Article

Citizens' experiences of enablers and barriers to obtaining digital citizenship: E-applications for social assistance

by

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Abstract

This article focuses on *citizens' experiences of enablers of- and barriers to obtaining digital citizenship*. E-applications for social assistance are used as an exemplar. In Sweden, as in many countries, there is political pressure on welfare services to become more digitalized, and to offer different kinds of self-service technology such as e-applications. Even if the goals of implementing these technologies are to increase efficiency and transparency and offer faster services to citizens, there is a risk of expanding the 'digital divide'. and making it more difficult to obtain one's digital citizenship and gain access to social rights. This article draws on a qualitative interview study and explores citizens' experiences using e-applications in two Swedish municipal social assistance agencies. Results show that most citizens had positive experiences applying for social assistance online, but there were some potential barriers. There were also differences in experiences in the two municipal social assistance agencies. We discuss how the increased digitalization of welfare services seems to push towards a blend of digital and social rights. In this process, social workers play an important role in countering new types of inequalities that emerge in evolving social assistance organizations. The article identifies several areas that merit further research.

Keywords

self-service technology, e-applications, digital divide, social assistance, digital citizenship, Sweden

Introduction

This article focuses on *citizens' experiences of enablers of- and barriers to obtaining digital citizenship*. In Sweden, as in many countries, there is political pressure on welfare services to become more digitalized, and to offer different kinds of self-service technologies, such as e-applications. Instead of making decisions manually, e-applications make it possible to make decisions either partially or fully automated, and hence speed up the pace of the decision-making process (see Germundsson, 2022, on digital automation). The goals of implementing self-service technology are often to increase efficiency and transparency, and offer faster services to citizens (cf. Simonofski et al., 2021; Considine et al., 2022; Nordesjö et al., 2023; Silvennoinen & Rantanen, 2023).

In this article, e-applications for social assistance are used as an example to capture citizens' experiences of enablers and barriers to obtaining digital citizenship. The article includes two Swedish social assistance agencies in two municipalities, which differ regarding how long and in which ways they work with e-applications. In Sweden, there are 290 municipalities, and each municipality can decide whether they want to implement self-service technology, what type of software to use and how they want to organize it (Nordesjö et al., 2023). Due to this local self-government organization, each municipality has a considerable degree of autonomy, and services and support to citizens can vary depending on location (Ramsten et al., 2017). Social assistance is a form of temporary financial support under the Social Services Act to make sure that citizens have a reasonable standard of living. People with a strained financial situation can only apply for selective and means-based social assistance in the municipality in which they live. They have the right to apply for—but not to receive—social assistance. If eligible, social assistance covers fixed expenses such as housing and electricity, but also costs such as food, clothes and telephones (National Board of Health and Welfare, 2021). There is a national standard for how much to receive and what expenses can be covered, but needs should be assessed individually. If there are extenuating circumstances, applicants can negotiate the expenses social assistance will cover (Panican & Ulmestig, 2016; Salonen, 2013). This means that in Sweden, there are not only potential differences between

municipalities, but also within a municipality when it comes to handling social assistance, as these applications should be assessed individually.

Hence, applying for social assistance is a social right in Sweden, and is connected to 'social citizenship' (cf. Marshall & Bottomore, 1992). However, as societies and welfare services become increasingly digitalized, scholars have argued that it is important to explore 'digital citizenship' (Hintz et al., 2019, Tomasello, 2023), but also how these two citizenships are related. While social citizenship refers to *what* kind of social rights the state is obliged to provide its citizens (i.e. the content), digital citizenship refers to the medium that regulates social rights (i.e. access). It is therefore important to understand how self-service technology such as e-applications can become a threshold for obtaining one's social rights. In research, much of the focus has been on the 'digital divide', in which some people have access to- and the skills to use new technology, while others do not, and where the latter group becomes more and more excluded from society (Steyaert & Gould, 2009; Seong-Jae, 2010; Schou & Pors, 2019; Méndez-Domínguez et al., 2023). Scholars, such as Considine et al. (2022: 521), have also discussed the potential and risks of what they call 'machine bureaucracies' in Welfare-to-Work, when human-to-human interaction is replaced by self-service technology based on automated decision-making. By focusing on citizens' experiences applying for social assistance online, this article can contribute further insights on digital citizenship (see also Mossberger et al., 2008), and how such citizenship can be obtained in a time where more and more welfare services are being digitalized.

This article addresses citizens' experiences of enablers of- and barriers to obtaining digital citizenship by presenting insights from a 2021 qualitative study using semi-structured interviews with 11 citizens who applied for social assistance in two Swedish social assistance agencies/municipalities. We have thematically mapped citizens' experiences in the two municipalities, and use the concept of the digital divide to analyse and discuss enablers of- and barriers to obtaining digital citizenship.

