values and knowledge traditions of professions (cf. Abbott 1988; Evetts 2009). This highlights the need for a broader concept that accounts for how professionals act not only out of institutional obligation, but also on the basis of their profession-based ethical commitments.

Furthermore, our concept is broader in another sense: by taking digital infrastructures as our point of departure (Henman 2010), we highlight that professionals do not merely compensate for shortcomings in isolated tools, but for the interconnected processes created by multiple digital systems. In contemporary welfare services, it is difficult to restrict analysis to single applications; instead, professionals navigate a landscape of overlapping and sometimes poorly integrated technologies. This observation echoes insights from STS and research on digital work, which emphasize the invisible labor required to sustain and repair sociotechnical infrastructures (Star and Strauss 1999; Møller 2025). Digital compensatory work thus accounts not only for how professionals relate to clients, but also for how they engage with and intervene in infrastructures, that is, the technological platforms, automated processes, and embedded routines that together shape the conditions of welfare service delivery (cf. Henman 2010). For

instance, consider how a malfunction in a digital scanner may disrupt the functioning of the case management system, require manual workarounds, and at the same time raise concerns about confidentiality when staff are forced to use less secure channels. Compensatory practices, in this sense, arise from the inability of multiple, interlinked digital tools to support professional standards of service delivery.

Taken together, these arguments point to the need for a broader analytical lens. With the concept of digital compensatory work, we shift the focus to a wider repertoire of professional practices, where professionals complement, rectify, or dismiss digital systems in both reactive and proactive ways. Unlike approaches centered on duty to office or individual coping, our analysis highlights practices grounded in professional values and oriented toward entire digital infrastructures rather than isolated tools. In this way, digital compensatory work not only integrates but also extends previous perspectives, filling a conceptual gap by showing how professionals actively sustain and uphold the functioning of digitalized human service organizations.

A critical reflection concerns the heterogeneity of the material included in our review. While we analyzed studies from different welfare settings and involving a range of digital tools, this variation does not undermine the analytical contribution. Rather, the recurrence of similar discretionary practices across diverse contexts suggests that digital compensatory work reflects a broader pattern in client-facing, relational professional work. At the same time, compensatory practices are shaped by profession-specific mandates, organizational routines, and technological infrastructures, which place limits on the generality of our claims. The framework should therefore be understood as an analytical lens for identifying how professionals intervene when digital systems fall short, rather than as a fixed typology tied to a specific organization or tool.

Importantly, context dependence does not preclude transferability; rather, it clarifies the conditions under which the framework is likely to travel. We suggest that digital compensatory work is most immediately relevant in relational, client-facing professions, where digital systems increasingly structure core tasks while professionals remain responsible for interpreting individual circumstances and safeguarding situational judgement. In such settings, including healthcare, education, policing, and psychological services, professionals routinely work at the intersection of standardized digital procedures and individualized assessments. This creates recurring situations in which professionals must intervene when digital arrangements prove insufficiently sensitive to contextual, relational, or ethical aspects of practice. Under these conditions, the framework offers an analytical lens for identifying compensatory dynamics, even though the specific forms such work takes are likely to vary across professions.

At the same time, the framework may also offer analytical leverage beyond human service organizations, wherever professional work involves mediating between standardized digital procedures and situated professional judgment. Compensatory practices may arise when digital systems shape professional work, across decisions, workflows, interactions, and accountability arrangements, in ways that professionals judge to be misaligned with their responsibilities. The extent and form of such practices are likely to vary depending on professional mandates, accountability regimes, and the relational intensity of the work. Rather than assuming direct transferability, future research could therefore examine how compensatory work is configured, constrained, or transformed across different occupational contexts, helping to clarify the conditions under which similar dynamics emerge beyond welfare settings.

Finally, although we analytically distinguish between complementing, rectifying, and dismissing digital technologies, these modes should not be understood as fixed or mutually exclusive. Rather, they may shift over time as professionals reassess what is required to make digital systems workable in practice. Attending to such dynamics offers a promising avenue for future research. Future studies should also examine how this often invisible labor shapes professionals' experiences of responsibility, workload, and legitimacy, as well as its implications for occupational well-being, including stress and risks of burnout.

