

Navigating digital encounters: insights from frontline professionals on public service delivery

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Abstract

Purpose – Digitalization is transforming public service delivery, potentially increasing efficiency and availability but risking excluding vulnerable people with weak digital skills. Despite technological advances, frontline professionals remain a crucial element of service value creation, as many services require human interaction, even if it is digitally mediated. This study surveys frontline professionals to capture their experiences and assess whether digital encounters meet their clients' needs.

Design/methodology/approach – The dataset comprises 15 interviews with professionals assisting migrant clients. The data were analysed using abductive thematic analysis, utilizing viewpoints about the digital divide and digital public services from previous literature.

Findings – The study emphasizes three pivotal elements inherent in digital public encounters with migrant clients: (1) a high administrative burden due to clients' weak technological competency, Finnish skills and knowledge of the local public service system, (2) the importance of interpersonal trust and (3) the shifting and pressurized role of the professional.

Originality/value – The main novelty of this study lies in illustrating that administrative burden and trust are interconnected. This study contributes to public management research by enhancing the understanding of digital public service development. It provides crucial insights from frontline professionals, which could pave the way for applying technology to public services to benefit all citizens, including vulnerable populations.

Keywords Digitalization, Public services, Value creation

Paper type Research paper

Introduction

Digital solutions can be beneficial in terms of efficiency, availability, and transparency (e.g. Lindgren *et al.*, 2019). They can provide tailored and context-sensitive service user experiences (Larsson and Skjølvsvik, 2023) and enable access to hard-to-reach people (Jalonen *et al.*, 2021). Although a digitally induced transformation is underway within the public sector (Zyzak *et al.*, 2024), fully harnessing digitalization's potential to enhance citizen engagement remains challenging (Santolamazza *et al.*, 2024). The benefits of that development are not distributed equally among citizens owing to the digital divide (Hyytinen *et al.*, 2022) and issues such as service failures and distrust (Safarov, 2023). The digital transformation of public services is incomplete if citizens lack the necessary skills for participation (Patergiannaki and Pollalis, 2024; Alidousti and Sahli, 2024). Earlier research shows that those unable or unwilling to use digital public services are often marginalized in some way; they might, for example, be socioeconomically disadvantaged, disabled, or elderly (Hyytinen *et al.*, 2022;

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Lythreatis *et al.*, 2022) or migrants who do not grasp the local service system and language (e.g. Safarov, 2023). That same group's dependence on public service provision makes this a crucial topic (Pethig *et al.*, 2021).

Digitalization has diminished frontline professionals' discretionary power (Hupe, 2022; Larsson and Skjølvsvik, 2023). However, they remain key actors in public service value creation, as interacting directly with citizens means they can create or destroy service value (e.g. Gyllenhammar *et al.*, 2023) in *public encounters* (Goodsell, 1981). Nevertheless, digitalization has profoundly redrawn the contours of the public encounter, delineating the interface between citizens and public functionaries. Despite the critical significance of client–professional interactions, little research examines the altered dynamics brought about by digitalization (Breit *et al.*, 2021; Osborne *et al.*, 2021). The current research addresses the prevailing gap characterized by an intellectual deficit in comprehending the intricate interplay between digitalization and the dynamics of these interactions. The current research does so by analysing frontline professionals' experiences and the nuances of digital encounters.

This research analyses frontline professionals' views on *digital public encounters* and the factors contributing to or hindering their success. In this article, a frontline professional refers to someone working in a public institution, providing client information and guidance. Such people are *street-level bureaucrats* (Lipsky, 1980) striving to follow rules set from above and simultaneously meet client expectations. We concentrate on professionals who support migrants, as that client group is especially vulnerable due to issues communicating in the local language, structural knowledge, and system navigation (Safarov, 2023), and also often weak digital skills. The work of Mortensen (2024) indicates that frontline professionals face conflicts requiring coping strategies when interacting with migrants through digital channels. In this article, the term migrant is used to describe all foreign-born people who have chosen to live in Finland whether intending to settle permanently or not. We seek to answer the following question: *How do frontline professionals serving migrant clients experience digital public encounters, and to what extent do they consider such encounters respond to their clients' needs?*

