“Without my phone, I cannot move one step forward”

A Qualitative Study of the Information Practices of Immigrants to Sweden through their Smartphones

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2023

Given increased immigration rates in recent years and the rapid rate technology has become part of daily life, understanding the role of technology in the immigration process is important. Smartphones, in particular, are now commonplace, yet little is known about their role in immigration, still less from an information perspective. This study explores how immigrants to Sweden engage with information, with a particular focus on the function of smartphones and smartphone applications as intermediary tools between their adopted Swedish society and their countries of origin. A framework consisting of two theoretical lenses is employed: a practice approach, specifically information practices and transnational practices, and theories of belonging. Adopting a qualitative approach, semi-structured interviews were carried out with 12 participants. This study finds that smartphones can serve as a space through which immigrants can develop an understanding of the new information landscape and maintain a connection to the home country, primarily through contact with social networks. However, some form of prior knowledge, often from a third party, is commonly needed to use smartphones effectively in the new landscape. By facilitating an understanding of the new information landscape, and maintaining a connection to the home country, smartphones can be seen as involved in the development of a sense of belonging in the new environment. This study creates new insights into how immigrants engage with information, especially through smartphones, however, further research in this area is encouraged.

Smartphones, Smartphone applications, Transnational practices, Information practices, Belonging, Immigration, Information, Library and Information Science.
Contents

1 INTRODUCTION AND PROBLEM FORMULATION ......................................................... 1

1.1 AIM AND RESEARCH QUESTIONS ........................................................................ 3

2 PREVIOUS RESEARCH AND LITERATURE REVIEW ..................................................... 4

2.1 THE IMPORTANCE OF INFORMATION ACCESS IN SOCIETY .............................. 4
2.2 LIS AND IMMIGRATION ......................................................................................... 6
2.3 IMMIGRATION AND TECHNOLOGY ...................................................................... 11
2.4 SUMMARY ............................................................................................................ 14

3 THEORY AND CONCEPTUAL FRAMEWORK .............................................................. 16

3.1 INFORMATION PRACTICES ................................................................................. 16
3.2 TRANSNATIONAL PRACTICES ...................................................................... 17
3.3 TRANSNATIONAL INFORMATION PRACTICES ............................................... 18
3.4 BELONGING ....................................................................................................... 19
3.5 SUMMARY ............................................................................................................ 21

4 METHODS AND MATERIAL ....................................................................................... 23

4.1 STUDY DESIGN ................................................................................................... 23
4.2 METHOD ............................................................................................................... 24
4.3 FINDING PARTICIPANTS .................................................................................... 26
4.4 MATERIAL CREATION ..................................................................................... 27
4.5 TRANSCRIPTION AND ANALYSIS .................................................................. 29
4.6 RESEARCH ETHICS & POSITIONALITY .............................................................. 30
4.7 TRUSTWORTHINESS ............................................................................................ 32

5 RESULTS ...................................................................................................................... 34

5.1 ATTITUDES TOWARDS SMARTPHONES ............................................................ 34
5.2 THE SMARTPHONE IN SWEDEN ..................................................................... 37
5.3 SMARTPHONE USE ............................................................................................ 39
5.4 FACTORS INFLUENCING SMARTPHONE USE ............................................... 48
5.5 CHALLENGES TO INFORMATION ACCESS ...................................................... 51
5.6 FEELING AT HOME AND BELONGING ............................................................. 56

6 DISCUSSION .................................................................................................................. 59

6.1 ANSWERING THE RESEARCH QUESTIONS ....................................................... 59
6.2 DISCUSSION IN RELATION TO PREVIOUS RESEARCH ........................................ 60
6.3 LIMITATIONS & SUGGESTIONS FOR FURTHER RESEARCH ......................... 66

7 CONCLUSIONS ........................................................................................................... 69

REFERENCE LIST ........................................................................................................... 71

APPENDIX A CONSENT FORM
APPENDIX B INTERVIEW GUIDE
1 Introduction and Problem Formulation

Levels of immigration have increased exponentially in recent years around the globe. The United Nations suggests that there are more than 280 million people living outside their country of birth today which is approximately 3.6% of the global population (United Nations, n.d.-b). This figure has increased by around 100 million in the last twenty years alone (International Organization for Migration, 2022). Europe has been the region with the most increased numbers of international migration going from 56.9 million in 2000 to 86.7 million in 2020 (International Organization for Migration, 2022). Sweden, in particular, has experienced high levels of immigration in recent years. Between 2000 and 2019, the amount of granted residence permits in Sweden had almost doubled from 60,490 to 117,776 (Migrationsverket, n.d.). As of 2022 the number of “foreign-born” individuals in Sweden was over 2 million which equates to around 20% of the population (SCB, 2022).

The European Commission defines an immigrant as a person “arriving in a state with the intention to remain for a period exceeding a year” (European Commission, n.d.), that is to say, there is some level of permanency. People immigrate for many different reasons. Immigration can be voluntary or forced. Some people immigrate in order to work, study and seek better opportunities or for family reunification, whilst others are forced to immigrate in order to escape persecution and conflict as well as environmental factors (United Nations, n.d.-a). Caidi et al. (2010) emphasise the importance of considering the heterogeneity of immigrants in research. They argue that the diversity of immigrant groups means there is still much to be learnt and understood about how immigrants engage with information, information institutions and technologies (Caidi et al., 2010, p. 498). When using the term ‘immigrant’ we must consider that this word refers to people who have a wide range of reasons for immigrating but also come from different backgrounds and “whose needs, experiences, and strengths vary significantly depending on various factors, including: education, age, sex, country of origin, family status, and their knowledge of English or the dominant language in their new country” (Caidi et al., 2010, p. 498). All these individual factors can have an effect on the immigration process.

Immigrating to a new country can be extremely challenging and complex. In fact, Caidi et al. (2010) describe international migration as “one of the most vital global issues of our century” (p. 493). Both before and after immigrating, there are many new processes and systems to learn, a new culture and perhaps all in a new language as well; a wealth of information that must be obtained and processed. Access to appropriate information at the correct stage is extremely important and could help facilitate the process of settling in another country. Caidi and Allard (2005) emphasise the importance that the way in which one accesses information can have on integration in a new country. However, knowing what information to obtain, where to obtain it and how to distinguish between reliable and unreliable information when arriving in a new country is a challenging task. Such issues can contribute to a feeling of social exclusion (Caidi et al., 2010) and can make integration more challenging, which can also lead to societal issues (Suh & Hsieh, 2019, p. 38). Conversely, when an individual feels at home or as if they belong this can contribute
positively to social cohesion (Halse, 2018). Alencar and Tsagkroni (2019, p. 186) suggest that a sense of belonging is required to build social capital. Social capital being the benefits that result from participation in social networks or other social structures (Portes, 1998, p. 6).

Given the increased rates of immigration, there has been much research done in recent years with regards to integration in society and the role the library as an institution and librarianship as a profession have in integration. This is an increasingly heavily researched area within the field of Library and Information Science (LIS). Many of the studies that have been carried out with a focus on integration highlight the importance of the library as a meeting place (Audunson et al., 2011), a place for social interaction, culture, and language learning (Johnston, 2016) and the building of social capital (Khoir et al., 2017). However, there is a lack of research that considers “the significance of information as a resource” (Lloyd et al., 2017, Introduction).

Furthermore, the technological developments of the last decades have changed the way people access and engage with information as people turn to their devices nowadays more and more. Smartphones, in particular, are widely used, giving access to many resources. This is especially true in Sweden where many people use smartphones for payment purposes and as a means of verifying their identity. As such they are an essential everyday item for many and devices that are being increasingly incorporated into daily life in society.

Research has shown that mobile phones are widely used throughout the immigration process for a variety of different reasons (Mancini et al., 2019) and there has been an increasing amount of research looking at the role of technology in connection with immigration and integration (see for example Bradley et al., 2017; Kaufmann, 2018). The research suggests that smartphones have an important role to play throughout the immigration process. Studies have shown that smartphones can be instrumental in orientation and navigation (Gillespie, 2018; Gough & Gough, 2019; Görland & Arnold, 2022; Lingel, 2013), for security (Gillespie, 2018), for social purposes and maintaining a connection to one’s culture (Görland & Arnold, 2022) and as a means of overcoming everyday difficulties in the new country (Kaufmann, 2018). Research also suggests smartphones may have an important role to play in integration (Drydakis, 2021; Görland & Arnold, 2022; Kaufmann, 2018). One recent study carried out by Drydakis (2021) has even suggested that the use of smartphone applications using artificial intelligence may play an important role in supporting integration and promoting well-being in a new country. Furthermore, the technology that is afforded to smartphone users presents opportunities to access information from sources and networks around the world rather than being restricted to the physical location a person is in.

Despite increased interest in the areas of immigration, integration and information, there is still limited research that explores the role of technology in connection with these subjects. The need for further research is intensified by the fast rate at which technology changes, meaning that research must also keep up. The smartphone is now for many the first point of call when it comes to accessing information and it is therefore important to obtain a good understanding of how smartphones and smartphone applications are used by those who have immigrated to Sweden. Mobile phones are used extremely
commonly and are accessible for many, as previous research has shown (Mancini et al., 2019), and therefore have the potential to be a way of facilitating the immigration process in a new country by easing the dissemination and access of information. However, more research is required in this area.

### 1.1 Aim and Research Questions

**Aim:** This study aims to create insights into how immigrants to Sweden engage with information, with a particular focus on the function of smartphones and smartphone applications as intermediary tools between their adopted Swedish society and their countries of origin.

**Research Questions:**

1. How do immigrants to Sweden reason about accessing information through smartphones?

2. In what ways, if at all, do smartphones serve as intermediary tools between Sweden and the home country?

3. How are smartphones implicated as intermediary tools in shaping the sense of belonging of people with migration experience?

To answer the research questions, a qualitative approach was adopted with semi-structured interviews as the chosen method. A total of twelve participants were interviewed and a combination of pair and individual interviews were carried out.
2 Previous Research and Literature Review

This chapter outlines previous research and literature relevant to the study’s aim. First, the importance of information access is discussed with a focus on information during immigration. Secondly, an overview is given of previous research in the field of LIS that is concerned with immigration. This section starts by discussing how research in the area has previously focused around the role of the library in immigration and integration. Other research in the field is organised into types of information, information sources, and barriers and these are each discussed in turn. Finally, research exploring the role of technology in immigration is reviewed with particular focus on research relating to smartphones.

2.1 The Importance of Information Access in Society

Previous literature has highlighted the importance of information and information access for individuals and society. Raseroka (2006) states that “information and communication technologies are a tool that may provide opportunities for building a fair and just society” (p. 102). This concept is echoed by Zarrehparvar (2006) who affirms that information gives people power and aids “participation in the development of democratic societies” (p. 230). Furthermore, information and information literacy can be seen as having political power as they are interwoven with economic and human rights questions (Whitworth, 2020, p. 25). During the process of immigration, information and information access becomes particularly important when “seeking and gathering information is critical” (Shoham & Kaufman Strauss, 2007, p. 202).

The role of information in integration and social inclusion is a commonly discussed topic in the existing literature. Caidi and Allard (2005) explored the information practices of immigrants with a focus on social capital and social inclusion and they emphasise how access to necessary information is a vital step towards social inclusion. However, not everyone can access information to the same extent or in the same way. Yu et al. (2020) studied information access disparity in society and found that an individual’s capability to access information is determined by practice and information environments. For example, the embedded practices of how people interact with and pass along information, as well as available resources and socioeconomic status, will affect further information access. Thus, an individual’s information activities are influenced both personally and collectively by the environment and surrounding social practices (Yu et al., 2020).