Practical implications

Our findings underscore that discretion is not a residual feature of digitalized human service organizations, but a vital condition for sustaining professional practice and values. Professionals view discretionary space as essential not only in client encounters but also in the development, implementation, and adaptation of digital systems. In their accounts, digital infrastructures must allow for context-sensitive and ethically informed work if welfare services are to remain responsive and trustworthy. The concern, however, is that compensatory practices often remain invisible or undervalued. If such interventions are ignored, future digital reforms risk constraining the professional agency that is indispensable for upholding the relational, ethical, and contextual dimensions of public service.

Downloaded from https://academic.oup.com/jpo/article/13/3/joag011/8586536 by University of Borås user on 13 April 2026

CONCLUSION

This study contributes to the literature on the digitalization of human service organizations by offering a more comprehensive framework for understanding how frontline professionals sustain service delivery when digital systems fall short. We introduce the concept of digital compensatory work to capture recurring discretionary practices through which professionals intervene in digital infrastructures. Organized into the categories of complementing, rectifying, and dismissing, the framework provides an integrative vocabulary that synthesizes previously fragmented accounts of professional action in digitalized welfare settings.

In advancing this model, the study reframes these practices not as incidental coping or isolated acts of resistance, but as a repertoire of professional work grounded in ethics, situated judgment, and responsibility toward clients. By conceptualizing digital compensatory work, we shift the analytical focus from digital tools to digital infrastructures, and from reactive adaptation to both reactive and proactive interventions. In doing so, the article highlights how professional discretion remains a critical resource for making digital welfare function in ways that align with professional values and ideals.

Acknowledgments

This research was funded by Forte (Swedish Research Council for Health, Working Life and Welfare), whose support made this study possible. We are also grateful to the anonymous reviewers and the editor for their constructive and insightful comments, which significantly strengthened the manuscript.

Supplementary material

Supplementary material is available at *Journal of Professions and Organization* online.

Conflicts of interest

None declared.

FUNDING

This work was supported by Forte, the Swedish Research Council for Health, Working Life and Welfare (Reference number: 2022-00288). The project commenced in the autumn of 2022 and focuses on how professionals contribute to the functionality of digital technology in human service organizations.

REFERENCES

Abbott, A. (1988) *The System of Professions: An Essay on the Division of Expert Labor*. Chicago: University of Chicago Press.

Bovens, M. and Zouridis, S. (2002) 'From Street-Level to System-Level Bureaucracies: How Information and Communication Technology is Transforming Administrative Discretion and Constitutional Control', *Public Administration Review*, 62: 174–84. https://doi.org/10.1111/0033-3352.00168

Breit, E. *et al.* (2021) 'Digital Coping: How Frontline Workers Cope with Digital Service Encounters', *Social Policy & Administration*, 55: 833–47. https://doi.org/10.1111/spol.12664

Brodkin, E. Z. (1997) 'Inside the Welfare Contract: Discretion and Accountability in State Welfare Administration', *The Social Service Review*, 71: 1–33. https://doi.org/10.1086/604228

Brodkin, E. Z. (2011) 'Policy Work: Street-Level Organizations Under new Managerialism', *Journal of Public Administration Research and Theory*, 21: 253–77. https://doi.org/10.1093/jopart/muq093

Buffat, A. (2015) 'Street-level Bureaucracy and e-Government', *Public Management Review*, 17: 149–61. https://doi.org/10.1080/14719037.2013.771699

Burton, J. and Van den Broek, D. (2009) 'Accountable and Countable: Information Management Systems and the Bureaucratization of Social Work', *British Journal of Social Work*, 39: 1326–42. https://doi.org/10.1093/bjsw/bcn027

Busch, P. A. (2020) 'Crafting or Mass-Producing Decisions: Technology as Professional or Managerial Imperative in Public Policy Implementation', *Information Polity*, 25: 111–28. https://doi.org/10.3233/IP-190163

Busch, P. A., Henriksen, H. Z. and Sæbø, Ø. (2018) 'Opportunities and Challenges of Digitized Discretionary Practices: A Public Service Workers' Perspective', *Government Information Quarterly*, 35: S61–8. https://doi.org/10.1016/j.giq.2018.09.003