The paper's first contribution is to reimagine digital client–professional interactions in public services. Examining frontline professionals' perspectives on digital public encounters sheds light on the nuances of digital interaction compared to face-to-face engagement in public services. Second, exploring frontline professionals' decisions as essential service value creators navigating between technology and citizen interaction reveals the delicate balance between enhancing operational efficiency and maintaining service quality. Third, the study draws upon the digital divide concept to investigate the challenges vulnerable groups face when using digital public services. This contribution enriches the understanding of how the ongoing digital transformation affects those marginalized groups who can be heavily reliant on public services. By integrating these contributions, the paper provides a comprehensive analysis of the multifaceted implications of digitalization for public services, covering issues related to accessibility, service quality, frontline professionals' roles, and the evolving nature of client–professional interactions in the digital era.

The digital divide

While many people are empowered by digital technology, vulnerable groups can perceive it as unsuitable, complicated, and alienating (Brandesen *et al.*, 2021). Those groups may then be further marginalized by limited digital skills (Schou and Pors, 2019) and a weak understanding of the service system (Döring, 2021; Safarov, 2023). One of the biggest risks regarding digital public services – online services or information for citizens provided through a government portal – is the *digital divide* or digital inequality, referring to citizens' unequal access to information and communication technology and uneven skills and experience relating to its utilization (Norris, 2001; Pérez-Morote *et al.*, 2020). Being digitally competent involves more than being able to use the latest smartphone or computer software; it encompasses being able to

search, filter, and evaluate data, interact and collaborate using digital technology (including engaging with citizenship requirements), and protect data and privacy (European Commission, 2022). The digital divide is underpinned by many factors, such as sociodemographic, socioeconomic, and personal elements (such as trust, motivations, values, attitudes, and beliefs). It is also affected by access to social support, digital training, infrastructure, and large-scale events such as COVID-19 (Lythreitis *et al.*, 2022). Individuals' confidence in their ability to use technology is task-specific: They might be confident when connecting with friends but less so when addressing an administrative matter (Linos *et al.*, 2022).

Digitalization tends to create barriers to participation for vulnerable and disadvantaged groups (Safarov, 2023). The ability to derive benefits from internet use correlates with education levels and income. People with higher education and better incomes utilize the internet more profitably and understand how the government functions and how to get involved in civil society. In contrast, those with fewer resources often surf online aimlessly (Pérez-Morote *et al.*, 2020). The advance of digitalization has sustained and even deepened existing social inequalities (e.g. Schou and Pors, 2019; Madsen *et al.*, 2022) and led to so-called *creaming practices*, where professionals prioritize the clients best able to communicate on digital platforms (Breit *et al.*, 2021).

The *administrative burden* (Herd and Moynihan, 2018) refers to a citizen's experience of an onerous system, especially one that is taxing for disadvantaged groups. The burden takes the form of compliance, learning, and psychological costs, which typify the time and money needed to navigate an administrative process; the difficulties faced when searching for information on services, the social shame of accessing services the general public views negatively; and feelings of disempowerment because of reliance on such services (Linos *et al.*, 2022; Madsen *et al.*, 2022). The administrative burden is further exacerbated by digital technologies, creating additional hurdles for those with low digital competency (Döring, 2021; Madsen *et al.*, 2022). The digitalization of public services has imposed greater responsibility on service users by requiring digital skills and administrative competency (Grönlund *et al.*, 2007).

Recent research demonstrates that migrants find navigating digital services difficult (Aaltonen, 2019) and are sometimes unable to do so at all (Safarov, 2023). Migrants may also be subject to discriminatory actions by public servants (Halling and Petersen, 2024). Moreover, migrants are at a disadvantage in terms of understanding the local public service system, which intensifies the administrative burden (Safarov, 2023). Claimants must know where to find the necessary forms and information, how to act upon them (Grönlund *et al.*, 2007), and also understand the vocabulary and syntax of bureaucratic communications; such capabilities are naturally weaker among migrants than others in society (Döring, 2021; Grönlund *et al.*, 2007). It is important to remember that the group labelled *migrants* is by no means homogenous but differs regarding education levels, the reasons for migrating, and socioeconomic background. For example, in Finland, 40% of migrants grapple with literacy or numeracy skills (Musset, 2015), while on the other hand, 40% possess higher-level qualifications (Larja, 2020). This portrait elucidates the nuanced interplay between societal positioning, educational inequities, and the implications of digitalization.