Theoretical perspectives and previous research

Social rights and digital citizenship

'Citizenship is a status bestowed on those who are full members of a community. All who possess the status are equal with respect to the rights and duties with which the status is endowed' (Marshall & Bottomore, 1992: 18). However, what counts as 'social rights and duties' differ, and can change over time. The concept of social rights highlights the social responsibilities the state has to its citizens, especially toward those who are not self-sufficient. For something to be a social right, the state is obliged to provide citizens with that right (Panican & Ulmestig, 2016), especially when it comes to guaranteeing a minimum level of economic security for citizens who are not self-sufficient. In this article, we focus on citizens' rights to apply for social assistance.

As societies have become more digitalized, scholars have begun to discuss whether there is such a thing as 'digital citizenship'. Even though several scholars tend to focus on participation in a digital and datafied society more generally (Mossberger et al., 2008; Hintz et al., 2019), the concept can also be used to highlight what responsibilities the state has to its citizens when more and more welfare services have been digitalized. There is an increasing amount of different digital self-service solutions that can become a threshold for citizens' access to their social rights (cf. Hintz et al., 2019). Citizenship is connected to both territory (i.e. municipality) and access to resources (i.e. social assistance). Building on Marshallian conceptualization, Tomasello (2023: 464) argues that it is important to rethink 'social rights in cyberspace', and introduces the concept of 'digital–social rights' to highlight the connection between social and digital rights to counter new types of inequalities that emerge in highly digitalized societies.

Within research in social work, only a few scholars have used this concept. However, Schou and Pors (2019) have studied the consequences digitalization policies and reforms have for citizenship by researching Danish citizen self-service centres. Since 2015, it is mandatory in Denmark for citizens to communicate digitally with all public authorities to hasten the process of making online self-service the norm. Results show that these type of digital self-service solutions place high demands on citizens,

especially on citizens who already find themselves in a vulnerable position in society. In fact, these high demands challenge the idea of social citizenship, as not all members of society can access their rights when welfare services become increasingly digitalized.

The digital divide: The tension between digital exclusion and digital inclusion

A concept related to 'digital citizenship' is the 'digital divide*'* (Mossberger et al., 2008; Wong, et al., 2009), which is much more commonly used and researched. The concept can be understood in different ways, but often refers to the distinction between those who have access to- and competence using digital tools, and those who do not (Ragnedda, 2017). In society, some tasks are considered more important to be able to do online, and are therefore more strongly connected to exclusion/inclusion (Gallist et al., 2021).

Research on the digital divide is predominantly quantitative (see e.g. Moreno et al., 2023), but there are some mixed-method and qualitative studies that focus on welfare users' experiences. Research shows how both life circumstances and digital skills tend to create a new digital divide among citizens in Nordic countries (Hansen et al., 2018; Schou & Pors, 2019), particularly in the case of digital self-service solutions (Schou & Pors, 2019).

Ragnedda (2017) argues that even though online and offline inequalities are often entangled, the causal relationship between them is not clear-cut. He writes:

> …there exists a kind of recurring cycle between social and digital inequalities. That is, social inequalities are the root of digital inequalities, and at the same time, digital inequalities increase and reinforce social inequalities already present in a stratified social sphere. (Ragnedda, 2017: 48)

Another concept is 'social stratification', which refers to how society is a structured system of inequalities between various categories. The stratification is hierarchal, and renders some individuals more privileged than others based on their age, gender, economic resources, status and/or power, etc. (Ragnedda, 2017: 50). Consequently, within research, there have been discussions as to whether social services only are reproducing this stratification, or whether the implementation of digital tools risks

producing new forms of digital exclusion (Helsper & Reisdorf; Schou & Pors, 2019; Middle & Welch, 2022). In particular, there seems to be a complex connection between digital exclusion and poverty (Holmes & Burgess, 2022). However, according to Seong-Jae (2010), it is important to distinguish between the *first-level digital divide* associated with sociodemographic factors, such as age, gender education, income and employment, and the *second-level digital divide,* associated with factors such as internet skills, interest and motivation.

However, implementing new IT systems can also improve people's quality of life (Ragnedda, 2017) and lead to *digital inclusion*, and hence to obtaining one's digital citizenship (Mossberger et al., 2008). Several scholars discuss how citizens need to be included in the design process to achieve digital inclusion. For example, a study on homeless youth shows how the majority found that digital communication, such as texting, made contact with their case manager much easier (Bender, 2015). Also, rural older homeless people with complex needs gained more confidence and felt more independent and socially engaged when they were provided with and learned how to use tablets (Baker et al., 2017). A study on the use of Information and Communication Technologies (ICT) among mothers of low socio-economic status shows how accomplishing digital inclusion is a complex task, because it is not only about giving individuals access to technological devices and wi-fi. They also need to enhance their digital skills, and education must be integrated into contemporary social services (Goedhart et al., 2019).