A practice approach was also important for Lloyd and Wilkinson (2016) when exploring the role of everyday spaces in how young refugees understand their new information landscape. An information landscape is what is understood by people in a particular context about a given situation (Lloyd & Wilkinson, 2016). When an individual encounters a new information landscape they must learn about it and its accepted practices (Lloyd, 2010, p. 139). In order to do so, practices may need to be developed to make sense of the new information landscape or practices learnt from other information landscapes may need to be
employed (Lloyd, 2010). Lloyd and Wilkinson (2016) consider the importance of everyday spaces in their study of refugee youth. An everyday space is a site in daily life, be it physical, virtual, or emotional, which can provide specific information and information resources (Lloyd & Wilkinson, 2016). Examples of everyday spaces are: church and sports groups (physical spaces), Facebook (socio-technical space) and libraries (institutional spaces) (Lloyd & Wilkinson, 2016). Lloyd and Wilkinson (2016) found that everyday spaces played an important role in helping newcomers establish themselves and be better positioned to find work and integrate into the new society (p. 301). Each everyday space gives opportunities to access specific information and develop practices that can enable a better understanding of the information landscape (Lloyd & Wilkinson, 2019). To access the information opportunities of a space or tap in, information literacies are required (Lloyd & Wilkinson, 2019). In other words, certain information practices are required in order to develop other information practices. Lloyd and Wilkinson (2019) observed how digital, local and visual literacies were required to tap in to the everyday spaces discussed in their study. Practices were required to recognise information in the new information landscape, maintain a connection to old information landscapes and establish another information landscape for themselves that included both the new information landscape and the old (Lloyd & Wilkinson, 2019, p. 257).

In addition to access to information, Beretta et al. (2018) maintain that one must also have “full engagement with information” in order to obtain “full social inclusion” (p. 387). In other words, as well as having access to information, one must also be able to navigate, assess and use the information. The ability to critically assess information is needed to evaluate credible information and their sources and is an essential component in maintaining a democratic society and ensuring the security and well-being of individuals (Haider & Sundin, 2022). Haider and Sundin argue that one’s critical assessment of information plays a decisive role in knowledge and the decisions one makes with regards to trusting, mistrusting, or distrusting information sources. Haider and Sundin also highlight how certain patterns, such as trust in institutions, will vary considerably depending on circumstance and situation. This is important when considering how people who have moved to a new country engage with information as this is likely to be influenced by previous experience.

Moreover, the existing literature suggests that not having access to information or the ability to sufficiently navigate information can lead to social exclusion (Caidi et al., 2010; Lloyd et al., 2017) as the integration process becomes increasingly “difficult and frustrating” (Caidi et al., 2010, p. 499). Yu et al. (2020) state that an individual’s position in terms of information access disparity “tends to reproduce rather than transform itself” (p. 844). In other words, a positive experience in connection with an information action is more likely to promote the continuation of the action and encourage additional actions whilst a negative or difficult experience may discourage further information actions. Similarly, Lloyd (2010) reflects that the “process of engaging with information, and developing the skills and competencies that facilitate engagement, also shapes our identities, which are produced and reproduced as we accumulate skills and knowledge” (p. 141).
The previous research discussed in this section demonstrates the importance of accessing information for individuals and communities in society. For this reason, understanding how people engage with information is critical in order to also highlight the challenges and obstacles that prevent people from accessing information. This is particularly true among immigrants as through the process of immigration the information landscape one is used to often changes, presenting new challenges to information access. The way in which a person who has immigrated for work engages with information may differ greatly to someone who has been forced to immigrate due to conflict or persecution. Factors such as background, education, age, and digital literacy will further compound differences to engagement with information (Caidi & Allard, 2005). Therefore, increased research is needed to build knowledge in this area.

2.2 LIS and Immigration

This section discusses research and literature relating to immigration in the field of LIS. Much of the previous research has focused on the role of the library in relation to immigration, this research is briefly discussed in section 2.2.1. Section 2.2.2 discusses other research in the field and is divided into sections relating to information types, information sources, and barriers.

2.2.1 A Focus on Libraries

The increased rates of immigration globally have led to increased research in the field of LIS in connection with immigration in recent years. Beretta et al. (2018) state that information is an “inseparable component” of migration studies (p. 389). It is, therefore, important to research the two areas together. Much of the existing research has been in relation to the library and focuses on the library’s responsibilities and role in integration.

Many studies have found that the library can play an important role in integration (Audunson, 2011; Ericsson & Nordeman, 2011; Johnston, 2016; Jönsson-Lanevska, 2005; Paola Picco, 2008; Vårheim, 2014). Audunson (2011) conducted interviews with immigrant women to Norway and concluded that public libraries could be instrumental in helping to build social capital and act as an important meeting place for immigrant women. Vårheim (2014) also conducted interviews with immigrants in Norway and found that the public library played an important role in the building of social capital as well as trust. Johnston (2016) carried out a case study of the language group at the City Library of Malmö and concludes that such programmes and services offered by public libraries assist in building social capital and as such have the potential to facilitate the integration process. Khoir et al. (2017) also found that public library services helped to build social capital in their study of Asian immigrants in Australia.

Lloyd et al. (2017) suggest that public libraries should consider it their responsibility to help refugees in accessing social information. Access to such information can be crucial in the integration process. Therefore, it is also important that public libraries help with the development of skills required to obtain social information (Lloyd et al., 2017). Caidi and Allard (2005) emphasise the importance of information institutions considering the needs of
immigrant users and adapting to these where necessary. They conclude that being able to competently make use of information institutions may positively affect social inclusion. However, economic factors have been identified as a consideration in the public library’s ability to facilitate the integration process (Ericsson & Nordeman, 2011; Pilerot, 2018).

The existing research has contributed greatly to knowledge relating to immigrants and information by identifying the limitations and challenges libraries and other similar institutions face, and demonstrating the importance such resources can have for social capital and integration. However, research has also shown that the library is not always a popularly used resource among immigrant populations (Nekolová et al., 2016; van der Linden et al., 2014). Nekolová et al. (2016) investigated immigrants’ attitudes to libraries in the Czech Republic. They found that attitudes to libraries were generally positive but most participants in their study did not regularly make use of library services. van der Linden et al. (2014) studied the perceptions and awareness of public libraries in Canada from the perspective of immigrants. They found that there was low awareness and usage of services provided by the library besides from those that are considered the most obvious: that is to say, the collection and conversation groups (p. 74).

As research has shown, the library can undoubtedly be a useful resource for those settling in a new country especially with regards to building social capital. However, a lack of awareness of services provided (van der Linden et al., 2014) suggests that other resources may be used more in certain situations. The next section explores LIS research that has focused on immigration outside of a library context.

### 2.2.2 Types of Information, Sources and Barriers

Other research in the field of LIS in relation to immigration has typically studied a specific immigrant population, most often by ethnicity (Allard, 2015; Shoham & Kaufman Strauss, 2007; Suh & Hsieh, 2019) or immigrant group such as refugees (Lloyd et al., 2017) or students (Suh & Hsieh, 2019). Across the literature, three key areas are explored: types of information, information sources and information barriers. These three areas will be discussed in turn below.

#### 2.2.2.1 Types of Information

Allard (2015) studied the information practices of immigrants to Canada from the Philippines. She found that on arrival in Canada, the information that was most needed was related to housing, finding a job, and helping family to settle in the new country (p. 203). Shoham and Kaufman Strauss (2007) studied the types of information needed by North American Immigrants to Israel and divided this information into two categories: general and personal. Personal information is specific to an individual whereas general information is most often related to “housing, employment, schooling, driving, banking, government offices, legal issues, and the health system” (Shoham & Kaufman Strauss, 2007, p. 191). Suh and Hsieh (2019) found that the types of information South Korean immigrants to the USA required could be categorised into the same groups as reported by Shoham and Kaufman Strauss.
(2007) but they also identified information related to socialising as another important category. Caidi et al. (2010) organise the types of information that immigrants need into two groups, orienting information seeking and problem-specific information seeking according to Savolainen’s (1995) model of Everyday Life Information Seeking. In their literature analysis, Wang et al. (2020) found that the most cited types of information were “housing, education, health, and banking” (p. 5).

The type of information that is needed may change over time during the immigration process (Allard, 2015; Beretta et al., 2018; Caidi et al., 2010; Wang et al., 2020). On arrival in a new country, the need for information tends to be most urgent (Allard, 2015). Newcomers require a lot of information but must navigate an information environment that is not familiar to them which can lead to “information disjuncture” (Allard, 2015, p. 203). However, after time in the new country, the type of information that is required becomes “more complex and long term” rather than immediate, states Allard (p. 203). Examples of “more complex and long term” information are professional training, leisure related activities and finding out more about the area in which one is now living (Allard, 2015, p. 203). Beretta et al. (2018), in their review of research on immigrant information experiences, suggest the way in which the types of information that are required by immigrants change can be better understood by considering the different stages of settlement (p. 378).

It is likely that the type of information that is needed may also differ significantly due to the heterogeneity of immigrant groups (Caidi et al., 2010). Research in this area usually focuses on one nationality or ethnic group. However, it is important to consider that many other factors such as age and employment status, among others, may also affect the type of information someone requires when immigrating to a new country. Wang et al. (2020) state that the type of information required is dependent on many things, naming ethnicity and education as just two examples (p. 4). Therefore, the type of information a person may require during the immigration process should be researched both within cultural groups and across these factors (Caidi et al. 2010, p. 505).

2.2.2.2 Information Sources

Research has often looked at the sources through which immigrants acquire information. Caidi et al. (2010) organise common sources into four categories: social networks, formal sources, information and communication technologies, and ethnic media. Similarly, Wang et al. (2020) state that the most common sources are personal networks, the Internet, institutional sources, and media sources. Shoham and Kaufman Strauss (2007) also identify personal or social networks as extremely important but found that there was “unanimous agreement” among participants that the Internet was the most useful source for finding information about moving to Israel (p. 197). Shoham and Kaufman Strauss also found that immigration organisations and pilot trips were considered useful information sources. In addition, television has been identified as an important source (Christiansen, 2004). Lloyd et al. (2017) identified smartphones, online sites, and social media. They employ the term digital environment to refer to such sources and state they are important both socially and as a way of reducing the many uncertainties refugees may have
when migrating. Pyati (2018) states that the popularity of information communication technologies (ICTs) and transnational sources of information continue to increase (p. 2128). Interpersonal sources are also often favoured among immigrants (Pyati, 2018, p. 2126). Allard (2015) also emphasises the importance of social networks as an information source for immigrants, this was especially true pre-migration when social networks were the dominating information source and other sources were not commonly used (pp. 202-203). Furthermore, official or government sources are used less frequently as they are often difficult to use and obtain the desired information from (Allard, 2015). Allard found that in some cases, social networks discouraged the use of official sources. However, official and institutional sources are more likely to be used later on in the settlement process (Allard, 2015, p. 203). Across the literature, social networks and digital sources, such as the Internet, are frequently pointed to as the most important and most used information sources for immigrants.

Research has indicated that the ways in which information sources are used may change over time (Allard, 2015; Shoham & Kaufman Strauss, 2007). Shoham and Kaufman Strauss (2007) found that the Internet was the most important source prior to immigrating although this changed after arriving in the new country when word of mouth and social networks became the most popular ways of accessing information. Interestingly, after immigration the Internet becomes a secondary source of information and “the new immigrant becomes a source of information for other prospective immigrants having contact with them over the internet” (Shoham & Kaufman Strauss, 2007, p. 202). This finding is an example of the “fluid and iterative” (Allard, 2015, p. 200) nature of how immigrants can engage with information. Allard (2015) illustrates this idea stating, “respondents were simultaneously privileged and marginalized both with respect to information landscapes and their social capital” (p. 196). According to Allard, a person cannot simply be labelled as either information poor or well-informed. Instead, a person is likely to be well-informed in certain areas but less so in others, and this will change over time and as a result of going through an information-seeking process.

Shoham and Kaufman Strauss (2007) state the Internet was the most popular pre-migration source. This is in contrast to Allard’s (2015) findings which showed social networks were the primary source prior to immigrating. This once again demonstrates the heterogeneous nature of immigrants and how engagement with information may vary across different populations, highlighting the need for more research in different settings and contexts. Beretta et al. (2018) discuss how sources may vary in different circumstances. For example, they suggest that the sources used by refugees are often different to other groups as they rely most heavily on settlement services as well as social networks (Beretta et al., p. 380). Due to these differences, it is important that information providers “understand and acknowledge the varied ways information and its different aspects are experienced by immigrants at different stages of their settlement process and therefore, tailor their services, programs and policies accordingly” (Beretta et al., 2018, p. 390).