The role of frontline professionals in the quality of digital public services

Digitalization can potentially improve interaction and access and erase geographical, physical, and time restrictions on services (Breit *et al.*, 2021; Nordesjö *et al.*, 2022). Nevertheless, it can also pose notable challenges if, for example, professionals or clients are not abreast of the technology (Breit *et al.*, 2021). Limiting frontline professionals' discretion seems to enhance efficiency but at the expense of decision quality (Busch and Henriksen, 2018).

Digitalization has changed the role and tasks of both the service user and the public official (Pollitt, 2012). It has altered the power dynamic between them (Breit *et al.*, 2021), raised

ethical questions about client privacy and confidentiality (Nordesjö *et al.*, 2022), and created mutual anticipation (Hupe, 2022). In the present study, the term *digital encounter* refers to interactions between frontline professionals and citizens conducted through digital channels (Breit *et al.*, 2021). These encounters leverage technology to facilitate either the co-production and co-creation of public services or the creation of public value through public services. Digital technology's potential to enhance the co-creation of public services (Criado and Gil-Garcia, 2019) lies in facilitating direct interaction, encouraging citizen participation, and helping solve capacity problems (Lember *et al.*, 2019; Breit *et al.*, 2021; Zyrak and Martinussen, 2024). Public value can be recognized either directly by service users or indirectly by those who observe its adopters (Lopes *et al.*, 2019). The above suggests that the *quality* of digital technology lies not in its technical capabilities but in how it aligns with and enhances the underlying values of the relationship between frontline professionals and citizens (Casula *et al.*, 2022). The public official's role is pivotal in digital public encounters, as the value of a service is created in the interaction between a frontline professional and a client and is defined by the latter determining how well the resources provided match their needs (Osborne *et al.*, 2021).

The digitalization process has spurred considerable growth in self-service elements, which has reduced the frequency of citizen encounters with frontline professionals (Hupe, 2022; Schou and Pors, 2019). The situation is problematic because part of the population lacks the skills to obtain appropriate services and benefits and because citizen's trust in government is built on personal encounters with public service officials (Hansen, 2022; Van de Walle and Bouckaert, 2003). Public encounters facilitate trust and participation and also foster personal connections and thus counter alienation (Jeffares, 2021). Direct communication also tends to mean frontline employees will be more accommodating regarding clients' wishes (Halling and Petersen, 2024). Even a single encounter can have a far-reaching effect on a client's trust in administrative and political institutions (Hansen, 2022).

Trust is an inherent requirement in public services because they can be intangible and heterogenous and because service users must submit sensitive personal data (Belanche *et al.*, 2014). Citizens are most likely to trust a system they understand; if they do not comprehend it, they are more likely to question its legitimacy (Döring, 2021). A recent OECD study found public trust in government is generally high in Finland. Officials are considered competent and trustworthy and recognized as crucial to maintaining trust (OECD, 2021). However, the OECD (2021) also raised concerns over several efficiency-oriented reforms. Those include extending privatization and reducing public-sector staff levels, which exploit digitalization to deliver cost savings.

In the context of digital public services, trust appears as a multidimensional entity involving the interplay between technology, government entities, organizations, and individuals (Alzahrani *et al.*, 2017). The distance and impersonality of the internet make trust even more salient (Belanche *et al.*, 2014), and extensive research establishes its significant role in the acceptance of e-government (Lai and Lobo Marquez, 2023). Earlier research shows that e-government trust is heavily linked with trust in government organizations and the internet and technology (Lai and Lobo Marquez, 2023). Moreover, such trust is associated with a high educational level and income (Pérez-Morote *et al.*, 2020), disposition (Alzahrani *et al.*, 2017), service quality, and recommendations from public administration and related others (Belanche, 2014), perceived usefulness, ease of use, and awareness (Patergiannaki and Pollalis, 2024).