However, Ragnedda (2017:76) argues that people with high levels of *digital capital* can use it as 'bridge capital', which relocates advantages from other types of social capital and applies it in the digital realm (Ragnedda, 2017:76). Bernhard and Wihlborg (2021) have a similar argument, but focus on the role of the social worker. They discuss that clients must submit the data correctly, but not all clients have the capacity or/and digital competence to do so. Therefore, social workers play an important role in assisting clients, and in 'bridging digital divides' (Bernhard & Wihlborg, 2021: 373; cf. also Méndez-Domínguez et al., 2023). Similarly, also under discussion is how citizens' digital agency is constructed through interactions and negotiated with professionals. Citizens belonging to vulnerable groups often lack direct control over their situation, and can exercise 'proxy agency' when using self-

service technology, which also can help to bridge and reduce digital divides (cf. Silvennoinen & Rantanen, 2023).

Technical, economic and social barriers

It is important to explore what barriers citizens experience when using different technologies to gain knowledge on digital citizenship. Scholars have highlighted that there are technical, economic and social barriers to using new technology within welfare agencies (Baker et al., 2017). As the topic of this article is on obtaining one's digital citizenship, we will particularly focus on different *technical barriers*.

Previous studies from different areas of social work show that there are several technical barriers to obtaining support, such as a lack of access to computers, smartphones and the internet (Raven et al., 2018; Endale et al., 2020; Galperin et al., 2021). Smartphones can sometimes compensate for a lack of technical equipment (Endale et al., 2020). Nevertheless, for some client groups; for example, people who experience housing instability, it can be difficult to find places to charge a phone battery, and therefore to search for shelter or jobs, and it becomes much easier to miss calls from social workers (Galperin et al., 2021). Research also shows that some citizens do not have adequate digital skills to be able to use self-service solutions (cf. Ramsten et al., 2017; Goedhart et al., 2019), and need more training (Baker et al., 2017). It has also been discussed how different barriers could be lowered for individuals who may have minimal, or no access, to technology and the internet (cf. Raven et al., 2018). An aggravating circumstance highlighted in research is that the threshold for using new technology also varies depending on where you live. For example, a Swedish study on the support offered by municipalities to young adults with mild-to-moderate intellectual disabilities confirmed how services and support differ depending on location (Ramsten et al., 2017).

Research has also explored whether if people who did not grow up with digital technologies experience more technical barriers that others. The term 'digital natives' refers to individuals born after 1980 who have interacted with digital technologies their entire lives, and are considered 'native speakers' of computer language from birth. These individuals think and process information differently from older

generations. ‘Digital immigrants’ refer to people born before 1980 who are not native speakers. Even though they can learn computer language and skills, they cannot fully understand them as well as ‘digital natives’ (Prensky, 2001; Manor & Kampf, 2022). The validity of these concepts has been criticized, because there is variation within these categories due to a number of factors (Manor & Kampf, 2022). According to Manor and Kampf (2022), the sharp distinction between digital natives and immigrants based on whether they were born before or after 1980 may not always apply, but can still be used as an analytical tool for exploring differences in relationships to- and experiences of digital technology.

In this article, we will explore both enablers and technical barriers to using e-applications in social assistance.

Method

Addressing citizens’ experiences as enablers of- and barriers to obtaining digital citizenship was explored in interviews in which we took part in citizens’ conceptions and interpretations of events associated with e-applications for social assistance.

Cases

This article draws on an interview study in two Swedish municipalities’ social assistance units in spring 2021, which we have renamed *Digiholm* and *Techstad*. While *Digiholm* had only used e-applications for a couple of years, *Techstad* had used them for several years. Both municipalities used e-applications as the first step in a process of automated decision-making (ADM), in which an algorithm assesses the citizen’s application, and suggests a decision to a social worker. However, the e-application—which is a sort of self-service technology, in which the citizen fills in questions relating to their personal, work and financial situation—is the only part of the ADM process that the citizen interacts with. Early empirical findings suggested that although citizens from both social agencies were generally positive about their experiences with the e-application, they still differed in terms of technological barriers and contact with social workers. For example, social worker contact was frequent in *Digiholm*, but limited in *Techstad*. In *Digiholm,* the time gained through the use of e-applications was used to increase interactions between social workers and citizens.

In *Techstad,* social assistance was very much bureaucratic in nature. Social workers had very little interaction with citizens, and instead citizens were referred to job coaches for support. While social workers have social work bachelor's degrees, job coaches' educational backgrounds are more diverse, e.g., behavioural psychology and human resources.