Cámara, N. (2024) *DiGiX 2024 Update: A Multidimensional Index of Digitization*. BBVA Research. Accessed 25 March 2025. https://www.bbvaresearch.com/wp-content/uploads/2024/08/DiGiX_2024_Update_A_Multidimensional_Index_of_Digitization_edi.pdf

Caswell, D. and Høybye-Mortensen, M. (2015) 'Responses from the Frontline: How Organisations and Street-Level Bureaucrats Deal with Economic Sanctions', *European*

Downloaded from https://academic.oup.com/jpo/article/13/3/joag011/8586536 by University of Borås user on 13 April 2026

Journal of Social Security, 17: 31–51. https://doi.org/10.1177/138826271501700102

De Boer, N. and Raaphorst, N. (2023) 'Automation and Discretion: Explaining the Effect of Automation on how Street-Level Bureaucrats Enforce', *Public Management Review*, 25: 42–62. https://doi.org/10.1080/14719037.2021.1937684

Delpierre, A., Demazière, D. and El Fatihi, H. (2024) 'The Stealth Legitimization of a Controversial Policy Tool: Statistical Profiling in French Public Employment Service', *Regulation & Governance*, 18: 499–512. https://doi.org/10.1111/rego.12541

Devlieghere, J., Bradt, L. and Roose, R. (2018) 'Creating Transparency Through Electronic Information Systems: Opportunities and Pitfalls', *British Journal of Social Work*, 48: 734–50. https://doi.org/10.1093/bjsw/bcx052

Devlieghere, J., Gillingham, P. and Roose, R. (2022) 'Dataism Versus Relationshipism: A Social Work Perspective', *Nordic Social Work Research*, 12: 328–38. https://doi.org/10.1080/2156857X.2022.2052942

Devlieghere, J. and Roose, R. (2018) 'Electronic Information Systems: In Search of Responsive Social Work', *Journal of Social Work*, 18: 650–65. https://doi.org/10.1177/1468017318757296

De Witte, J., Declercq, A. and Hermans, K. (2016) 'Street-level Strategies of Child Welfare Social Workers in Flanders: The use of Electronic Client Records in Practice', *British Journal of Social Work*, 46: 1249–65. https://doi.org/10.1093/bjsw/bcv076

Erisman, T., van Bommel, M. and Tonkens, E. (2024) 'Travelling Meanings: How Digital Documentation Shapes Professional Practices in Child Protection', *Journal of Social Work*, 24: 45–63. https://doi.org/10.1080/13691457.2024.2436029

Eubanks, V. E. (2007) 'Trapped in the Digital Divide: The Distributive Paradigm in Community Informatics', *The Journal of Community Informatics*, 3(2). https://doi.org/10.15353/joci.v3i2.2373

European Commission (2025a). 'Belgium digital decade country report 2025'.

European Commission (2025b). Denmark digital decade country report 2025'.

European Commission (2025c). Sweden digital decade country report 2025'.

Evans, T. (2011) 'Professionals, Managers and Discretion: Critiquing Street-Level Bureaucracy', *British Journal of Social Work*, 41: 368–86. https://doi.org/10.1093/bjsw/bcq074

Evans, T. (2016) *Professional Discretion in Welfare Services: Beyond Street-Level Bureaucracy*. London: Routledge.

Evans, T. and Harris, J. (2004) 'Street-level Bureaucracy, Social Work and the (Exaggerated) Death of Discretion', *British Journal of Social Work*, 34: 871–95. https://doi.org/10.1093/bjsw/bch106

Evetts, J. (2009) 'New Professionalism and New Public Management: Changes, Continuities and Consequences', *Comparative Sociology*, 8: 247–66. https://doi.org/10.1163/156913309X421655

Flemming, K. and Noyes, J. (2021) 'Qualitative Evidence Synthesis: Where Are We at?', *International Journal of Qualitative Methods*, 20: 1609406921993276. https://doi.org/10.1177/1609406921993276