Research design and methodology

Researchers collected primary data from interviews with frontline professionals guiding migrant clients. This approach means that the actual voice of the target group is conveyed through another party, perhaps diluting some views while amplifying others. However, the interviewees had an extensive understanding of the issues facing migrants in Finland, as they

meet clients daily. Additionally, 11 of the 15 interviewees had personal experience of migration. The interviewees were selected utilizing a purposive sampling method based on their knowledge of the topic. After 15 interviews, the data appeared sufficiently saturated.

Qualitative methods support the aim of this study by providing a rich understanding of a complex phenomenon when it is not reasonable to study quantitative data alone (Denzin and Lincoln, 2000). Digital public encounters are an emerging and complex research subject where patterns remain to be identified, thus justifying the qualitative approach.

The empirical context and data collection strategy

In Finland, 5.3% of the total population is foreign-born. Significant proportions of that group are present because of work (35.8%) or family reunification (33.3%) (European Commission, 2024). The percentage of people from migrant backgrounds receiving unemployment and social benefits is higher than that of Finnish-born citizens (Jauhainen and Raivonen, 2020), and cities and municipalities are central to providing guidance for migrants and promoting integration and working life (Centre of Expertise in Immigrant Integration, 2024). The interviewees were chosen to represent an array of institutions facilitating migrant integration into Finnish society and catering to different client groups. One interviewee estimated half of their client group was illiterate, while others described their clients as highly educated. Seven interviewees provided counselling and guidance to address clients' needs in languages other than Finnish or English. Some of them also served clients in English and Finnish. Four other interviewees also provided general information but only in Finnish or English. The remaining four advised on specific issues, such as university education or employment. One of the interviewees worked for an NGO, and the others were public-sector officials.

The first author conducted the interviews between September 2023 and February 2024. A group of 15 professionals were interviewed, 12 in one-to-one interviews and three in a group interview. The sessions lasted between 26 and 97 min, and all interviews were recorded and transcribed. All interviewees had at least some experience of online meetings and also met their clients in person. Some interviewees reported they held just a couple of online meetings per month, whereas, for others, the online format was more the rule than the exception.

The interviews were semi-structured, a form that has the advantage of being flexible and also of enabling reciprocity between interviewer and interviewee (Galletta, 2012). The interview questions directed participants towards the type of information the interviewer sought (Gill et al., 2008). However, the format was intended to leave room for facts or attitudes to emerge that provided insights into the relevant phenomenon. The format is especially suitable when studying people's perceptions and opinions or complex issues and when the research is exploratory and the researcher is unfamiliar with the topic (Barribal and While, 1994).

Following the five-step guide to conducting semi-structured interviews defined by Kallio et al. (2016), we started the process by identifying the prerequisites for using semi-structured interviews. The process entailed establishing a knowledge base concerning digital encounters and identifying specific areas to focus on. Second, we reviewed the key research literature and informally discussed the topic with public service professionals to obtain a comprehensive overview. Third, we formulated the preliminary semi-structured interview guide in the form of a list of questions directing the conversation towards the research topic (Barribal and While, 1994). The fourth stage was to pilot-test the guide, confirming its relevance and coverage. That stage involved internal discussions between the researchers and an assessment by the service experts. The guide addressed questions about the interviewees' jobs, their experience with digital public encounters, how they thought the digital medium affected the encounters, and how well they thought their clients could utilize digital services.