Data collection

11 semi-structured interviews with citizens who applied for social assistance were carried out in the two municipalities (see Table 1). The only criterion was that they could speak Swedish, and could be interviewed by the authors. This has potentially excluded citizens with experiences of enablers and barriers other than those described in this article. In general, the 11 interviewees' ages spanned from 20–60 years, they were equally divided in terms of gender, and most (7/11) spoke Swedish as their first language. In *Digiholm*, most interviewees have been on social assistance for several years, while most of the applicants in *Techstad* were new to the social assistance system. This is due to the way interviews had to be conducted flexibly during the COVID-19 pandemic. In *Techstad*, one of the authors interviewed citizens on-site after their first physical meeting after they had applied for social assistance electronically. In *Digiholm*, citizens who already had been on social assistance were easier to contact, and were interviewed by another author via phone. Still, the citizens in *Digiholm* were also new to the e-application. Interviews were with individuals that lasted 15–40 minutes, and revolved around the citizen's experiences of the application process, such as whether they think it was understandable and easy to fill out, whether they could communicate what they wanted to communicate, and whether they felt they were in control of their application. Overall, it was emphasized that questions did not specifically concern the citizen's personal situation, and that the primary interest concerned their experiences applying for social assistance online.

Table 1: Interviewees

Interviewee	Age	Sex	First language	Social assistance/time
Digiholm				
A1	30	F	Swedish	12–13 years
A2	60	M	Swedish	4–5 years
A3	60	M	Swedish	2–3 years
A4	50	F	Arabic	2–3 years
A5	40	M	Somali	2–3 years
Techstad				
B1	30	M	Swedish	New
B2	50	F	Arabic (interpreter)	New
B3	30	F	Swedish	New
B4	30	M	Swedish	New
B5	20	F	Multiple languages	Unclear
B6	40	F	Polish	6–7 years

To further anonymize interviewees, we have chosen to round off their age and the exact time spent obtaining social assistance.

Management in both municipalities put the authors in contact with social workers and job coaches, who in turn asked citizens whether they would like to be interviewed for the research project. Social workers and job coaches were given information on the project's aims and interview procedures that they, in turn, presented to the citizens. It was also clearly stated that declining the interview would not affect the citizen's application. If the citizen agreed to participate, information was presented at the beginning of the interview, and the citizen gave their written or verbal (via telephone) consent. Social workers and job coaches therefore knew who had been interviewed. This approach was still preferable to, e.g., asking citizens in a reception, since it gave citizens the possibility to decline an interview twice, and since it gave the interview validity by connecting the citizen to the organization and to the application process. Information on the interview included that data was handled according to GDPR guidelines in terms of the purpose and use of personal data and contact information to the responsible institution. Moreover, data would be pseudonymized and could not be connected to interviewees, and would be processed in such a way that unauthorized persons could not access it. The research project was subject to ethical review, and approved by the Swedish Regional Ethical Review Board.

Thematic analysis

Data were analysed via thematic analysis (Braun & Clarke, 2012). We coded the material starting from our interest in citizens' experiences using e-applications in social assistance. Initial coding resulted in two main themes revolving around enablers and barriers in e-applications. These themes were subsequently explored comparatively between social agencies to highlight differences and similarities. They were then discussed and reformulated with the help of previous research and theories on the digital divide and enablers of- and barriers to understanding how to obtain digital citizenship. The final themes were: 1) easy, flexible and fast (once you get the hang of it); 2) language difficulties, technological hassles, and not enough patience.

Analysis

The analysis is structured around two themes, and citizens' experiences in the two social agencies will be compared. Few interviewees had reflected on their e-applications prior to the interviews.

Easy, flexible and fast—once you get the hang of it

Most of the interviewees in the study stated that they were positive about using e-applications, but overall citizens in *Digiholm* seemed to be a little more satisfied regarding applying for social assistance online than the citizens in *Techstad*, and hence about obtaining their digital citizenship. One explanation of this difference in satisfaction is that the citizens in *Digiholm* seemed to experience a much closer relationship with their social worker/job coach. Some of the citizens in *Techstad* said that they were not in contact with one particular person, whereas the citizens in *Digiholm* often seem to discuss their experience with their social worker, building a relationship.

Three advantages in using e-applications were identified in the interviews: 1) easy to use; 2) fast and flexible, and 3) more control.