2.2.2.3 Information Barriers

Finding the correct information in a new country can be very challenging (Caidi et al., 2010, p. 516). It therefore follows that barriers and obstacles to obtaining information is another area that is commonly addressed in the literature. Beretta et al. (2018) state that the most common obstacles are limited access to the required technology, language and communication problems, different systems, mistrust or a lack of support, financial constraints, and culture. Caidi et al. (2010) organised the most common information barriers into two groups: structural barriers and social barriers. Structural barriers consist of problems connected to language, new systems, and immigration status whilst social barriers include communication problems, cultural differences, and social isolation. Wang et al. (2020) describe the obstacles immigrants face as “multifaceted” and list language, culture, the digital divide, unfamiliar systems, level of education, economic problems, and psychological factors as some of the principal barriers to information although culture and language are highlighted as the most cited barriers in their literature analysis (p. 6). Caidi et al. (2010) also state that language is usually the greatest obstacle (p. 515). In addition, Christiansen (2004) discusses a lack of appropriate or relevant material for newcomers in public service television and that, as a result, other, perhaps transnational, sources may be sought out. For this reason, as discussed by Beretta et al. (2018, p. 390), it is important that organisations adapt in order to meet immigrant information needs as not doing so leads to additional barriers to information.

Research has also pointed towards specific areas in which obtaining sufficient and correct information has proven difficult. The labour market is one area that can be problematic for immigrants (Allard, 2015). Social networks, although helpful in many other areas, may not provide the necessary information with regards to finding work and in addition, information in this area is particularly complex (Allard, 2015). Access to information relating to health and legal issues has also been identified as challenging for immigrants (Suh & Hsieh, 2019, p. 41). The principal reason for this was found to be due to a lack of understanding of these systems in the new country, in this case in the United States (Suh & Hsieh, 2019, p. 41).

As discussed in the literature, language is often a leading obstacle to information access. Saidabdala (2020) also found this to be the case when observing immigrants use of the Swedish Public Employment Service’s (Arbetsförmedlingen) website. Although there was an option to change the language of the website, the button for this was written as ‘languages’ in English meaning it was easy to miss for those that did not speak English. Furthermore, not all areas of the website could be translated which resulted in many participants choosing to access the website through their mobile phones so that they could use Google Translate to translate the contents (p. 48). Consequently, because of barriers connected to the website, participants lacked information (p. 51). Access to the sort of information available on the Swedish Public Employment Service’s website can be an important step towards integrating into life in Sweden. Saidabdala therefore concludes that adapting the website to better suit newcomers is extremely important (p. 52). Shoham and Kaufman Strauss (2007, p. 197) also found that information accessed online was often not available in a translated format. They identified further
issues with online information such as the vast amount of information which can lead to information overload and information being spread across various sources rather than one source of consolidated information.

Barriers to information access can cause problems for immigrants which make the immigration process more challenging but could also cause issues for integration in the new country (Saidabdala, 2020). More specifically, information barriers may also be a contributing factor to social exclusion (Beretta et al., 2018, p. 386; Caidi et al., 2010, pp. 519-520). Therefore, increased understanding around the type of information that is difficult to access and why certain sources are preferred over others is crucial to avoid serious problems such as social exclusion and to assist with integration and well-being in the new country.

2.3 Immigration and Technology

The literature demonstrates how technology is being used more and more during immigration and that, as well as increased immigration rates, has led to increased interest in the role technology may play for immigrants in the immigration process. Technology has been shown to be particularly important for everyday life in a new country. Lloyd and Wilkinson (2016) found this to be true with all participants identifying Facebook as the principal way they maintained contact (p. 307). Suh and Hsieh (2019) studied the types of information required and ICT usage of South Korean immigrants in the United States. They found that ICTs such as “location-based services, search engines and online communities” were widely used to find information that was necessary for daily life (p. 44). Mehra and Papajohn (2007) studied the internet use of teaching assistants in the United States and found that the Internet was perceived as beneficial in helping to manage life in the new country. The Internet was found to be beneficial in two ways: firstly, it allowed for access to information online which made life in the new country more manageable, and secondly, it allowed for communication with family and friends at home which provided support. Similarly, Lloyd and Wilkinson (2019) suggest that the maintained contact between the new country and home country afforded by technology can play a role in the shaping of a new information landscape and how an individual understands their new information landscape.

Technology playing a key role in maintaining ties to home, both with family and friends as well as culture, is also a common theme in the literature. Suh and Hsieh (2019) found that ICTs were also important for maintaining ties with the home country and communicating with friends and family, both in the United States and back home in South Korea. Similarly, ICTs played an important role in maintaining family ties in a study of Romanian immigrants in Switzerland and this helped family members who had emigrated maintain an ordinary presence in the lives of their family members who had remained in Romania (Nedelcu & Wyss, 2016). Benítez (2012) studied the ICT usage of Salvadoran families with family members living abroad and concludes that ICTs form an extremely important part of how these transnational families can maintain ties, both to family and culture.

Much of the research into technology and immigration has been undertaken in the areas of Migration studies and Communication and Media studies.
Research in these areas has tended to focus on integration and social capital. Khoja (2020) studied the digital media usage of highly educated Syrian refugees in southern Sweden. They found that digital media was used for family bonding, news access, entertainment, and socialising. The study concluded that digital media plays a role in integration, for example in adapting to the new environment, but that other “offline practices” are also necessary (p. 69). Alencar (2018) studied social media use by refugees in the Netherlands and the role it has in integration. Social media was used extensively among participants especially for building social connections and learning about the new language and culture as well as maintaining contact with family members and friends. Social media, therefore, played an important role in the integration process. Alencar and Tsagkroni (2019) studied the information practices of refugees in the Netherlands from a social capital perspective, exploring how digital technologies may influence integration. Their study suggests that there is a need for more “inclusive online content” (p. 192) and increased reliability of online sources. They also found that more could be done to make better use of digital media in the integration of refugees and suggest both public and private stakeholders should focus on the development of digital technology initiatives to assist with refugee integration (p. 192). Díaz Andrade and Doolin (2016) studied the social inclusion of refugees and suggest that ICTs have the potential to enable: participation in an information society, effective communication, understanding a new society, social connections, and expression of cultural identity.

As discussed in section 2.2, research within LIS has pointed towards the importance of technology for immigrants’ information access. Beretta et al. (2018) state that “with the emergence of the Internet, primary information sources have moved online or are accessed through technological devices such as smartphones” (p. 379) and ICTs have been identified as one of the four main sources through which immigrants access information (Caidi et al., 2010). Lloyd et al. (2017) found that digital resources are a vital part of the refugee information experience and that this is particularly true for the smartphone, online sites, and social media which play an important role in “creating and regaining a sense of place” (Connecting to place and community section). They conclude that “the digital environment becomes increasingly important for access, creation and dissemination of information and represents a significant social ground and as such threads through the information experiences of refugees” (Lloyd et al., 2017, Findings).

The literature discussed in this section highlights several common themes with particular emphasis on maintaining familial ties, connections to the home country, obtaining information for everyday life in the new country and the building of social networks and social capital.

### 2.3.1 Immigration and the Smartphone

One piece of technology that has grown in almost unparalleled popularity is the smartphone. Smartphones have transformed from a luxury piece of technology to an everyday item that many people do not leave home without. Görland and Arnold (2022) state that it is more common nowadays to have “access to mobile media like smartphones than to freshwater toilets” (p. 240). As the smartphone has become a more common and accessible tool, researchers have
started investigating the potential role it may play in immigration. This is still a relatively new area of research. Research in the area is certainly growing, however, to date there are limited studies that explore both immigration and smartphone use and even fewer still from an information perspective.

The current literature indicates that smartphones may have an important role as a tool during the immigration process and that some immigrants may have a reliance on them (Kaufmann, 2018). Mancini et al. (2019) conducted a review of studies exploring the role of the mobile phone between 2013 and 2018 which highlighted the prominent use of smartphones in modern day immigration. Gillespie et al. (2018) also studied the role of the smartphone for refugees during migration. Smartphones were found to be most important for mobility, locatability and safety. Görland and Arnold (2022) investigated the importance of the smartphone for refugees in Germany, both during and post migration. The results of the study showed that smartphones were heavily used, with applications for social purposes being used the most. Smartphones were also considered important for finding one’s way, entertainment, information gathering, and religion. Lingel (2013) investigated the information practices of newcomers to New York in connection to urban space and found that map applications such as Google Maps were extremely important for orientating oneself in a new city. Gough and Gough (2019) also found smartphones to be an important tool for orientation in a new country. In their study of the role of the smartphone in the lives of refugees in Denmark, Gough and Gough found that smartphones were important at all stages of the migration process, especially as a means of maintaining contact with family and friends back home, as well as an orientation tool. Kaufmann (2018) studied the use of smartphone applications by Syrian refugees in Austria. Smartphones were shown to be important for helping with the difficulties of everyday life in a new country and participants are described as being both “emotionally attached” and “technically dependent” on their smartphones (p. 893). Lloyd and Wilkinson (2019) found that smartphones were important for refugee youth in their “everyday information activities” (p. 256).

The smartphone may also be able to assist in the building of social capital and ultimately better integration (Bradley et al., 2017; Drydakis, 2021; Görland & Arnold, 2022; Kaufmann, 2018). Görland and Arnold (2022) conclude that smartphones can in fact be seen as a “self-empowerment tool” for refugees as they enable communication and help form communities. Another study, carried out by Bradley et al. (2017), looked at the use of mobile phones in the context of language learning. Participants in the study were all immigrants to Sweden and were learning the Swedish language. Participants were asked about their mobile phone usage and results showed that they were mainly used to stay in contact with friends and family rather than contacts in Sweden. They were also divided into control and test groups to observe the effects of using a mobile application designed to help improve Swedish pronunciation. The results indicated the application was effective and the researchers believe that the development and implementation of such applications could aid integration. Kaufmann (2018) echoes this stating that smartphones have great potential to assist with integration. Finally, Drydakis (2021) looked specifically at smartphone applications to investigate if applications designed to assist integration in fact have a connection to levels of integration and well-being. The study concluded that there is an association between applications designed
to assist integration, such as maps, translation, administrative apps etc. and social integration and well-being.

As well as the many positive and useful aspects mobile phones can bring to the process of immigrating, research has also shown that they pose risks (Gillespie et al. 2018; Mancini et al. 2019). In their review, Mancini et al. (2019) conclude that mobile phones have the potential to “bring both risks and opportunities” to migrants (p. 18). They also state that smartphones have the potential to lead to the circulation of incorrect or “dangerous information” (p. 8) or can leave immigrants vulnerable to exploitation (p. 10). Gillespie et al. (2018) also conclude that while smartphones present many affordances in the immigration process, they have the potential to make immigrants vulnerable to the risks of exploitation and surveillance. Therefore, organisations need to “re-imagine and integrate smartphone applications into strategies and programs for refugee integration, care, protection, and outreach” (Gillespie et al., 2018, p. 10) so that they can be used effectively whilst avoiding exposure to vulnerabilities that may be harmful to users.

Furthermore, research has also indicated that there are limitations to the usefulness of smartphones for immigrants, particularly with regards to official information. For example, smartphones were often found insufficient for translating official documents and contacts in networks were relied on instead for this type of assistance (Kaufmann, 2018). In addition, Alencar (2018) found that social media applications were often not considered helpful with regards to official information connected to rights and citizenship. Furthermore, there is still little research about how social media is used for official and governmental purposes (Alencar, 2018, p. 1600). Gough and Gough (2019) suggest that although smartphones serve as unquestionably important tools in the immigration process, certain heavily used applications, such as Google Translate, are “of limited use in relation to aiding refugees integrate into their new society” (p. 96).

2.4 Summary

This chapter provides an overview of current research in the areas of immigration and information, focusing on previous research in the field of LIS and immigration and technology with special emphasis on the smartphone. The chapter shows that information access is particularly important for immigrants and can play a role in social inclusion and integration.

Traditionally, there has been a focus on the library as a source of information for immigrants, however, the research discussed here shows that sources outside of the library environment such as social networks and ICTs are heavily relied on, and this is particularly true in the case of the smartphone. As smartphone technology develops at a rapid pace, there is a need for increased research in order to develop a better understanding and stay up to date in this area. Much of the current literature focuses on smartphone usage and the types of information required, but there is a lack of information focusing on how immigrants engage with information through smartphones. Mancini et al. (2019) also highlight a need for more research on mobile phone practices from a transnational perspective. Furthermore, much of the literature pertains to refugees and is often focused on one location and community. The complex
and diverse nature of immigrant communities has meant that knowledge relating to the information practices of immigrants is limited (Caidi & Allard, 2005) so it is therefore important that more research is carried out in other locations and that other immigrant groups are researched.
3 Theory and Conceptual Framework

This chapter outlines the study’s theoretical framework which consists of two theoretical lenses: a practice approach, focusing specifically on information practices and transnational practices, and theories of belonging. Firstly, the concepts of information practices, transnational practices and transnational information practices are outlined and the reasons why this approach has been adopted are discussed. Finally, the concept of belonging and its relevance as an important aspect of this study is presented. Belonging is employed in this study as an additional theoretical lens that highlights an important dimension of many practices.