Data analysis

The information derived from the interviews was subjected to thematic analysis using an abductive approach, which enables a dialogue between theoretical understanding and insights

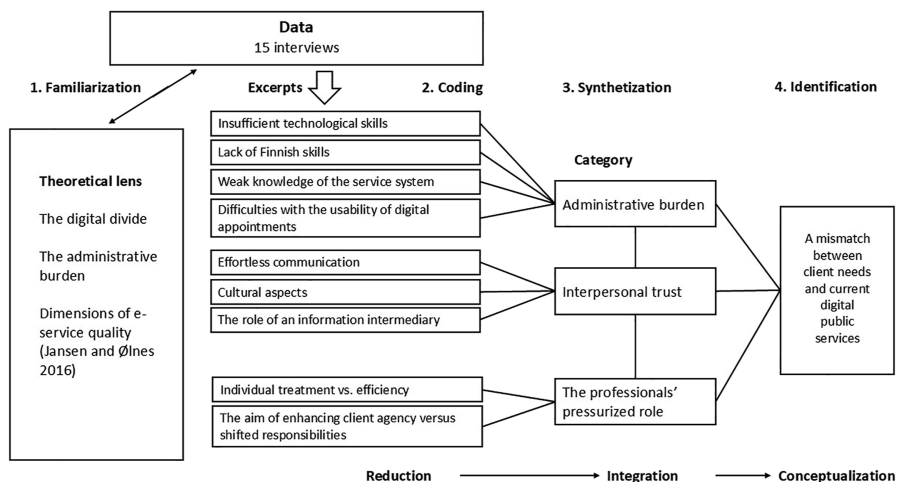
from the empirical data (Dubois and Gadde, 2002). The thematic analysis was built upon a contextual understanding of the nuances of the digital divide and the administrative burden. The analysis followed the plan of Robson (2011, p. 476), who divided the thematic coding approach into five stages (see Figure 1). First, researchers familiarized themselves with the data by listening to all interviews, focusing on the overarching impressions of the interviewees on digital public encounters and their attitudes to these interactions. Second, we listened to the interviews again and generated the initial codes, which allowed us to organize the data into manageable segments for further analysis. Third, we identified recurring patterns and themes to reveal elements that either enhanced or hindered the quality of the digital interactions. To strengthen the reliability of the study, both authors listened to the interviews and coded the themes independently. Following coding, we convened to reconcile our findings, discuss our individual interpretations, and ensure our analyses were congruent. Fourth, we synthesized these themes into coherent thematic networks, enabling a more structured representation of the data. Finally, we integrated the thematic networks and interpreted them with reference to relevant literature, also returning to the interviews and assessing the congruity of the networks with the original data. We prioritized themes based on their relevance and contribution to our research objectives.

Findings

Below, we explore frontline professionals' experiences with digital public encounters and their opinions on their relevance and adequacy with migrant clients.

Administrative burden

The results show that the majority of the interviewees did not consider digital means well-suited to responding to the needs of their clients and preferred in-person encounters. Key problems permeating digital public encounters with migrant clients were insufficient technological or Finnish-language skills. Those issues were sometimes combined with weak knowledge of the local service system and sometimes even illiteracy. The issues particularly affected older adults and those from developing countries.



Source(s): Figure created by authors

Figure 1. The theory-guided content analysis

Insufficient technological skills and lack of Finnish-language skills. Some interviewees complained that too much of the brief designated appointment time was wasted logging in and testing sound and image quality. Some clients did not know how to share their screens, preventing them from showing a form or decision they did not understand. Those clients who struggled to use digital devices also often struggled to communicate in Finnish or English, and the interviewees considered it especially important to offer hands-on guidance to clients who did not understand Finnish or English.

There were also issues with connections lagging that impacted the overall technical performance. Sound connection issues meant participants had to repeat themselves. One interviewee pointed out that such problems “make you kind of lose your rhythm”. The findings point to the paradoxical nature of technology, recognized by Earley (2014), as digital solutions usually foster productivity; however, when applied, new tools and infrastructure present new complexities, which can obscure the desired results.

Weak knowledge of the service system. That client segment struggled with digital services and the bureaucratic system (Madsen et al., 2022). Many matters could not simply have been administered digitally, as clients often sought help with digitalized public services. Examples of problematic situations requiring the client’s presence included completing forms in a system demanding authentication or a professional having to contact a service provider on their behalf.