Easy to use

Previous research has highlighted how states, when implementing self-service technology, place new demands on citizens who must learn to become 'digital citizens' (cf. Shou & Pors, 2019), but interviewees in this study found this specific self-service technology to be easy to use, overall. Hence, the first advantage of using e-applications was that they were *easy to* use and to fill in. Several of the interviewees in *Digiholm* stated as much, as in the following examples: "It works really well" (A3); "It is really easy to do digitally" (A4); and "Yes, it was the first time for me to fill in the e-application and it is the easiest for me, the best actually" (A5). There were also some citizens in *Techstad* who expressed that it was easier to apply online, especially when compared to paper applications:

> It is much easier (to apply online). I have applied by submitting papers (for example, bills as basis for decision—authors' note) before, and it is a damn lot of paperwork, to sign and stuff. The only thing that is a little harder online is if you have to call them (social services). There may be 20 other people in the queue, and you sit there for two hours before it is your turn if you need help with something. (B1)

As the above quote shows, citizens in *Techstad* expressed that there were some downsides to using e-applications, as they could potentially be time-consuming instead of timesaving if you need some kind of personal assistance. Having to wait in a long telephone queue could also potentially be expensive, depending on one's mobile subscription. The citizens in *Techstad* could also ask for help if anything went wrong, but they did not refer to a specific social worker to the same extent as the citizens in *Digiholm,* which reflects how e-applications are organized in the two social agencies. A citizen from *Digiholm* said: "in the beginning it was hard, and I used to e-mail him so he (his social worker) could explain…send an e-mail or so. Okay, we read it together, he said" (A5). Applying for social assistance was described as being much easier, once you got the hang of it, indicating that it sometimes took a bit of time to become familiar with the IT system, and to learn its internal logic. E-applications were also described as uncomplicated, "after you have done it once" (A1). In line with previous research (cf. Shou & Pors, 2019), this indicates that citizens, at least initially, must learn how to use and fill in the e-application to obtain their digital citizenship, but the application system is experienced as easy to learn. Being able to quickly get in contact with a social worker, as in *Digiholm*, seems to be particularly important during the initial application phase. This means that besides

relational aspects, it is also important to include temporal aspects in citizens' experiences of enablers of- and barriers to obtaining digital citizenship.

Fast and flexible

Previous research has also highlighted that the goals of implementing self-service technology are often to increase efficiency and offer faster services to citizens (cf. Simonofski et al., 2021; Considine et al., 2022; Nordesjö et al., 2023; Silvennoinen & Rantanen, 2023). The second advantage put forward by interviewees was that e-applications were both *fast* and *flexible* to use, because there are no geographic or temporal boundaries. Here we see the same pattern in the two social agencies, in which citizens in *Digiholm* expressed these benefits slightly more often. For example, a citizen in *Digiholm* said:

> I feel that it is much easier on the computer. I can do it whenever I want. On the computer or on the mobile, or wherever I am. If I am on work training or at home or whatever. Therefore, it is easier, actually. I do not have to keep track of opening hours and all that stuff. (A2)

Applying for social assistance from home was described as a more flexible option. This was especially important for citizens who had to stay at home with their children. An interviewee in *Techstad* explained:

> It is perhaps easier when you have children, so you can do it from home. If you do not have a car, it feels better to be at home or at work, so you have the opportunity to fix it fairly quickly. (B6)

E-applications were often described as a faster and more flexible option only for some categories of citizens, which is in line with previous research on the digital divide (cf. Hansen et al., 2018; Gallist et al., 2021) and social stratification (Ragnedda, 2017). An interviewee explained: "I think so, once you get into it...then I am at that age, it is probably worse for those who are even older, I was brought up with phones and computers, anyway" (A3). This quote can be understood as the interviewee explaining the differences in experiences, depending on whether the individual is a 'digital immigrant' or a 'digital native' (Prensky, 2001; Manor & Kampf, 2022), categorizing herself/himself as a 'digital native' who grew up with technology. Drawing on the first definition of these two concepts, i.e., whether people were born before or after 1980, nine of 11 interviewees were 'digital natives'. However, the interviewee in the quote was in his late 50s, confirming the aforementioned issues with using a fixed year to separate 'digital immigrants' from 'digital natives'. Similar to

Manor and Kampf's (2022) argument, we found that the interviewee's relationship to technology was not clearly related to age. As the quote shows, there was still an assumption that there was a certain connection between digital skills and age. However, it was indecisive about what age defines people as 'digital immigrants', and is perhaps irrelevant, as these concepts can merely capture interviewees' thoughts on, and experiences related to, technology.

More control

A third advantage of e-applications put forward by citizens in both social agencies was that applying online made them feel *more in control*. Experiences of being in control when using self-service technology have seldom been highlighted in previous research. However, Silvennoinen and Rantanen (2023) discussed that because citizens belonging to vulnerable groups lack direct control over their situation, they tend to exercise proxy agency. Proxy agency can, in turn, help to reduce the digital divide.