3.1 Information Practices

Information practice is a theoretical approach derived from practice theory which focuses on practices. Pilerot et al. (2017) describe practices as “situated sets of embodied activities grounded in time and space, and as reproductive of the social, which means that what is going on in practice contributes to maintain practice” (Introductions and overviews of practice theory). Cox (2012) describes practices as “sets of things we do – tasks and bigger projects – that are linked to what are considered appropriate ends” (p. 178). Similarly, Nicolini and Monteiro (2016) define practices as “meaning-making, order-producing, and reality-shaping activities” (p. 6). Practices are also “inherently material in nature” (Nicolini & Monteiro, 2016, p. 5) so material factors, as well as social and contextual factors, are important considerations in practice theory.

Information practices has become a commonly used term in the field of LIS, arising as an alternative to the information behaviour approach (Fulton & Henefer, 2018; Savolainen, 2007) which has typically been employed from the cognitive perspective (Savolainen, 2007) in which there is a greater focus on the individual. An information practices approach on the other hand, focuses more on the context an individual is in (Fulton & Henefer, 2018; Savolainen, 2007). Both terms have been used as “umbrella terms” to refer to many types of information activity and it is often unclear where exactly the distinction lies between information behaviour and information practice as definitions of the terms are often unclear (Savolainen, 2007). However, the two concepts are not synonymous, originating from different theoretical perspectives, and this is important to consider as they consequently give “alternative viewpoints on information seeking” (Savolainen, 2007, p. 110). Allard (2015) defines information practices as “an umbrella term used to capture the variety of everyday information activities in which individuals engage” (p. 39). Lindh (2015) states that a practice theory approach allows for information to be studied “as something that is formed neither by individual minds nor derived from governing structures, but as something that takes shape and is made sense of in practices” (p. 42).

When adopting a practice approach, “information is everywhere” (Haider & Sundin, 2019, p. 35). For this reason, Cox (2012) suggests the term information in social practice as an alternative to information practice in order to convey how information may be found in nearly all activities and not just those
activities that are focused around obtaining information. McKenzie (2003) also uses the term information practices when looking at a model of everyday-life information seeking. McKenzie makes an important differentiation between active and non-active information seeking, stating that “active engagement in information seeking does not account for all of information behaviour” (p. 21). That is to say, much of our engagement with information may come from other practices, even those that are passive, and not just activities in which the individual has intentionally sought out information. Caidi et al. (2010) echo McKenzie’s (2003) ideas of active and non-active information seeking and add that aside from obtaining information solely to achieve a specific goal, information practices are also about “expressive or communicative activities” (p. 514). Lindh (2015) states that “information practices are usually not primarily information-oriented but interwoven into practices that do not necessarily have information-centred aims” such as routines (p. 22). Through adopting an information practices approach, different types of things and activities can be considered as informational (Lindh, 2015, p. 47) and not just those that have an obvious connection to information.

Furthermore, the social and cultural context of a situation is important in an information practices approach. Savolainen (2007) describes information practices as putting emphasis “on the role of contextual factors of information seeking, use, and sharing” (p. 121) and Allard (2015, p. 39) states that “information practices highlight the importance of social and cultural factors in individuals’ information related activities.” Cox (2012) argues that this is a key draw of a practice approach as it allows for the contextual and social factors to be considered whilst still considering the individual (p. 182). When adopting this approach, both social and material factors have been shown to have “consequences for diverse kinds of information activities” (Lindh, 2015, p. 23). Therefore, an information practices lens allows the smartphone as a material object to be considered in relation to engagement with information.

Moreover, Caidi et al. (2010) describe the concept of information practices as being “particularly suited to the study of immigrants” (p. 502). As a result of immigration, location, surroundings, and social networks may all be affected and thus one’s context often also changes, that is to say, one is positioned in a new information landscape. Therefore, by adopting an information practices approach, the importance of context in information activities can be considered. Furthermore, Allard (2015) states that employing an information practices approach allows “important aspects of migrants’ transnational experiences, particularly their unexpected and undirected encounters with information” to be captured (p. 38). A transnational focus will also be important in this study and is discussed in the next section.

### 3.2 Transnational Practices

Transnationalism is a term that has become increasingly popular in the field of migration studies in the last thirty years (Kivisto, 2001). It has been particularly popular as a potential alternative to the concepts of assimilation and cultural pluralism (Kivisto, 2001) as it expresses how an individual may be part of multiple cultures simultaneously rather than going from one and then becoming part of another. However, as with many such terms there have been varying definitions of what exactly transnationalism is (Kivisto, 2001). Christiansen
(2004) states that transnationalism “covers a social context or a network dominated by practices which connect two or more national contexts” (p. 188). Similarly, Allard (2015) states that transnational migration studies are focused on “migrants’ practices, formations, and processes rather than on global forces and trends” (p. 29) and describes transnational migration as “multilayered and multi-sited” (p. 30). The difference between words such as transnational and international is often hard to grasp. Literally the prefix trans means across (Cambridge Dictionary, n.d.-c) whilst international is defined as simply involving more than one country (Cambridge Dictionary, n.d.-b). Taking the above into consideration, transnational practices can be understood as practices spanning over two or more countries (Rouse, 2019), which is more than just a tie or connection between countries. Transnational practices are practices that “create or maintain links between former and new homelands among immigrants and their descendants” (Christiansen, 2004, p. 188). Examples of transnational practices are “sending remittances, sustained engagement with sending countries, and international media consumption” (Allard, 2015, p. 28).

Immigrating to a new country is not just a one-way journey from A to B in which one’s life was previously in one place and has now moved in its entirety to another. There are many reasons why a person may move to a new location and still have ties to their previous location such as family and friends, work, culture, and language. Allard (2015) describes immigration as “a process of ties and connections whereby many migrants will sustain ongoing ties and relationships (in terms of ongoing communication, remittances, and political participation etc.) with their countries of origin while developing a new life in a new country” (p. 3). It therefore follows that the adoption of a transnational practices approach is well suited to a study focused on immigrants and can help to better understand the information practices of immigrants (Allard, 2015; Srinivasan & Pyati, 2007).

### 3.3 Transnational Information Practices

A transnational information practices approach combines the ideas of information practices and transnational practices. Allard (2015) defines transnational information practices as referring to “the international or global information practices” in which a person engages (p. 197). However, Allard also points out that not all transnational information practices need to happen in an international setting. Practices that are carried out in the new country but within an international community, or that build or maintain a connection to the home country may also be considered transnational information practices.

Adopting a transnational information practices approach allows for participants’ information practices to be understood across contexts. Migrating involves not only a change of country but a change of information landscape. Previous information landscapes and practices learnt from previous landscapes will influence how a person is able to understand and access new landscapes (Lloyd & Wilkinson, 2019). This is particularly important to consider in the case of people immigrating as the information landscapes known in the home country may be similar or vastly different to that of the new country, and this will play a role in how they learn about the new society.
Allard (2015) describes the information practices of immigrants as complex and fluid, giving the concept of information poverty as an example (p. 196). Immigrants are often seen as information poor as they find themselves in an unfamiliar information environment. However, Allard argues that this perspective is too simplistic, and if looked at from a transnational perspective, immigrants may be information poor in certain contexts but also information rich in others, for example, with information from the home country or information gained through the immigration process. Furthermore, through transnational ties and social networks in the home country, people may have access to information that others in the new society may not have (Caidi et al., 2010, p. 509). There may also be underlying reasons behind certain information practices that are not at first obvious (Caidi et al., 2010, p. 515). For example, Sampredo (1998) studied reading practices and observed that newspapers were often read for other reasons than simply obtaining the news, such as to maintain a connection to home. This gives an example of transnational information practices and illustrates how a transnational perspective can shed new light on the information practices of immigrants.

Adopting a transnational approach to study the information practices of immigrants is of particular relevance today due to the prevalence of technology in society (Caidi et al., 2010; Pyati, 2018). Improved transport links and technological developments have meant access to resources and maintaining social networks in other locations are also possible (Mohme, 2016, p. 32).

Research has shown that the Internet, information and communication technologies, and social networks are commonly chosen and important sources of information for immigrants (Allard, 2015; Benitez, 2012; Lloyd et al., 2017; Nedelcu & Wyss, 2016; Pyati, 2018; Shoham & Kaufman Strauss, 2007; Srinivasan & Pyati, 2007; Suh & Hsieh, 2019). These sources are of particular importance as they serve as global information sources, meaning information is not restricted to the geographical area one is in. Research has also highlighted the importance of the smartphone for transnational practices (Alencar, 2018, Gough & Gough, 2019; Kaufmann, 2018; Lingel, 2013). Transnational practices and information practices are in many cases entwined and it is therefore important to consider the approaches together to be able to further explore the complexity of these practices (Allard, 2015). This approach allows for the current context and previous contexts to be considered providing a richer and more detailed overview of the phenomena being studied.

3.4 Belonging

The notion of belonging is broad and complex (Halse, 2018) and therefore difficult to define. Halse adds that trying to explain what constitutes a sense of belonging is a complex task given the “increasing racial, religious, ethnic, cultural and language diversity” in today’s world (p. 4). Furthermore, belonging is very personal and dependent on many factors (Baumeister & Leary, 1995; Yuval-Davis, 2006). The Cambridge Dictionary simply defines 'to belong' as to feel a sense of happiness or comfort in a situation or to feel as if one is in the right place (Cambridge Dictionary, n.d.-a). Belonging is also often connected to social relationships (Halse, 2018). For example, belonging can be defined as the personal experiences of individuals and their feelings when connecting towards a specific group or social community, in which individuals
feel accepted and included by other individuals who share the same values, interests, beliefs, and experiences (Baumeister & Leary, 1995). However, belonging can also be understood as how someone feels in terms of place and space (Antonsich, 2010). Antonsich suggests belonging stems from “an individual’s attachment to a familiar locality, territory, geographic place or symbolic space that gives one a feeling of being ‘attached to and rooted’ and where one feels comfortable, secure and at home” (p. 647). Yuval-Davis (2006) similarly defines belonging as being about “emotional attachment, about feeling ‘at home’” as well as feeling safe (p. 197). Youkhana (2015) states that “belonging comes into being between people and things, and between people and people, through material conditions” (p. 16). Thus, a sense of belonging can be felt in relation to "a place, a space or a social group" (Halse, 2018, p. 7). Furthermore, “belonging can operate on multiple scales,” going from the small and local, to transnational and global networks (Halse, 2018, p. 7). This study understands belonging to be an individual feeling of inclusion, comfort or contentment in a group, community, or place.

How a person experiences a sense of belonging will vary from individual to individual (Baumeister & Leary, 1995; Yuval-Davis, 2006). Baumeister and Leary (1995) consider long-term, affectionate, social relationships and the maintenance of these relationships as essential in the shaping of a person’s sense of belonging. Furthermore, these kinds of emotions and connections might not be available in shorter term relationships or temporary communications and dialogues with people they do not know well (Baumeister & Leary, 1995). For this reason, a few close relationships are prioritised, and it is these relationships that are the most important relationships for an individual’s well-being. It then follows that people often try to maintain these connections and avoid losing relationships with others even though they may not be active, or effort is required to maintain a connection (Baumeister and Leary, 1995).

Antonsich (2010) states that “to be able to feel at home in a place is not just a personal matter, but also a social one” (p. 649). For Antonsich, the contextual and social factors surrounding an individual also play an important role in one’s sense of belonging. Antonsich maintains that belonging must be considered from two angles: firstly, belonging as a personal, individual feeling, namely place-belonginess in which a person has the sense of feeling ‘at home’; and secondly, the politics of belonging, which considers more social and situational factors such as the granting of citizenship. Antonsich encourages studies to focus on both aspects as they are intertwined, and a focus on just one element may result in a loss of context in our understanding of belonging. In other words, whilst belonging is in many ways an individual feeling, it is impacted by others around a person and the situation and circumstances a person is in.