Difficulties with the usability of digital appointments. Clients did not necessarily have computers, and both sides found conducting online meetings by telephone difficult, especially if something had to be shown on the screen, as was often the case. Some clients were in noisy, public places, such as a bus, which complicated interaction, especially if their language skills were weak. Some were at home and were interrupted by children.

The online booking system used in one organization caused problems, as clients often booked an online appointment but then visited the organization in person, or some tried to make contact using the more familiar WhatsApp video call function instead of via the Teams application mandated by the public service provider. Clients did not find the services easy to use and could not personalize digital encounters. Many clients preferred using WhatsApp or social media to interact with professionals, but that route is often prohibited in public organizations. Moreover, non-attendance and asking questions beyond the remit of the professionals were more frequent online than in person.

Nevertheless, six interviewees stated that clients who chose to meet digitally had good digital skills and were well-prepared for the meeting. The online option seemed best suited to meetings conducted in English, as the clients, in that case, were most often well-educated and digitally competent. Students, and young people in general, were usually comfortable with online meetings and even preferred them. Online meetings were considered suitable for simple matters, general guidance, and those seeking employment or education when the requirements were straightforward. For example, an adviser could share their screen to illustrate which websites to search for work or to review a client’s CV. The natural prerequisite is for the client to have adequate digital skills and preferably also competent Finnish or English to understand Finnish public services websites. For clients juggling a busy schedule and with young children or those located outside the city or even abroad, digital meetings offer a practical solution. Many interviewees mentioned that follow-up sessions could be implemented more easily online if the client required several meetings.

Interpersonal trust

The interview data highlight the importance of human presence and building trust between the professional and the client, which has been recognized to shape citizen trust in government and even individual encounters matter (Hansen, 2022). Most interviewees stated trust only grew during in-person meetings owing to easier communication, cultural aspects, and the professionals’ role as conduits between the client and bureaucratic requirements.

Effortless communication. The professionals considered in-person guidance added value to the service system. All but one stated that the interaction was *just not the same* online, and some connection seemed lacking. As one interviewee put it: “We are not in some Kafkaesque castle on a mountain but humans, and you can come and talk face-to-face with us.” Meeting in person improved mutual understanding through non-verbal communication and helped maintain concentration. If the client did not have a camera on, it was difficult to be sure they truly understood, even if they said they did. The professionals noted clients seemed to feel more secure in in-person meetings and could easily query issues they were unsure of. The in-person meetings were depicted as more relaxed, including small talk to prime the conversation.

In contrast, online meetings moved straight to business, congruent with prior findings about digital interaction tending to focus on specific goals instead of building lasting working relationships (Nordesjö *et al.*, 2022). Some professionals discussed the emotional aspects of being an adviser – some clients wanted to relate issues such as their struggles in Finland or previously in their homeland. The situation might indicate other service needs (Aaltonen, 2019).

Cultural aspects. In addition, many clients seemed to trust information delivered in person more than that obtained from websites or online meetings. That finding could reflect clients having little experience with alternatives to in-person service provision in their home countries. The majority of clients opted for in-person meetings, and most of the professionals preferred them too. Some expert interviewees stated no preference for remote or in-person meetings, but the nature of their client’s issues and insufficient digital skills made in-person meetings easier. The in-person preference could also be partially connected to the professionals’ disposition. As one interviewee put it, “I think it’s to a certain extent linked with your personality; maybe I am the type of person who likes to get to know people in person, likes to engage with others; I am very comfortable speaking, leading these kinds of sessions”.

The role of an information intermediary. It seemed that clients relied on the professionals offering advice in their first language (who were immigrants themselves), and the specialist from the NGO whenever they encountered problems with Finnish bureaucracy. The finding is congruent with recent research indicating that people need information presented from a citizen perspective, communicated in plain language (Madsen *et al.*, 2022), and for a kind of *information intermediary* between the government and the citizen (Giest and Samuels, 2023). Most of the information on Finnish public services is available online, but finding it requires digital competence and an understanding of the system. In addition, the professionals regarded conveying empathy, demonstrating they were paying attention, and offering a friendly face as equally important. They felt they could not express professional warmth in the same way via digital technology, and online communication erected barriers. That is an important consideration, as Hansen’s (2022) results establish that a professional’s warmth and competence are important factors in building trust in a governmental institution and, ultimately, the system in general. However, one of the interviewees had different experiences and did not consider the medium of the meeting to distort the communication in any way, as long as the professional’s communication was convivial. The same interviewee also stated that on occasion, maintaining a certain distance between client and professional could be a benefit, a view supported by another interviewee, who said that in some cultures, people expect there to be barriers between themselves and officials.