An interviewee in *Digiholm* stressed that information did not disappear online: "it is smoother and does not disappear, as paper applications tend to do" (A1). All the information can be saved in the system, so citizens can go back later on if they want to check anything. An interviewee in *Techstad* said that he felt safer: "I like when you do not have to fill in a lot of paper and stuff. I like the e-application. You feel safe using it" (B4). Another interviewee in *Techstad* explained that it was also much easier for him to get an overview of his personal finances in this way:

> You log in with your BankID[1] and you fill in your information, what your name is, where you live, how you live, rent, electricity, water, etc., and lots of other expenses, broadband, medicines, so you can calculate how much money you need. (B1)

The citizens in *Digiholm* expressed a high level of trust in both the IT system and in their social worker/job coach. The fact that social workers had a certain amount of control over citizens' financial situation was described as fair: "I think that is fair" (A1), answered one of the interviewees regarding social workers' control of citizens' Swish-

[1] BankID is a secure digital identification app provided by the banks that is widely used in Sweden for verifying documents, etc.

money.[2] Regarding whether it felt impersonal to receive a decision online, an interviewee in *Techstad* explained that it did not matter, as long as you receive the decision: “No, as long as I find out whether it is approved or not, it does not matter whether it is a human being or an e-mail or similar who says it” (B1).

It is difficult to say whether these experiences of feeling more in control are also an expression of- and can be understood as a proxy agency that can foster digital inclusion (Silvennoinen & Rantanen, 2023). The empirical material indicates that it is more important to have personal contact with a social worker/job coach who can motivate the applicant and discuss the decisions that were made if the e-applications are denied. This part of the application process seems to be more ‘vulnerable’, and can affect both the access to- and the materialization of social rights, although this finding requires further research. It is important to further investigate *when* personal contact with a social worker/job coach is important for citizens during the e-application process to avoid situations of digital exclusion.

Language difficulties, technological hassles and not enough patience

As has already been discussed, most of the interviewees in both social agencies stated that there were no- or only a few disadvantages to using e-applications compared to applying for social assistance on paper. It can be interpreted as feeling overall that they could easily obtain their digital citizenship, and that the self-service technology they used made it easier to access social rights. However, in the interviews, we have identified four potential barriers to using e-applications: 1) a lack of language skills, 2) a lack of digital skills, 3) insufficient available technology, and 4) a lack of patience—all of which can make it more difficult to access and materialize social rights.

A lack of language skills

One barrier mentioned in the interviews was *a lack of language skills*. Therefore, it was not mainly a question of a lack of computer language skills, as is the case in theories on digital natives and digital immigrants (Prensky, 2001; Manor & Kampf,

[2] Swish is a Swedish payment service available on smartphones and connected to a mobile number, and is used for payments between private users, as well to companies. Stores often use QR codes to make payment easier.

2022)—it was also a question of having sufficient skills in the Swedish language. For example, an interviewee in *Digiholm* explained that his wife could not fill in e-applications independently because of a language barrier:

> My wife cannot manage to fill in the applications online without having help. It is because of the language. It is the language, the words you use, and how you fill in it. It is not the same when you fill in paper applications as [it is] on the e-services. A slightly higher level of language is needed when filling in the e-services. (A5)

As the quote shows, e-applications were described as requiring higher language skills than paper applications, in which case applying alone without anyone available to consult clearly becomes an obstacle. An interviewee in *Techstad* had a similar description of language barriers:

> I know many who actually have problems with it (the e-application), but they also have problems with Swedish. They do not understand much. Before, they could get help filling in the application (by a person). However, that thing with the language, if they understand it only a little, it might be more difficult for them. (B6)

In this respect, e-applications run the risk of facing a higher threshold for citizens who have difficulties reading or/and writing in Swedish. What is interesting about this particular barrier is that the interviewees in both social agencies only talked about other citizens' experience of this threshold, thereby indicating that our sample did not include people with first-hand experience facing language difficulties when applying for social assistance online.

A lack of digital skills

A second barrier discussed in the interviews was *not enough digital skills*. This is a barrier that has been heavily discussed in previous research on digitalization in social work from a citizen perspective (Ramsten et al., 2017; Goerdhart et al., 2019). One interviewee said: "I am not so technical" (B3), and another explained that she was prepared to fill in a paper application at the office instead, because: "You understand better, you get help and understand what they want, and so on" (B2). In fact, this barrier, connected to digital skills, risks creating new categories of digital exclusion in welfare services for citizens who apply for social assistance, and has implications for the ability to exercise one's digital citizenship. Citizens with high digital skills (Ragnedda, 2017) seem to feel more included in society, whereas citizens who feel that they have limited digital skills feel more excluded. Several interviewees in both social agencies said that they had experienced technological hassles when applying

online, and social workers seemed to play an important role in assisting citizens with their e-applications when there are problems, such as technological hassles or when the application has been denied without a clear reason. For example, an interviewee in *Digiholm* explained:

> It has happened that it has been hassle (with the technical parts)...but then I have...then I called my social worker and asked what was going on, then there was something with their server...so my social worker told me to wait until the next morning (A2).