Germundsson, N., Stranz, H. and Bergmark, Å. (2024) 'Automation in Swedish Social Assistance: Frontline Experiences', *European Journal of Social Work*, 27: 267–78. https://doi.org/10.1080/2156857X.2024.2440720

Gillingham, P. (2013) 'The Development of Electronic Information Systems for the Future: Practitioners, 'Embodied Structures' and 'Technologies-in-Practice'', *British Journal of Social Work*, 43: 430–45. https://doi.org/10.1093/bjsw/bcr202

Gillingham, P. (2015) 'Electronic Information Systems and Social Work: Principles of Participatory Design for Social Workers', *Advances in Social Work*, 16: 31–42. https://doi.org/10.18060/18244

Gillingham, P. (2019) 'Can Predictive Algorithms Assist Decision-Making in Social Work with Children and Families?', *Child Abuse Review*, 28: 114–26. https://doi.org/10.1002/car.2547

Goldkind, L., Wolf, L. and Jones, J. (2016) 'Late Adapters? How Social Workers Acquire Knowledge and Skills About Technology Tools', *Journal of Technology in Human Services*, 34: 338–58. https://doi.org/10.1080/15228835.2016.1250027

Gough, D., Thomas, J. and Oliver, S. (2012) 'Clarifying Differences Between Review Designs and Methods', *Systematic Reviews*, 1: Article 28. https://doi.org/10.1186/2046-4053-1-28

Hasenfeld, Y. (2010) *Human Services as complex Organizations*, 2nd edn. Thousand Oaks: Sage. (Original work published 1992).

Henman, P. (2010) *Governing Electronically: E-Government and the Reconfiguration of Public Administration, Policy and Power*. London: Palgrave Macmillan.

Downloaded from https://academic.oup.com/jpo/article/13/3/joag011/8586536 by University of Borås user on 13 April 2026

Hofmann, S., Sæbø, Ø and Rydén, H. H. (2024) 'Implications of Digitalised Welfare Services from a Vulnerable Citizens' Perspective', *Nordisk Välfärdsforskning*, 9: 127–41. https://doi.org/10.18261/nwr.9.2.2

Höglund Rydén, H. H. and Hofmann, S. (2024) 'Frontline Workers' Role in Digital Self-Service Co-production: Channel Promoters, Digital Helpers, or Intermediators', *JeDEM—eJournal of eDemocracy and Open Government*, 16: 1–27. https://doi.org/10.29379/jedem.v16i2.919

Høybye-Mortensen, M. and Ejbye-Ernst, P. (2018) 'The Long Road to Data-Driven Decision-Making: How do Casework Registrations Become Management Information?', *STS Encounters*, 10: 7–36. https://doi.org/10.7146/stse.v10i2.135241

Hupe, P. and Buffat, A. (2014) 'A Public Service Gap: Capturing Contexts in a Comparative Approach of Street-Level Bureaucracy', *Public Management Review*, 16: 548–69. https://doi.org/10.1080/14719037.2013.854401

Jacobsson, K., Wallinder, Y. and Seing, I. (2020) 'Street-level Bureaucrats Under new Managerialism: A Comparative Study of Agency Cultures and Caseworker Role Identities in two Welfare State Bureaucracies', *Journal of Professions and Organization*, 7: 316–33. https://doi.org/10.1093/jpo/joaa015

Jørgensen, B. and Schou, J. (2020) 'Helping or Intervening? Modes of Ordering in Public Sector Digitalization', *Journal of Organizational Ethnography*, 9: 265–79. https://doi.org/10.1108/JOE-02-2019-0015

Jorna, F. and Wagenaar, P. (2007) 'The 'Iron Cage' Strengthened? Discretion and Digital Discipline', *Public Administration*, 85: 189–214. https://doi.org/10.1111/j.1467-9299.2007.00640.x

Jørring, L. (2025) 'Automatically Prepared? How Frontline Workers Cope in the Face of Automation', *Social Policy & Administration*, 59: 962–71. https://doi.org/10.1111/spol.13105

Kersing, M. *et al.* (2022) 'The Changing Roles of Frontline Bureaucrats in the Digital Welfare State: The Case of a Data Dashboard in Rotterdam's Work and Income Department', *Data & Policy*, 4: e24. https://doi.org/10.1017/dap.2022.16

Lecy, J. D. and Beatty, K. E. (2012) 'Representative Literature Reviews Using Constrained Snowball Sampling and Citation Network Analysis', Available at SSRN: https://doi.org/10.2139/ssrn.1992601

Lester, S. (2020) 'New Technology and Professional Work', *Professions and Professionalism*, 10: 2020. https://doi.org/10.7577/pp.3836

Lipsky, M. (2010) *Street-level Bureaucracy: Dilemmas of the Individual in Public Service*, Updated edn. New York: Russell Sage Foundation. (Original work published 1980).