Technology has been found to play an important role in one’s sense of belonging. Khoja (2020) discusses in their master’s thesis the role of digital media in shaping immigrants' sense of belonging. Khoja observed how a sense of belonging could be created through participation in social media groups in which people can recognise themselves or their situation in each other. Other forms of digital media, such as television series set in the city where one lives, were also found to promote a sense of belonging. Similarly, Lloyd et al. (2017)
state that the use of technology gives access to information which can facilitate the “regaining of a sense of place” (Connecting to place and community).

Belonging forms one aspect of integration (Heckmann, 2006; Khoja, 2020). Research suggests that there may be a connection between transnational practices and integration in a new country (Bermudez, 2010; Christiansen, 2004; Kivisto, 2001). Rather than slowing down integration, Christiansen (2004) describes transnational practices and integration as “phenomena which may nurture each other” (p. 202). Similarly, Bermudez (2010) suggests that transnational practices and integration may be “mutually reinforcing processes” (p. 77). Not being able to access information can increase feelings of exclusion and therefore transnational information sources become even more important, offering alternative sources to those in the geographical location (Christiansen, 2004). Furthermore, involvement in transnational communities may assist with acculturation (Kivisto, 2001, p. 572) and support gained through transnational communication can also better equip an individual to manage unfamiliar information environments (Mehra & Papajohn, 2007).

A sense of belonging can lead to social cohesion (Halse, 2018). However, when individuals do not feel a sense of belonging, for example when having few or no close relationships, they might feel isolated, unsupported, stressed, and lonely, and this may lead to depression which can affect them physically and mentally (Baumeister & Leary, 1995). Thus, understanding belonging is an important societal issue.

The concept of belonging is particularly relevant in relation to immigration. Immigration is an extraordinary occasion in a person’s life which can potentially lead to changes in one’s sense of identity and belonging (Gilmartin, 2008). Gilmartin emphasises the importance of understanding belonging in relation to migration studies in order to better grasp the experiences and challenges of immigrants. By considering theories of belonging in this study, affective dimensions of migration are brought to light, highlighting how certain emotions are constitutional of transnational information practices.

3.5 Summary

This study aims to create insights into how immigrants to Sweden engage with information, with a particular focus on the function of smartphones and smartphone applications as intermediary tools between their adopted Swedish society and their countries of origin. This is a complex and multi-layered area of research, and the adoption of a transnational information practices perspective will enable the creation of further insights. By combining theories relating to information practices and transnational practices, a better understanding of immigrants’ experiences can be obtained (Allard, 2015) as these practices are often entwined. A transnational information practices lens allows for different types of information activity to be considered and considers the engagement immigrants have with information in the new society from a much broader perspective, considering past and current information landscapes and temporal, spatial and transnational factors. In addition, a focus on context from a practices approach also considers how social and contextual factors may affect information activities. Furthermore, through also considering belonging, a concept that is ever more important for social
cohesion and satisfaction in today’s society, we can develop a better understanding of the transnational information practices of participants and how these may be related to contentment and comfort in a new society.
4 Methods and Material

This chapter first outlines the study’s design and the choice of methods in accordance with the study’s theoretical position. In the following sections, the choice of method is explored in detail and participant selection and recruitment is discussed. A section on material creation follows detailing the process of developing the interview guide (see Appendix B) and conducting interviews. Following this is a section discussing the transcription process and the strategy for analysis. The final two sections of this chapter reflect on research ethics and positionality, and the trustworthiness of the study.

4.1 Study Design

This study employs practice theory as a lens through which to better understand how immigrants to Sweden engage with information, with a particular focus on the function of smartphones and smartphone applications. Irvine-Smith (2017) states that when viewing practice “as an interpretive lens” it can then be used as a theoretical concept (Practice theory: what people do). Irvine-Smith continues that when practice is used as a lens through which research can be understood “the full gamut of actions, activities, behaviours, situations and context that result in an individual becoming informed” can also be identified and explored (Conclusion). As discussed in chapter 3, the social context is extremely important in practice theory, as Irvine-Smith puts it “practices are the realm of the social” (Sociality section). This study therefore adopts an interpretive, exploratory approach and a qualitative research design in line with this approach. A qualitative research design best allows for the study’s aim to be explored. Bryman (2016, p. 401) states that a qualitative approach can be seen as being concerned with “the meaning of action” whereas the focus in quantitative research is on the action itself. A qualitative approach will help produce deeper and richer information which is necessary to achieve the aim. Semi-structured interviews were employed during the material creation phase of this study. The term material creation is employed in line with the study’s theoretical stance as creation suggests something that is produced through the practice of carrying out research and it therefore also acknowledges the researcher’s active role in its production.

Enabling participants to play a central role and guide the study through their individual experiences and stories with regards to their information practices was considered important. The immigration journey is extremely personal, and no two experiences are the same. Therefore, it was important for this to be reflected in the study design and for there to be a focus on the participants as individuals. Focusing on the participant’s perspective as a key driving force in a study is often a characteristic of qualitative research (Bryman, 2016, p. 401).

Furthermore, this study is exploratory in nature. It considers a large subject area and as such hopes to generate results that may provide interesting areas of focus for further research, in addition to the insights it creates. In a larger research project, a mixed methods design may prove fruitful as quantitative information could be obtained through a questionnaire which may help to establish causality with regards to variables such as gender, time in Sweden, age etc. whilst qualitative data from interviews could provide more in-depth
explanations. Similar studies have already been carried out whilst researching integration and the role of and attitudes towards public libraries: Nekolová et al. (2016) looked at attitudes to public libraries held by immigrants in the Czech Republic and Khoir et al. (2017) studied public library use of Asian immigrants in Australia. However, for this study we focus on the qualitative approach. Studies exploring immigration and the role of the smartphone and/or digital media have typically also adopted a qualitative approach (see for example Alencar, 2018; Gough & Gough, 2019).

4.2 Method

Semi-structured interviews were determined to be the best method for this study. Luo and Wildemuth (2017) describe semi-structured interviews as “one of the most useful data collection methods for studying a wide range of information behaviours” (p. 256). A qualitative survey was not considered appropriate for this study as there were concerns about the response rate. Potential participants may have been deterred by the task of having to sit down and write long answers to questions. Writing in Swedish or English may also present a problem for participants as Swedish will not be a first language and therefore face-to-face communication was considered a better option. Additionally, a survey would not give the opportunities to follow up on answers or ask for the clarification that would be necessary for the type of questions in this study. Furthermore, semi-structured interviews provide freedom during the interview to probe and develop the questions (Luo & Wildemuth, 2017, p. 249) and give the best opportunity to obtain rich data.

Thought was also given to the type of interviews that would be best suited to the study: individual, pair or group. Pair interviews, although not a widely used method, can present several advantages (Cartwright et al., 2016). Pair interviews have often been used in the “helping professions” (Cartwright et al., 2016, p. 1552) especially when research may be of a sensitive nature. Pair interviews can reduce the pressure participants may feel in one-on-one interviews (Bayley & Nancarrow, 1998, p. 105). Parrish et al. (2012) employed pair interviews to carry out their research on the effect school environments may have on physical activity levels. They observed that the children they interviewed appeared to be “more comfortable” being in a pair (Parrish et al., 2012, p. 273). Highet (2003) conducted pair interviews in which the young people participating selected their interview partner themselves. Highet (p. 109) observed that participant engagement in the interviews was high. In addition, Highet (p. 111) found that arranging pair interviews was quite simple and the attrition rate was very low. Bayley and Nancarrow (1998, p. 105) also observed that pair interviews in which the participants are well acquainted helps increase confidence during the interview process. Face-to-face interviews can seem intimidating in some cases, and this may be particularly true when the interview is being conducted in a second language. Ensuring participants felt at ease and reducing interviewer influence as much as possible were important considerations when selecting a method. Consequently, pair interviews were chosen as the best method for this study.

Pair interviews have often been used to observe interactions between two participants, for example members of the same household (Valentine, 1999) and patient and carer (Morris, 2001). However, the main reasoning behind
using pair interviews in this study was to promote conversation and help generate more material from the participants. Pair interviews allow participants to develop their ideas based on what the other person in the interview has said (Morgan et al., 2016, p. 110). Haider & Sundin (2022) also employed pair interviews when interviewing adolescents in their study of information literacy challenges in digital culture and found that this method generated “rich material” (p. 1180). It was hoped that the option to participate with another person would lead to the creation of richer material that would help provide answers to the research questions.

Ensuring a comfortable environment for the participants was a high priority. This was especially important as being immigrants to Sweden, participants would all be interviewing in another country and many not have been part of this type of academic study previously. Furthermore, they may also be using a language that was not their mother tongue. Giving the option to be interviewed with a friend or classmate was a way to help create a more relaxed and comfortable environment for participants.

The use of pair interviews gives several advantages that suit this study type well. However, it can also pose problems. A concern with the choice of pair interviewing is that one participant may take the lead in the interview and speak much more than the other person (Houssart & Evens, 2011, p. 66) or that participants may feel less inclined to share certain information in front of their partner. However, Morris (2001, p. 565) observed no reluctance to talk about certain topics due to the presence of the interview partner. During the material creation stage, the interviewers were mindful of these potential issues and therefore tried to ensure participants had equal opportunity to speak by redirecting the conversation back to a quieter participant if required. Participants were also provided with the consent form (see Appendix A), which briefly summarised the type of information that would be discussed in the interviews, in advance. In doing so, participants had time to read and consider if they would feel happy discussing these topics with a partner and had the opportunity to raise any concerns or questions or opt to be interviewed individually, before the interviews took place.

The types of issues that can be found in pair interviews such as one participant talking more than another (Houssart & Evens, 2011, p. 66) are personal and depend very much on the individuals taking part. For this reason, it was decided to give participants the choice of which interview type they would prefer: individual or pair. Morris (2001, p. 565) highlights that it is important to have individual interviews as an alternative, as this format may be preferable to certain individuals. Giving participants the option as to which interview type they prefer is also in keeping with the qualitative nature of the study, allowing the study to be in part steered by the participants (Bryman, 2016, p. 401). It was also hoped that giving participants some level of control and say in the study would help to create a comfortable environment for participants and reduce interviewer influence by making the balance of power more even. For the same reason, interviewees were also given the choice of language that the interview would be conducted in: English, Swedish or Arabic. Partaking in an interview in a language that is not one’s mother tongue can be daunting or make it more difficult to express one’s opinions. Therefore, enabling the participants to have some element of choice in this regard was important.
4.3 Finding Participants

There are many reasons why people immigrate (Caidi et al., 2010). Under the umbrella label of *immigrant* is a varied and diverse group of people with different backgrounds, needs, beliefs, and experiences (Caidi et al., 2010). It is therefore important to acknowledge this diversity and approach research from a pluralistic perspective to avoid generalising and stereotyping. Previous studies that have explored questions related to immigration have often looked at smaller, more specific groups within the immigrant community, focusing for example on nationality, reason for immigration and level of education (see for example Alencar & Tsagkroni 2019; Audunson 2011; Khoja 2020). However, nationality, reason for immigration and first language can be considered sensitive personal information, and due to research ethics and General Data Protection Regulation (GDPR) compliance such criteria were not considered in this study. Nevertheless, such factors, that may have an influence on a person’s information practices, should not be forgotten when considering the results of this study and may lead to insightful future research. Furthermore, although studies that adopt a narrow sample looking at specific groups are very important, there is also a need for studies that look at broader groups to be able to “draw conclusions across the various small studies” (Caidi et al., 2010, p. 520). Lingel (2013) adopted such an approach in their investigation. As much research within LIS has focused on one nationality, Lingel instead focused on a “heterogeneous population of participants” in order to “track practices that emerged across backgrounds and nationalities” (p. 140).

The third research question of this study is concerned with an individual’s sense of belonging in the new society. Language can play a key role in how an individual feels in a new country (Khoja, 2020) as speaking the primary language of a country gives access to many areas of society that may be or seem to be more challenging to access without the language. It was also thought that those who had taken steps to start learning the Swedish language would, in many cases, have an interest in integrating to some extent in Sweden, whereas those who had no plans or intentions to learn the Swedish language may have quite different motivations and perhaps different information practices. This would be an interesting area for future study. However, for this study, in addition to being an immigrant residing in Sweden, some level of Swedish language or a demonstration of having taken steps to start learning the language was a criterion for participation.