There appear to be differences in citizens' experiences of social workers assisting them in solving technical hassles in the two social agencies. The citizens in *Digiholm* expressed a much closer relationship with their social worker/job coach than the citizens in *Techstad*, and as the below quote shows, the social workers in *Digiholm* were described as 'accessible'. However, one of the interviewees from *Techstad* also said that she had a personal coach that she could turn to:

> You can always call them. If it has been denied, they immediately know why. What have I missed? What should I send in? They check it. You have a personal coach who looks at the computer and checks what is wrong. (B6)

Several of the interviewees from *Techstad* said that they also had received help with their e-applications in the town hall; for example, where to find out how to appeal the decision. In fact, appealing decisions is part of their social rights. Nonetheless, the lack of digital skills can force citizens to seek help through traditional communication channels, which may force citizens into time-consuming queues. Something that was meant to be easy and accessible hence risks becoming the opposite—a barrier to accessing social rights.

Insufficient available technology

Research has focused extensively on a lack of access to computers, smartphones and the internet (Raven et al., 2018; Endale et al., 2020; Galperin et al., 2021). A third barrier identified in the interviews was *not having sufficient technology available*. An interviewee from *Techstad* explained:

> It was very difficult. I have always filled in paper forms before. Now you have to log in with Bank ID, enter personal information, attach the lease, the jobs, and bank statements, and then I had to download it on my phone and then I would attach the bank statements...it was maybe 30 attachments. (B3)

As the quote shows, for this interviewee applying for social assistance online was not easy for a number of reasons. The interviewee explained that she did not have a

computer, and hence had to do everything on the phone, and it quickly became complicated to photograph and attach everything: “I would rather have printed it out, and sent it in paper form” (B3). According to this interviewee, not having sufficient technology available is an example of a technical barrier, because only having access to a smartphone and not to a computer complicates the process considerably. Similar to Endale et al.’s (2020) study, smartphones are expected to compensate for limited access to other technical equipment, even though they do not always have the capacity to do so.

A lack of patience

A fourth barrier identified was *a lack of patience.* Instead of motivation, which has been highlighted in theories on digital exclusion (Seong-Jae, 2010; Silvennoinen & Rantanen, 2023), our interviewees talked about patience. For example, an interviewee from *Techstad* said:

> I do not know. I do not have patience for such things. It takes time. And I cannot read everything. It ends up with me not understand anything. I did not understand what to write or send or…nevertheless, it worked out in the end. (B5)

As the quote shows, a lack of patience when learning the e-application system was described as an obstacle, and the interviewee experienced it to be too time-consuming to apply for social assistance online. There is a risk that a lack of motivation and not enough patience learning new IT systems becomes internalized and connected to negative personality traits, instead of demanding that IT systems should be easy to use and ‘user friendly’. Like discussions of other barriers, there is not only a risk of creating a higher threshold for citizens with fewer language and digital skills, and with less access to technical equipment, but also of creating forms of digital exclusion based on interest, willingness and an ability to learn how to use e-applications. There is a risk that the citizens who lack skills or motivation will not be able to participate on equal terms (see also Silvennoinen & Rantanen, 2023), and hence be able to obtain their digital citizenship in the same ways as other citizens, even though they have the same social rights as citizens with the necessary skills and motivation.

Conclusions and discussion

This article has contributed a thematic mapping of citizens' experiences of enablers of- and barriers to obtaining digital citizenship when applying for social assistance in two Swedish municipalities. Overall, the interviewees experienced that they could easily obtain their digital citizenship; hence, the self-service technology used made it easier to access social rights. The analysis also showed that the citizens interviewed in *Digiholm* seemed to be slightly more satisfied with the use of e-applications then in *Techstad*. Three enablers were described pertaining to the use of e-applications: 1) easy to use; 2) fast and flexible; and 3) more control. Four barriers were also described in using e-applications: 1) a lack of language skills, 2) a lack of digital skills, 3) insufficient available technology; and 4) a lack of patience.

The insights gained from this study can also contribute guidance on additional research, and we have identified four such areas. First, there is a need for additional studies on 'exclusion by design' (Park & Humphry, 2019). Previous research has highlighted several barriers for different groups of citizens in using digital tools, such as technical, economic and social barriers (cf. Baker et al., 2017; Raven et al., 2018; Endale et al., 2020; Galperin et al., 2021). In this study, *age*, *technical barriers* and *language barriers* were most visible in the citizens' descriptions. Age and language skills, both in Swedish and regarding 'computer language', were often used as an explanation as to why applying for social assistance online was experienced as easier for some citizens than for others. Similar to what has been described in Bernhard's and Wihlborg's (2021) study, the citizens in our study experienced demands related to correctly typing and submitting data, and it was particularly challenging for citizens with fewer Swedish language skills. If the online application system is too sensitive when it comes to typos, etc., there is a risk of creating what Park and Humphry (2019) refer to as 'exclusion by design', which merits additional research.