The professionals’ pressurized role

Individual treatment versus efficiency. While the professionals did not expressly state it, online meetings can be more efficient as the timescale is set and discussions go straight to the point. Interviewees seemed to balance the importance of individual treatment and efficiency, a common dilemma for street-level bureaucrats (Busch and Henriksen, 2018). They used their discretion to ascertain that clients’ needs were met and strived to answer all their questions, even those beyond the professional’s remit. However, the short periods assigned for meetings and long client queues forced the experts to hurry.

The aim of enhancing client agency versus shifted responsibilities. One professional stated that online meetings could advance clients' digital competence and encourage them to manage their affairs independently, an assumption in line with earlier research showing that digitalization has shifted responsibility onto citizens (Lindgren *et al.*, 2019). That shift can create a dilemma: It is important to motivate clients to increase their agency and to ensure different groups do not miss out on technological development, but enacting the policy and a lack of accountability can persuade the government to dilute its responsibility in pursuit of cost savings (Steen *et al.*, 2018). That is an issue when digitalization is exploited to increase productivity (OECD, 2021). Despite living in Finland for a considerable period, some clients were not conversant with the public service system and frequently returned to the guidance services.

Discussion

This study focused on frontline professionals' experiences with digital public encounters and analysed how well they respond to migrant clients' needs. We identified (1) the importance of interpersonal trust, (2) the need for more user-friendly and functional services, and (3) the pressurized and shifting role of the frontline professional as key aspects when assessing the functionality of digital public encounters.

First, interpersonal trust was recognized as a key factor determining the success of a digital public encounter. Trust in such an abstract construction as a public service system is strongly influenced by experiences at its access points (Alzahrani *et al.*, 2017). Interpersonal trust seems to promote public value creation, buffering clients' doubts about digital public services and the impacts of the administrative burden. Weak trust between clients and service providers could trigger a value co-destruction process instead of value co-creation (Steen *et al.*, 2018). Our research highlights that digital public encounters do not function with people lacking competency in the Finnish language and digital skills and with a limited understanding of the local service system. Instead, they form another barrier for these vulnerable people (Safarov, 2023). The interviewees considered the in-person encounters increased clients' trust and confidence that issues could be resolved, which should support the continued use of digital encounters. A trusted adviser is especially crucial for those migrants with a narrow social circle as they could be the only contact with practical knowledge of the administrative system.

Second, the results call for the further development of digital public encounters. The supply must be user-friendly and functional for less affluent and less educated clients to ensure successful services and productivity gains. Digital encounters should not be reserved for those already skilled and exclude groups with fewer competencies. It is important to emphasize that the main reason for the development should not be financial scarcity but inclusion: if the client's voice is not heard sufficiently in the development process, the services do not meet their needs. Our interviewees' experiences show that current digital public services require digital and societal competency, including proficiency in the language, which many clients do not possess. While digital interaction can expand participation (Pérez-Morote *et al.*, 2020), the challenge is to apply technology to existing organizational processes to benefit the service user. When that integration fails or the official channels are too complex, people turn to unofficial sources such as social media (e.g. Linos *et al.*, 2022).