Length of time in Sweden was also considered as a potential criterion. Caidi and Allard (2005) suggest that the type of information required may be different at different stages of immigration and Caidi et al. (2010) identify the different stages of immigration as an area in need of further research with regards to information practices. For this reason, focusing on either newcomers to Sweden or people who had lived in Sweden for a longer period of time e.g. five years or longer, was discussed. However, both areas were considered to be of equal interest and relevance with regards to the research questions and therefore the decision was made not to focus on length of time in Sweden as a participation criterion. Nevertheless, it was thought this may still prove to be an interesting point of comparison during the analysis of results and for this reason a question about length of time in Sweden was included in the interview guide.
Participants were recruited from the Språkcafe (Language café) and students studying Swedish for Immigrants language courses (SFI) using a combination of purposive and snowball sampling. Caidi et al. (2010) acknowledge that participant recruitment is often challenging among immigrants (p. 501). Therefore, two recruitment starting points helped generate more potential participants. Gough and Gough (2019) employed a similar sampling strategy consisting of two starting points when studying the role of smartphones for Syrian refugees. They found that using two starting points enabled them to recruit a sufficient number of participants for their study.

Språkcafes are voluntary and informal Swedish language groups organised by volunteers for people wishing to improve their language skills and have the opportunity to practice speaking with native speakers. The researchers visited the Språkcafe on several occasions, initially to introduce themselves and the study, and thereafter to build rapport with potential participants. Ensuring that participants felt comfortable agreeing to participate in the study and during the interview process was a principal consideration and therefore having the opportunity to become a familiar face and answer any questions regarding the study was important. Those who expressed an interest in participating were contacted to schedule a time for an interview. The Språkcafe in question takes place on Tuesday and Thursday afternoons from 16.30 to 18.30. The Språkcafe is run by volunteers and is free to attend. Participants sometimes attend regularly every week or just on occasion. A contact attending SFI classes assisted us in making contact with more potential participants and arranging interview times. The SFI courses are held on weekdays and students study part time. In total, twelve participants were recruited, whereof seven were through the Språkcafe and five were SFI students. Six female participants and six male participants took part. Participants ranged in age from 19 to 62 and the length of time in Sweden varied from nine months to 25 years.

4.4 Material Creation

Semi-structured interviews were conducted in March and April 2023. In total, twelve participants were interviewed in four pair interviews and four individual interviews. Interviews were conducted in either English or Arabic and one interview was conducted in Swedish. Interviews varied in duration lasting between 35 minutes and 90 minutes with an average time of 45 minutes.

4.4.1 Interview Guide Development

Semi-structured interviews were selected as the best method for this study. Designing the interviews in a semi-structured way allowed the interviewers to have some control of the conversation topics whilst at the same time allowing the participants the flexibility to discuss the areas that seemed most relevant to them. Employing semi-structured interviews has two main benefits. It “allows for unanticipated details and patterns to emerge” and accounts for “the unconscious nature for individuals of information practices” (Allard, 2015, p. 52). Participants may be unaware of their own information practices and direct questions regarding this would therefore be difficult to answer. Thus, designing questions to be broader in nature allows for this.
An important aspect of the interview design was the smartphone as a conversation tool. Participants were asked to bring their smartphones to the interview and refer to them throughout the interviews. It was thought that the smartphone would act as a visual tool and prompt for participants and thus, help to produce richer material. Gough and Gough (2019) also used smartphones as a tool during their interviews and found that this was extremely beneficial to the discussions (p. 92). Khoja (2020) employed smartphone ethnography in their study of digital media consumption. They found that engaging with the smartphones encouraged participants to discuss “consumption patterns” they would have otherwise not thought about and using the smartphone in this way “helped them to become experts in their everyday lives” (Khoja, 2020, p. 70). Lloyd et al. (2017) used photography and focus groups as data collection tools and stated that through these methods participants could “demonstrate their own agency by determining what information to represent in their narratives” (Positionality section). In the same way, the implementation of the smartphone as a tool in the interviews gives an element of power to the participants as they can navigate through their phones and decide what to share.

The interview guide comprised five sections. The first section is designed to collect background and demographic information such as age, time in Sweden, occupation and information relating to attendance at the Språkcafe or language course. It then leads into an open question about the importance of the smartphone in the participant’s life. This question was designed to be a springboard into the following sections of the interview. The following four sections focus on: smartphone use, smartphones in everyday life, obstacles to information access, and life in Sweden. Each of these four sections was designed with an open statement to lead into the topic area. More specific focus areas are then detailed under each heading as prompts to be discussed if the participant had not already mentioned them. By opening each subject area with a broad statement, the participants had more power to lead the conversation and discuss the areas that seemed most relevant to them.

The four sections relate to the different focal points of the project’s aim and research questions. Section 2 addresses typical information practices in relation to the smartphone whereas section 3 looks at the participants’ everyday lives and how the smartphone plays a role in these activities. Section 4 focuses on difficulties or barriers to accessing information and how these may be connected to smartphone use whereas section 5 focuses on how participants feel living in Sweden in order to gauge their feelings regarding a sense of belonging. The interviews were concluded with two reflective questions about the interview itself, aimed to give the participants the opportunity to add any additional information and reflect on the interview experience.

Before material creation began, two pilot interviews were conducted. This was a particularly useful practice as it allowed the interviewers to become more familiar with the interview guide and it also highlighted the importance of using the smartphone as a tool for generating richer material. After the pilot interviews, the questions were rearranged into the five sections discussed above to encourage a better flow of discussion and the broad opening statements were added to each section. After the first two interviews were conducted, several further changes were made to the interview guide to
incorporate prompts for areas that had arisen during the first interviews. Before data collection commenced, the authors also interviewed each other. This ensured the interview style would be similar regardless of the interviewer.

4.4.2 Conducting Interviews

Participants who had expressed an interest in participating were contacted and interviews were scheduled. The interviews were conducted either at the public library or the SFI common area, places that all participants were familiar with, and one interview was conducted online. This study has been the work of two authors; however, the decision was made that only one interviewer would be present at each interview in order to ensure the setting was as relaxed and unintimidating as possible. For this reason, the interviewer present was the person who had made initial contact with each participant. Participants decided on the interview language at the time of scheduling. Consent forms were also distributed to participants prior to the interviews so that they had time to review the information and contact the interviewers with any questions or doubts they may have had. Consent forms were translated into English, Swedish and Arabic to ensure informed consent as much as possible. It was at this stage participants also decided if they wished to be interviewed in a pair or individually. In the case of a pair interview, participants chose someone they would like to interview with such as a classmate or someone known to them at the Språkcafe.

Before each interview began, the purpose of the study was briefly summarised again for participants, and they were given the opportunity to ask any questions. They were also reminded that the interview would be recorded at this stage. Given GDPR and research ethics related to research conducted by students, participants were also informed that they would not need to discuss any sensitive information. It was anticipated that participants may want to refer to their home countries during the interviews for example, information that can reveal one’s ethnicity, and in order to avoid the collection of such material, participants were advised to use the term home country rather than stating a specific place if they wanted to discuss where they were from.

4.5 Transcription and Analysis

Interviews were recorded using voice recorders. After the interviews had been conducted, the recordings were listened to and transcribed and those that had been carried out in Swedish or Arabic were also translated to English. Although time consuming, manual transcription was preferred as it gave the opportunity to engage with the material and become familiar with it before the next stage of analysis. It also provided an opportunity to make notes about any parts of the transcripts that were not clear or needed further clarification. After the transcriptions were completed, those participants who had agreed to be contacted again after the initial interviews were briefly contacted and the main ideas were summarised for them to confirm or add to, any points for clarification were raised and they were given the opportunity for further comment. This was viewed to be an important stage in the analysis for two reasons. Firstly, it allowed for clarification of any areas that needed further information or follow-up questions. Secondly, as the interviews were not always carried out in the participants’ first language, it gave them the
opportunity to confirm what they had wanted to express. It was important that participants be given the possibility to challenge or confirm interpretations of the material. This is discussed in more detail in section 4.6.

The transcripts were analysed with the help of NVivo. A thematic, inductive approach was initially employed, and coding was carried out line by line. Ryan and Bernard (2003) discuss the “trade-off” that exists between relying too heavily on prior theory when identify themes, which can lead to researchers finding what they expect or hope to see, and not applying any theory at all, which can lead to a disconnect between the analysis and the research questions (p. 94). To find this balance, initial codes were kept as similar to the wording of the transcripts as possible in an attempt to avoid over-interpreting the data in line with our theoretical approach at this early stage in the analysis whilst still considering the theory behind the study.

As two people were involved in the analysis and coding, it was particularly important to be clear about the analysis strategy. Coding and updating of the codebook were carried out iteratively. When new codes were discovered, these were discussed and added to the codebook, in keeping with a constant comparison technique. Although the coding of the eight transcripts was divided equally, on occasion we agreed on a specific section of the same transcript to code so we could then compare and discuss how we had coded. This provided the opportunity to discuss any differences and strive for intercoder agreement. The codebook was also revised iteratively allowing for codes to be merged when necessary. As the codebook was revised, codes were sorted into categories and themes. Examples of early emerging codes were related to transnational practices, digital security, maintaining contact, building new social networks, and finding out about life in Sweden. Although having two coders meant we had to ensure coding was carried out in the same way and have regular meetings and updates to increase intercoder agreement, we also saw it as a positive opportunity to reduce subjectivity. Whilst there will always be some level of subjectivity in such a study (Bryman, 2016, p. 386), having two people involved in all aspects of the analysis meant we were not reliant on the interpretation of just one individual. Ryan and Bernard (2003, p. 104) maintain that the greater the agreement amongst members in the team, the more likely it is that themes can be considered to be valid. In other words, by having two team members involved in analysis we hoped to increase the confirmability of the results.

4.6 Research Ethics & Positionality

Research ethics and compliance with data protection regulations have been of great importance and have been considered carefully at each stage in this study. Personal information was collected through qualitative interviews; however, this did not include sensitive personal information. Ensuring that no sensitive personal data be collected was considered carefully when designing the interview guide. This was also a consideration when finding participants. As no sensitive personal data was to be collected, participants could not be recruited based on nationality or reason for coming to Sweden. This is one reason why this study focuses on immigrants to Sweden without a particular focus on nationality or first language as these could be indicators of ethnicity, which is sensitive personal information. Before the interviews, participants were briefed
on what constitutes sensitive personal information so that they felt no obligation to divulge such information during interviews.

Ensuring the safe and proper processing of personal data was also an important consideration in order to protect the privacy of participants and maintain confidentiality and anonymity as much as possible. Therefore, before any material creation, the storage and sharing of material was discussed. This was an important consideration with two researchers working in different locations. Transcripts and consent forms have been stored in accordance with the university’s guidelines. It was decided that interviews would be recorded using dedicated voice recorders rather than recording through smartphones. Such voice recorders cannot be connected to the Internet, thus avoiding any information being uploaded to the “cloud”. This helped to maintain confidentiality and complied with the university's rules and regulations on personal data protection. Furthermore, we considered how discussions regarding smartphone applications could have the potential to lead to the inadvertent collection of sensitive personal information or compromise confidentiality. For example, certain transport applications can indicate a smaller area in which a person lives, or specific dating applications could be indicative of sexual orientation. It was decided that in the case of any such applications being named, these would be reported in a general way such as ‘transport app’ or ‘dating app’. In the analysis and transcriptions, each participant has been assigned a number to identify who contributed what whilst attempting to make the material as anonymous as possible. Numbers were favoured over pseudonyms as even the use of a pseudonym, if not selected entirely randomly, could hint at a person’s identity (e.g., nationality, gender, etc.).

Informed consent was also an essential ethical consideration. Before an interview was carried out, participants were asked to sign a consent form in which the study and content of the interviews were outlined and details regarding participants’ rights were included. Consent forms were distributed to potential participants either by hand or by email in advance so that sufficient time was given to thoroughly read and understand the forms and ask any questions. This was a particularly important consideration given that consent forms were not necessarily in the participant’s first language. Participants were also provided with an extra copy of the form for them to keep. However, to accommodate for this as much as possible, consent forms were made available in English, Swedish and Arabic. Before the recording of interviews commenced, the participants were briefed again on the purpose of the study and given the opportunity to ask any questions they may have as well as confirming that they consented to participate and for the interview to be recorded.