Second, even though several previous studies highlight problems such as a lack of- or insufficiently available technology (Raven et al., 2018; Endale et al., 2020; Galperin et al., 2021), there is a need to further explore the implications such 'technical poverty' has for both digital and social citizenship. It is important to stress

that even in a highly digitalized country such as Sweden, not all citizens own both a smartphone and a computer, and it can be difficult to apply for social assistance with just a smartphone, as suggested by some of the interviewees in this article.

Third, we also found that there is a need for more knowledge on social workers' role in bridging the digital divide, but also for research on when, where and how social workers/job coaches should operate to avoid situations involving the digital exclusion of citizens. In line with Bernhard and Wihlborg's (2021) study, we also found that social workers play an important role in assisting citizens when something goes wrong or when they require assistance applying for social assistance online and ensuring that e-applications for social assistance remain accessible for citizens, regardless of language and computer skills. However, helping citizens apply online is not only about bridging digital divides, but also about helping citizens obtain their digital citizenship, and hence access their social rights (cf. Marshall & Bottomore, 1992). However, as Tomasello (2023: 464) argues, we seem to be moving towards a blend of digital and social rights. Thus, there is a need for more knowledge on how these two sets of rights are blended, the implications this entanglement have for citizens, and how rights can be protected in a time when new self-service technology is implemented rapidly.

Tomasello (2023) focuses on rights to economic compensation when using social media in relation to how user-generated data is handled, which can be a source of profits for companies, and the rights users have as consumers. Tomasello (2023: 480) proposes the introduction of 'digital basic income'. Using e-applications for social assistance as an example, this article adds another dimension to how the blend of digital and social rights can be understood. For example, the handbook for social assistance for social services, published by the Swedish National Board of Health and Welfare, addresses what can be regarded as a reasonable standard of living, but gives little guidance for social workers on how to access applicants' digital rights. Internet access is argued to be included in a reasonable standard of living, but the need for mobile phones and computers should still be assessed individually (National Board of Health and Welfare, 2021). On the one hand, citizens who are not self-sufficient need additional resources to apply for social assistance online. On the other hand, some of these resources can only be gained if citizens apply and

negotiate what expenses should be covered, and what kind of support should be given. When these two sets of rights (social and digital) merge, there is a risk that they also reinforce each other. While social rights aim to reduce or at least compensate for social inequalities, unequal access to digital resources and skills could contribute to new forms of exclusion, and hence increase inequality. As Ragedda (2017) argues, inequalities seem to be strongly entangled in the tension between social and digital rights. In this process, social workers have an important role countering new types of inequalities that emerge in changing social assistance organizations, even if their role differs depending on the municipality.

Fourth, the article indicates that it is important that additional research focus on organizational aspects, and how digitalization changes the organization of social work. Even if using e-applications was described overall as something positive by interviewees in both municipalities, there seems to be a risk that, depending on how self-service technology has been implemented, applicants can lose opportunities to negotiate the sum they will receive with the social worker. In that case, social assistance does not become a means-based subsidy in the same way as it did before the implementation. In turn, this could lead to restricted access to social rights. In contrast, reducing social workers and job coaches' decision-making discretion can also contribute to more equal assessments, and therefore equal access to social rights. This variation means that people in Sweden who have the same social rights are treated differently (cf. Ramsten et al., 2017), which is why organizational aspects merit additional research.

The insights gained from this study can also contribute guidance on at least three practical implications. First, social workers' professional role must adopt to these new conditions, and the professional expertise on when and how to assist citizens in gaining access to their digital and social rights when welfare services are digitalized must expand. Second, it is important to utilize the potential of e-applications, and hence implement self-service technology that also enables multi-language solutions (cf. also Considine et al., 2022). Third, when designing and implementing new self-service technology, it is important to keep organizational aspects in mind, as these seem to have implications for citizens' outcomes.

Limitations

As with any study, this article has some methodological limitations. The number of citizens included in this study is limited, and cannot fully grasp all citizens' experience of enablers of- and barriers to obtaining digital citizenship. Regardless, by comparing citizens' experiences of using e-applications in two Swedish municipal social assistance agencies that have implemented self-service technology in diverse ways, we have been able to highlight how a different organization of self-service technology seems to lead to different experiences of the application process.

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