Third, exercising discretion renders the work of a frontline professional wielding public authority demanding. The role encompasses a promise to act with wisdom and justice, given the conflict inherent to it (Evans and Harris, 2004.) The division of discretion into rule, value, and task discretion (Taylor and Kelly, 2006) illustrates the shifts induced by digitalization, particularly in contexts involving vulnerable individuals. Digitalization has the potential to recalibrate rule discretion by introducing algorithm-based decision-making procedures. Professionals may rely on guidelines that offer structured decision paths, reducing rule application ambiguity. However, this shift necessitates a critical analysis to ensure that digital systems are attuned to the nuanced needs of vulnerable people and do not perpetuate systemic

biases. In the realm of value discretion, digitalization enables the abundance of data that can support professionals in making more informed decisions that align with societal values and individual needs. However, the impersonal nature of digital interactions can make it difficult to engage with vulnerable individuals empathetically. Digitalization also impacts task discretion by standardizing certain processes to improve efficiency. Nevertheless, there is a risk in oversimplifying complex human services that demand flexibility and adaptability. While digitalization offers opportunities to enhance the exercise of discretion through improved information flow and decision support, it also poses risks to the nuanced judgement required in human-centred public services (Virtanen *et al.*, 2023).

It is important to remember that only those experiencing issues with public services book appointments with professionals. Many migrants use these services independently without needing professional assistance.

Conclusions

This article highlights several important conceptual implications regarding the intersection of client needs and digital public services. Our key points to consider:

The identification of the administrative burden, lack of interpersonal trust, and the pressurized roles of professionals do not exist in isolation; they collectively impact the effectiveness of digital services. This interconnectedness points to a systems-thinking approach, implying that addressing one issue requires considering the others and promoting a more holistic strategy in service design and implementation.

Secondly, our findings show that building interpersonal trust between clients and professionals is an essential element of effective service delivery. This suggests that digital services should focus on both technological solutions and cultivating trust-based relationships that enhance user engagement and satisfaction. The emphasis on human factors underlines the importance of empathy and user-centred design in developing digital public services. The findings signal the necessity of understanding the lived experiences of vulnerable groups, indicating that their needs must be prioritized in service development. Thirdly, the mention of clients lacking language skills and administrative competence highlights the digital divide. This underscores the need for digital services to be more accessible and inclusive, ensuring that they do not inadvertently marginalize those already vulnerable. The recognition of frontline professionals as valuable sources of insight suggests that their expertise and perspectives are critical aspects of service design. This points to a collaborative model where service development involves not only policymakers but also those who interact with clients directly, fostering a more nuanced understanding of client needs.

For practitioners, the results demand the service user be at the core of service development (Earley, 2014; Pérez-Morote *et al.*, 2020). Those struggling with digitalization and the language need training options. However, it is important to be realistic about who might become linguistically and digitally proficient and who will continue to need at least some support from a professional. Returning to the elements contributing to the digital divide, in addition to digital training, our results point to the importance of increasing citizens' trust in digitalized services and information provided online (Lythreathis *et al.*, 2022). That goal seems heavily reliant on obtaining guidance from a trusted professional and information intermediary. That route would also offer access to social support (see also Welser *et al.*, 2019) as many clients might not have anyone to help them locally. In addition, the choice of communication channels should be considered since many clients prefer WhatsApp or other social media applications and, thus, might have greater self-efficacy utilizing them (Linos *et al.*, 2022). Privacy and reliability issues must be considered, but these options could at least be applied to general enquiries.

Each study highlights the need for further enquiry, and this study is no exception. We have identified three promising avenues for future inquiry. The first relates to the opportunities for digital co-creation. The key question is how to include vulnerable groups in developing digital services, as good intentions might lead to governments reducing their responsibility and

heightened inequality (Steen *et al.*, 2018). Addressing this question involves identifying mechanisms to prevent digital inequality and developing strategies that promote inclusivity. Secondly, our results indicate that it would be beneficial to investigate how frontline professionals' coping mechanisms (Breit *et al.*, 2021) could be integrated into digital service platforms. The goal would be to analyse mechanisms hindering the extension of existing inequalities and also to foster digital inclusivity for vulnerable populations. The third area of future research could be based on the design-for-experience perspective (Trischler and Westman Trischler, 2022). That approach could be tailored to meet the needs of vulnerable groups. The key question is how to create digital services that are not only accessible but also empower their stakeholders to co-create value in their environment.

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