Positionality was another important consideration. Considering positionality is especially important in studies with people from different cultures as “it influences researchers’ assumptions, agency and constructions and sanctioning of what constitutes knowledge” (Lloyd et al., 2017). We, the authors of the study, have both had our own immigration journeys to Sweden coming from different cultures and backgrounds with different first languages. This afforded us the opportunity to offer participants the choice of three languages: English, Swedish or Arabic, for the interviews. Gillespie et al. (2016, p. 43) discuss how
participants in their study found it helpful to speak with someone who could understand their situation and that by having an interviewer with a similar background to participants and who spoke the same language, trust and rapport were more easily established. However, it is also important to reflect that all immigration journeys differ, and similarities cannot be assumed based on similar backgrounds alone. This was also a paramount consideration during analysis to strive to ensure no assumptions or bias from the researchers’ perspective was transferred to the study’s results.

The researcher influence was reflected on and ways in which this influence could be minimised to the greatest extent were considered. Lloyd et al. (2017) state that by employing certain data collection techniques, participants have the opportunity to “demonstrate their own agency”. Giving participants the possibility to choose the interview language as well as choosing whether they wanted to participate in a single or pair interview, and freely choose their interview partner (in the case of a pair interview), allowed participants to have more say in how the interview would be carried out and create the most comfortable environment possible.

4.7 Trustworthiness

This section discusses how trustworthiness has been established in this study based on the criteria proposed by Lincoln and Guba (1985) as an alternative to reliability and validity which are terms most often used in quantitative research (Bryman, 2016, p. 384). Shenton (2004, p. 63) explains that this framework aims to achieve accurate, reliable, and credible results. Allard (2015, p. 67) highlights the importance of using this framework to address criticisms of qualitative research by positivist thinkers. Lincoln and Guba’s (1985) framework includes four components - credibility, transferability, dependability, and confirmability. We explore what is meant by each and how we have tried to ensure trustworthiness in our study through each criterion in the framework.

Credibility - ensuring that “a true picture of the phenomenon under scrutiny is being presented” (Shenton, 2004, p. 63)

Credibility is a key element in establishing trustworthiness (Lincoln & Guba, 1985 as cited in Shenton, 2004). "Prolonged engagement" (Lincoln & Guba, 1985, as cited in Shenton, 2004) is one step in ensuring credibility as it gives the opportunity to understand the environment and build rapport and trust with participants. In this study, the Språkcafe was attended regularly prior to interviews and this time was used to meet potential participants and explain the study and its goals. A contact, who was also an SFI student, acted as a gatekeeper introducing us to potential participants from SFI. Participants were fully briefed about what the study entailed and were given opportunities to ask questions or refuse participation, they were also informed of their right to withdraw consent. Shenton (2004, p. 66) suggests that using a “wide range of informants” may also help to verify the ideas expressed during interviews. The participants ranged in age, time in Sweden, profession, and position. This variety of situation helps build a “rich picture” of the phenomena being studied (Shenton, 2004, p. 66). Where possible member checks (Shenton, 2004) were carried out after the interviews had been listened to and transcribed. This was
viewed as a particularly important step as participants were not always responding in their first language and as in some cases when interviews had been conducted in Swedish or Arabic, transcripts were translated to English. Through conducting *member checks*, participants were given the opportunity to confirm the accuracy of our interpretations and clarify any doubts.

**Transferability** - “demonstrating that findings are applicable in other contexts” (Allard, 2015, p. 67).

Whilst a main preoccupation of positivist work is to show that a study’s results are applicable in other situations and to larger populations, this is not possible in qualitative studies which focus on a particular context usually with a small number of participants (Shenton, 2004, p. 69). Shenton (p. 70) also emphasises the importance of considering qualitative results within their context and that further studies using the same methods in other contexts or locations can be carried out to test if findings are applicable in other situations. For this reason, it is important that a detailed account of methods and context is provided (Bryman, 2016; Shenton, 2004). Lincoln and Guba (1985 as cited in Bryman, 2016) stress that by providing sufficient information about the research site and context, others can judge how transferable findings may be. We have therefore endeavoured to be as thorough and detailed as possible in our descriptions of methods throughout this text.

**Dependability**: “demonstrating that results are replicable” (Allard, 2015, p. 67).

To ensure dependability, it is important to address all the procedures and methods used in the study in detail (Shenton, 2004, p. 71). These steps if carefully and accurately addressed will help readers to understand the study, and assist researchers to adapt, replicate and apply the study in the future. We have documented and included comprehensive description of the different stages of the study.

**Confirmability**: where results are derived from the data itself and not from the researcher's motivation or personal interest (Allard, 2015, p. 67).

Confirmability is an important aspect of research quality and credibility. According to Shenton (2004, p. 72), it is important to ensure that study results are objective and not influenced by the researcher's biases or personal beliefs. This is particularly significant in qualitative research, where subjective interpretations by researchers can impact the findings. Providing a detailed description of the methodological approaches can help readers and other researchers deeply understand the data collection processes, analyses, and interpretations. This can be achieved by using an "audit trail" to document the research process (Shenton, 2004, p. 72). Allard (2015, p. 67) used NVivo to create a detailed “audit trail”. The collected data was analysed multiple times, ensuring the accuracy of the results. Similarly, in the present study, NVivo was also used to document transcripts, notes and codes as well as the iterative nature of the analysis.
5 Results

This chapter presents the results of the study. The results have been organised according to the key themes that emerged from the analysis: attitudes towards smartphones, the smartphone in Sweden, smartphone use, influences on smartphone use, challenges to information access and feeling ‘at home’ and belonging. To make the material as anonymous as possible and to safeguard confidentiality, the quotes used in this chapter have been edited where necessary, for example by using neutral pronouns, and referring to spouses as ‘partner’.

5.1 Attitudes towards smartphones

One theme that emerged from the analysis was how participants felt in relation to smartphones. Attitudes to smartphones were both positive and negative. This section is divided into three subsections that explore these positive and negative attitudes more closely: the importance of smartphones, getting away from the phone and privacy concerns.

5.1.1 The importance of smartphones

Smartphones were very important to all participants and used in their everyday lives. The theme of smartphone use will be discussed in more detail in section 5.3. For many of the participants, their smartphones were thought of as essential in their daily lives. One participant jokingly commented that their smartphone was the most important thing in their life. The same participant went on to explain that their smartphone formed a central part of their day and was used from the moment they opened their eyes in the morning and in many activities throughout the day:

“When I first open my eyes in the morning they go directly to my phone. I check my emails and other work-related matters. Without my phone, I cannot move one step forward. Even when I’m in the car I use Google Maps to drive to different locations that are sent to me by clients of other work colleges. I also use it for bank matters, I use it for everything basically.” (p10)

Another participant added that due to the importance of smartphones they found it hard to imagine how people would manage daily life without them: “Phone is so important to me and everybody else … I guess people cannot survive without their phones” (p1). This sentiment was also echoed by their interview partner who added that the smartphone made life much easier in general. Several other participants also discussed how smartphones made life easier and one participant expressed that the purpose of smartphone applications was exactly for the reason of making people's lives easier and saving time. Smartphones were also seen as important as a tool for learning, as one participant explains:

“Of course, it is so important, a person can learn many things using the phone for example via Google or YouTube there is a lot that a person can learn from.” (p4)
Several participants discussed the importance of smartphones in the Swedish context. One participant viewed smartphones as “essential” in Sweden as they acted as a tool enabling productivity and allowing them to “get things done”. While two other participants strongly felt that without their smartphones, life in Sweden would be more challenging. One participant gave examples of how smartphones were required for financial reasons and how BankID is used to verify identity in many different situations. The other participant felt that their smartphone helped them manage the challenges of living in Sweden, as illustrated in the following quote: “in Sweden I think without your phone, if you are new here, without your phone, you are nowhere” (p5).

The word “companion” was used by one participant to describe how they felt about their smartphone, as it is something they take everywhere with them and something that keeps them company when bored. Another participant also employed the word “companion” to describe the YouTube app which they use on their smartphone to access gym activities or audiobooks. Going to the gym and reading were cited by the participant as their principal free time activities. The smartphone, in this context, can be seen as giving access to and enabling these free time activities. When asked what importance their smartphone had in their life, another participant responded: “it’s like my baby! So, we’re always together, everyone is always together with their phone actually” (p11).

The choice of wording used by these participants to describe their smartphones could indicate emotional attachment to their smartphones. Not only are they objects that they use for many purposes but in general, participants are accustomed to having their smartphones with them or to hand almost around the clock with many participants discussing how their smartphones are often used first thing in the morning and at night before sleeping. However, this was not true for all participants, with several stating that they try to keep some distance between themselves and their smartphones. This will be discussed in more detail in the next section (5.1.2).

### 5.1.2 Getting away from the phone

As discussed in the previous section, all participants viewed smartphones to be important. However, this was not unanimously considered to be a positive thing. This is demonstrated by one participant who reluctantly acknowledges the importance of the smartphone in their life, when they declare: “I don’t want them to be important, but they are, and I try to avoid it as much as possible” (p7).

Time away from their phones was considered by many as something positive or healthy. One participant described how “on a good day” their bedtime routine would include reading a book rather than being on their phone, although they would answer messages if they had received any. Participants see too much screen time as negative whereas activities such as reading are viewed in a more positive light. Another participant described how the way they use their smartphone differs from weekdays to weekends. During the week they described how their smartphone was used for communication with family and friends as well as for staying up to date with the news through specific news applications, radio, and social media. However, the weekend was time for quality time with family and friends and relaxation. Relaxation and time spent on the smartphone were not viewed as being complementary of each
other. This idea is illustrated in the following quote: “on weekends it is me time to clear my mind and avoid the phone” (p9).

Relatively, two participants discussed how they tried to limit their smartphone time for the sake of their children. These two participants viewed time spent on smartphones as potentially harmful for their children. In the case of one participant, they were worried about the possibility of negative health consequences that could be caused due to prolonged exposure to technology such as smartphones. However, the second participant viewed the smartphone more as taking quality time away from time with their child and instead used a watch to get message alerts, and in doing so, be able to filter between notifications that needed action and those that did not.

Several people identified social media applications in particular as a potential way to waste time. One participant had deleted the TikTok application from their phone specifically for this reason as they found it hard to control their use and would lose track of time. Another participant tried to avoid social applications entirely. Whilst a third participant described how they tried to avoid such applications because they felt a sense of regret after having used them due to losing time in the process. However, social media applications themselves were not always viewed as unproductive but rather the activity and purpose of using the applications. In the case of this participant, they differentiated between using Facebook as a means of communication and using Facebook as “social media”. In other words, communicating with a family member or friend is seen differently to scrolling through a newsfeed. Scrolling through or browsing social media was seen by several participants as a way to “pass time” or entertain and occupy themselves when they were bored, as illustrated in the following quote:

“I just don’t like to waste my time on there, then I get angry with myself that I want more time, but I spent it on social media, but I use, I don’t use Facebook, well I use Facebook for messaging”. (p7)

Although all participants attributed importance to smartphones and the majority of participants discussed how smartphone applications made life easier, one participant felt strongly about limiting the number of applications they had on their phone. Instead, they preferred to use the Google browser (Chrome) application giving examples of Twitter and Wikipedia. They described how they felt irritation at being prompted to “get the app” when they saw it as unnecessary. They differentiated between applications which they saw as having a specific function such as Google Maps and applications in which the same information could be accessed through a browser.

The attitudes held by participants towards their smartphones may suggest that information overload is experienced by some or that they are aware of the potential for information overload. One participant discussed how they would like to be able to consolidate all social media applications so that it would be easier to manage use of them and another discussed how an improvement would be to consolidate information pertaining to deals and retail offers rather than having to filter this information manually.
5.1.3 Privacy Concerns

Concerns over privacy and the sharing of information were also commonly discussed. Participants considered the ease of access to personal information through online channels in Sweden disconcerting, it was described by one participant as “creepy” whilst another participant thought it should not be legal. The extent to which personal information is available was seen as something particular to Sweden that they had not been aware of in their home country to the same extent. One participant also commented that they felt this was because people in Sweden seemed to be more trusting. The accessibility of personal information online was generally viewed negatively, and one participant expressed how it made them on occasion feel unsafe:

“As an immigrant, when I see that my and my family’s information is easily accessible online, this makes me feel uncomfortable, and sometimes unsafe.” (p9)

The concerns about privacy and the sharing of personal information also in some cases dictated the choice of smartphone applications. One participant had stopped using Facebook due to concerns about the sharing of personal information. Whilst others preferred to connect with new contacts via Facebook Messenger as this meant they did not have to give a new acquaintance their phone number. However, one participant stated they specifically avoided any application through which they could be contacted. Furthermore, one participant explained that they had recently started using the Signal application for communication as it was viewed as better in terms of “tracking” personal information. For these participants, privacy is an important factor and something that is considered in the selection and use of applications.