Løberg, I. B. (2021) 'Digitalization and Discretion in the Welfare State: A Case Study of Frontline Work in NAV', *Nordic Journal of Working Life Studies*, 11: 3–22. https://doi.org/10.1016/j.giq.2020.101551

Løberg, I. B. (2023) 'Assessments of Digital Client Representations: How Frontline Workers Reconstruct Client Narratives from Fragmented Information', *Journal of Public Administration Research and Theory*, 33: 19–29. https://doi.org/10.1093/jopart/muac017

Løberg, I. B. and Egeland, C. (2023) 'You get a Completely Different Feeling'–an Empirical Exploration of Emotions and Their Functions in Digital Frontline Work', *European Journal of Social Work*, 26: 108–20. https://doi.org/10.1080/13691457.2021.2016650

Maynard-Moody, S. and Musheno, M. (2000) 'State Agent or Citizen Agent: Two Narratives of Discretion', *Journal of Public Administration Research and Theory*, 10: 329–58. https://doi.org/10.1093/oxfordjournals.jpart.a024272

Maynard-Moody, S. and Musheno, M. (2012) 'Social Equities and Inequities in Practice: Street-Level Workers as Agents and Pragmatists', *Public Administration Review*, 72: S16–23. https://doi.org/10.1111/j.1540-6210.2012.02633.x

Maynard-Moody, S., Williams, S. and Musheno, M. (2003) *Cops, Teachers, Counsellors: Stories from the Front Lines of Public Service*. Ann Arbor: University of Michigan Press.

McLoughlin, I. P., Garrety, K. and Wilson, R. (2017) *The Digitalization of Healthcare: Electronic Records and the Disruption of Moral Orders*. Oxford: Oxford University Press.

Møller, A. M. (2025) 'Inside the Digital State: Frontline Work in the Context of Digital Layering', *Journal of Public Administration Research and Theory*, 35: 133–47. https://doi.org/10.1093/jopart/muaf001

Neugeboren, B. (1996) 'Organizational Influences on MIS in the Human Services', *Computers in Human Services*, 12: 295–310. https://doi.org/10.1300/J407v12n03_09

Ogawa, R. T. and Malen, B. (1991) 'Towards Rigor in Reviews of Multivocal Literatures: Applying the Exploratory Case Study Method', *Review of*

Downloaded from https://academic.oup.com/jpo/article/13/3/joag011/8586536 by University of Borås user on 13 April 2026

Educational Research, 61: 265–86. https://doi.org/10.3102/00346543061003265

Pareliussen, B., Æsøy, V. and Giskeødegård, M. F. (2022) 'Professions, Work, and Digitalization: Technology as Means to Connective Professionalism', *Journal of Professions and Organization*, 9: 100–14. https://doi.org/10.1093/jpo/joab023

Parton, N. (2009) 'Challenges to Practice and Knowledge in Child Welfare Social Work: From the 'Social' to the 'Informational'?', *Children and Youth Services Review*, 31: 715–21. https://doi.org/10.1016/j.childyouth.2009.01.008

Pedersen, J. S. (2019) 'The Digital Welfare State: Dataism Versus Relationshipism', in J. S. Pedersen and A. Wilkinson (eds) *Big Data*, pp. 301–24. Edward Elgar. https://doi.org/10.4337/9781788112352

Pedersen, K. Z. and Pors, A. S. (2023) 'Discretionary Responses in Frontline Encounters: Balancing Standardization with the Ethics of Office', *Journal of Public Administration Research and Theory*, 33: 80–93. https://doi.org/10.1093/jopart/muac012

Pors, A. S. (2015) 'Becoming Digital—Passages to Service in the Digitized Bureaucracy', *Journal of Organizational Ethnography*, 4: 177–92. https://doi.org/10.1108/JOE-08-2014-0031

Pors, A. and Schou, J. (2021) 'Street-level Morality at the Digital Frontlines: An Ethnographic Study of Moral Mediation in Welfare Work', *Administrative Theory & Praxis*, 43: 154–71. https://doi.org/10.1080/10841806.2020.1782137

Pugh, A. J. (2024) *The Last Human Job: The Work of Connecting in a Disconnected World*. Princeton, NJ: Princeton University Press.

Ranerup, A. and Henriksen, H. Z. (2022) 'Value Positions Viewed Through the Lens of Automated Decision-Making: The Case of Social Assistance in Sweden', *Government Information Quarterly*, 39: 101664. https://doi.org/10.1016/j.giq.2019.05.004

Røhnebæk, M. (2013) 'Standardized Flexibility: The Choreography of ICT in Standardization of Service Work', *Culture Unbound*, 4: 679–98. https://doi.org/10.3384/cu.2000.1525.124679

Schmidt, A. (2024) 'The Mundane in the Digital: A Qualitative Study of Social Work and Vulnerable Clients in Danish job Centres', Doctoral dissertation. Copenhagen: Copenhagen Business School.

Smythe, E. and Spence, D. (2012) 'Re-viewing Literature in Hermeneutic Research', *International Journal of Qualitative Methods*, 11: 12–25. https://doi.org/10.1177/16094a0691201100102

Soss, J., Fording, R. and Schram, S. F. (2011) 'The Organization of Discipline: From Performance Management to Perversity and Punishment', *Journal of Public Administration Research and Theory*, 21: i203–32. https://doi.org/10.1093/jopart/muq095

Star, S. L. and Strauss, A. (1999) 'Layers of Silence, Arenas of Voice: The Ecology of Visible and Invisible Work', *Computer Supported Cooperative Work (CSCW)*, 8: 9–30. https://doi.org/10.1023/A:1008651105359

Susskind, R. and Susskind, D. (2015) *The Future of the Professions: How Technology Will Transform the Work of Human Experts*. Oxford: Oxford University Press.

Thunman, E., Ekström, M. and Bruhn, A. (2020) 'Dealing with Questions of Responsiveness in a low-Discretion Context: Offers of Assistance in Standardized Public Service Encounters', *Administration & Society*, 52: 1333–61. https://doi.org/10.1177/0095399720907807

Trappenburg, M., Kampen, T. and Tonkens, E. (2020) 'Social Workers in a Modernising Welfare State: Professionals or Street-Level Bureaucrats?', *British Journal of Social Work*, 50: 1669–87. https://doi.org/10.1093/bjsw/bcz120

Tummers, L. L. G. *et al.* (2015) 'Coping During Public Service Delivery: A Conceptualization and Systematic Review of the Literature', *Journal of Public Administration Research and Theory*, 25: 1099–126. https://doi.org/10.1093/jopart/muu056

Tummers, L. and Rocco, P. (2015) 'Serving Clients When the Server Crashes: How Frontline Workers cope with e-Government Challenges', *Public Administration Review*, 75: 817–27. https://doi.org/10.1111/puar.12379

Wohlin, C. (2014) 'Guidelines for Snowballing in Systematic Literature Studies and a Replication in Software Engineering', in *Proceedings of the 18th International Conference on Evaluation and Assessment in Software Engineering (EASE '14)*. London: ACM Press.

Wolf, L. and Goldkind, L. (2016) 'Digital Native Meet Friendly Visitor: A Flexner-Inspired Call to Digital Action', *Journal of Social Work Education*, 52: 99–109. https://doi.org/10.1080/10437797.2016.1174643

Zacka, B. (2017) *When the State Meets the Street: Public Service and Moral Agency*. Cambridge, MA: Belknap Press of Harvard University Press.

Downloaded from https://academic.oup.com/jpo/article/13/3/joag011/8586536 by University of Borås user on 13 April 2026