5.2 The Smartphone in Sweden

Most participants had prior experience of using smartphones before moving to Sweden except for a small number of participants who had moved to Sweden before smartphones had become commonplace in society. These few participants had therefore learnt to use a smartphone at the same time as others around them in the Swedish context. However, many of the applications that participants discussed using frequently were international applications. That is to say, an application that is used in many countries and is not just specific to the Swedish context. Examples of these international applications that were commonly discussed are Google Maps, Google Translate and WhatsApp. Many participants already had experience using these applications or similar before they came to Sweden, and it can be assumed that this prior experience helped inform them once in Sweden. For example, having prior experience of how to find places through Google Maps in one setting could then be applied to help navigate in the Swedish context. Lloyd and Wilkinson (2016; 2019) discuss how experiences from previous information landscapes can play a role in the shaping of a new information landscape. They also discuss how previous practices can help to develop new practices. In this instance, the practice of using a smartphone for navigation in one country can be transferred to help inform navigation in the new country.
However, it would appear that some activities relating to how smartphones are used, especially for communication, are adapted based on location. The majority of participants identified WhatsApp as their most used application for communicating with friends and family. Facebook Messenger and Viber were also commonly discussed but less so than WhatsApp. However, several participants commented that they were most likely to use these types of applications to communicate with friends and family in their home country or from their home country whilst for communication within Sweden the standard phone functions, text-messaging, and phone calls, were more commonly used. As the quote below illustrates, WhatsApp is considered a popular choice for international communication:

“I’m using WhatsApp more than regular phone or regular message with my partner and with my family because some of my family are living in different countries so I’m just using WhatsApp to reach them. But except that, if I’m calling some people who are living in Sweden then I’m using the regular phone and message.” (p11)

One participant observed that people in Sweden did not commonly use WhatsApp. This could imply that the choice of application for communicating with others is in part influenced by the social context one is in and what is considered the normal means of communication in that context. This is something that would have to be learnt when entering a new context. The choice of application was adapted based on who was being contacted, as illustrated by one participant who declares: “It all depends on whom I am contacting and where they live, I use different apps” (p1).

Many participants considered the information landscape in relation to smartphones to be somewhat different to what they had previously been accustomed to, or in the case of those who had lived longer in Sweden, what they had heard about or experienced in their home country. These comparisons were made particularly in terms of financial applications. Several participants reasoned that Sweden is more advanced and consequently there is more available technology. Several examples of this given by participants are that Google Maps works much better, government agencies have applications, and people use their phones “as wallets” in Sweden. The way in which smartphones are used in Sweden was contributed to the differing landscape. Smartphones were described as being used more as a tool in Sweden than they are in other places. BankID was commonly used to illustrate this idea as it is required for many things in daily life in Sweden and not just for logging into bank accounts which seemed a more expected use to some participants. This idea is explained by a participant below:

“I think here BankID is more like, like a normal tool, an everyday tool for anything, there’s not like specifically for signing papers or logging into your bank account to check for it, like I log in to get into the shop, like these 24-hour shops or just anything, shopping online or anything.” (p7)

Learning about applications such as BankID and Swish, applications that were considered important to the information landscape in Sweden but especially to smartphone use, most commonly took place in Sweden. This type of information, the existence of these applications, how they work and what their uses are, was often acquired through a third party. Partners and family
members who had already been living in Sweden for some time were most often identified as these third parties, however, several participants also stated that this type of information had been acquired through institutions such as banks and government agencies. Lloyd and Wilkinson (2019, p. 256) found that participants in their study often acted as “intermediaries, points of reference and interpreters of the information environments” for others around them. In the present study, third parties can be seen to play a big role in initially helping to understand the information environment. This is illustrated by one participant whose partner was instrumental in obtaining information initially in Sweden:

“My partner was here before us, so they were the main source of information when it comes to answering all kinds of questions about Sweden at the beginning” (p12)

The information landscape could also be understood through experience in the new country. One participant discussed several occasions when their observations helped them navigate the new information landscape. They discuss seeing people pay with their phones in shops and not carrying wallets in Sweden. Over time this has also become a common practice for them as their observations informed them that this was a common practice they too could partake in through their smartphone. Furthermore, the same participant describes one occasion when they needed to make an appointment at the hairdresser’s for the first time. In their home country, appointments are not required far in advance and drop-in appointments are common, so this was also the expectation in Sweden. However, on enquiring, they learnt that bookings must be made in advance through an application. Once the participant had downloaded this application, they also found they could make bookings for other services in their area. In this case, the use of the smartphone also informs further use although a third party or some form of experience is required first.

5.3 Smartphone Use

Participants’ responses regarding changes in how they have used their smartphones since moving to Sweden varied. Several were not aware of much change whilst some participants reported using their smartphones more since coming to Sweden. In the case of one participant, their phone had become a “companion” to them since they had moved to Sweden. However, all participants expressed that the applications they used had changed to some extent. In this way, the smartphone screen can be seen as a visual representation of how participants are adapting to the new information landscape. Numerous applications were mentioned in the interviews and participants described using various applications for different purposes. However, the most commonly mentioned applications were related to communication and social media, such as WhatsApp, Instagram, TikTok, Facebook, Snapchat, and Viber. Additionally, applications like YouTube, Google Translate, Google Maps, and the Google browser (Chrome) were said to be used frequently. Governmental applications like 1177 (Swedish healthcare online) and Skatteverket (the Swedish Tax Authority) were also mentioned and BankID was commonly discussed. Furthermore, some participants felt they had learnt to use their smartphones more effectively since moving to Sweden, utilizing them as tools for many purposes such as accessing information from government agencies or for translation purposes. In this
sense, smartphones can be understood as material objects that constitute part of the participants’ information practices (Lindh, 2015, p. 23).

Through the analysis of the material, common patterns in smartphone use since moving to Sweden were identified. These have been organised into five subsections which are presented below: maintaining contact, establishing new contacts, news access, orientation, and independence.

5.3.1 Maintaining Contact

Not surprisingly, one of the primary uses of smartphones reported by participants was to maintain contact with friends and family in their home country. The way smartphones were used by participants reflected the importance of maintaining contact. For example, several participants described how checking their phone for messages first thing in the morning and last thing in the evening was a practice that had become part of their normal routine. Communication applications like WhatsApp were most heavily relied upon, particularly for international communication with family and friends living in different countries. While other applications such as Facebook Messenger and Viber were used by some participants, WhatsApp appears to be the most frequently used application for maintaining contact with friends and family. One participant attributes the popularity of WhatsApp for communication to it being “universal”, when stating: “I can say that most of my friends and family use WhatsApp because it is universal” (p10).

Some participants mentioned having applications on their phones that they did not use frequently. However, these applications were kept in order to stay connected with particular individuals who use those particular apps. This point will be discussed in more detail in section 5.4. Several participants also explained that they kept applications from their home country on their smartphones despite only using them perhaps a few times a year. One participant reasoned that even though they were often unused, they preferred to keep them installed as they were then there ready to use in the event they travelled back to their home country. Another participant discussed how keeping applications from their home country allowed them to participate in aspects of daily life in their home country. For example, certain shopping applications were kept installed to send birthday presents to relatives. For these participants, smartphone applications act as a way of maintaining contact or a connection with their home country.

Despite living in Sweden for more than a year, several participants still used phone numbers from their home country. This enabled contact with their home country as they did not need to change their number on WhatsApp, for example. For one participant, this also facilitated communication related to their business in their home country, they stated:

“I still use my country number for my WhatsApp because I have a store back in my country which I still operate, a family member handles it for me, so sometimes they send me messages about my customers, about their welfare, about how things are going in my store and all.” (p5)

Another participant explained that they had had to make a choice between keeping their number from their home country and getting a Swedish number.
They reasoned that by maintaining the number in their home country they were better equipped to stay in touch with friends and family. It also facilitated administration connected to life in their home country, for example, notifications from the bank. This participant’s partner had a Swedish number, and they were able to provide this when required, for example, when creating an online account. A third participant acknowledged that maintaining their home number prevented them from having access to certain things in Sweden. The main example here was with regards to Swish: “I don’t have Swish though; I know how often it’s needed but I still have my homeland’s number so I can’t use Swish” (p7).

Maintaining a number from their home country allows participants to enact transnational information practices which help them maintain contact with social networks as well as maintain a connection to the lifestyle or culture in the home country in some way. However, this may also present problems with regards to integration as certain activities are limited without a Swedish number. For example, Swish is required as a payment method in many situations or a Swedish number is required to create certain accounts or sign up to certain things as well as for contact within Sweden. This may have consequences for how ‘at home’ one may feel. However, a sense of belonging may also be increased through the maintenance of practices that allow a connection to the home country, social networks, or previous lifestyle.

5.3.2 Establishing New Contacts

Several participants expressed that they had encountered difficulties in establishing contacts or making new friends in Sweden. One participant explained that their social network in Sweden consisted of other immigrants or someone who had moved to Sweden and whose partner was Swedish, but they did not know many Swedish families. Another participant found making contacts in Sweden difficult as they perceived the social norms to be different to those in their home country. They noted: “I think it is hard to meet new people in Sweden, it is not like other countries” (p12). The same participant added: “Here it feels like you need to put some effort to meet new people, and because it is harder to meet people then it is hard to find people that you share the same interest with, which makes it harder to make new friends” (p12).

The results highlight the challenges participants face when attempting to meet new people in Sweden. These can act as barriers to social interaction and to forming new community connections. This difficulty in establishing new contacts provides a potential explanation for the importance of maintaining contact with existing social networks both within and outside Sweden as they provide companionship and support. The importance of relationships with family and close friends in the home country is illustrated by this participant in the quote below. They see these relationships as “enough” for them and consequently establishing new contacts in Sweden is not a priority:

“I have my family and close friends from back home and that is more than enough for me if I meet someone in the future that I think could be a good friend then that is nice, if not then it does not bother me”. (p12)

However, physical locations were highlighted as being particularly significant as sites for meeting new people and establishing new contacts in Sweden.
Language programs such as SFI (Swedish for Immigrants), the workplace, the Språkcafe and library were all considered important settings for potential social interactions, building new relationships, and making new contacts, as well as facilitating language learning. For most participants smartphones do not represent a way of establishing new connections. One participant described how they did use their phone to meet new people through social media and dating applications although this was uncommon amongst the participants in general. Nevertheless, whilst smartphones were not said to be used as a primary way of making new connections they are used as an important tool in the process of establishing connections given that they allow for continued contact with new acquaintances. One participant explains: “My phone does not help me meet new people, but it helps me to connect with the people I meet if we want to keep in touch” (p2).

Smartphones can also act as a steppingstone to building a connection through enabling communication with new acquaintances. As discussed in section 5.1.3, some participants used applications such as Facebook Messenger to communicate with people they were not close enough to exchange numbers with. This is illustrated by one participant who explains:

“For me, if I want to talk to special or close friends then I use WhatsApp, but if I want to talk to others that are not close friends then I communicate using Facebook Messenger because I don’t want to give my number”. (p4)

For these participants, communication through smartphones in this sense is a way of connecting with someone new and potentially developing a connection whilst still maintaining privacy and personal details.

5.3.3 News Access

Social media was the most commonly cited source for news among participants and appears to be used more than other more traditional sources such as the television. Speed and ease of access were important factors for many participants when accessing news. Social media applications were thought to be particularly valuable for access to international news due to the range of information that can be accessed and the speed at which news is shared. One participant recounted hearing about the earthquake in Turkey and Syria that took place earlier this year (2023), stating that they first heard about it on Facebook long before any “official” coverage on the TV or radio:

“The earthquake that happened in Turkey recently, the first time I heard about it was from Facebook, I saw it live on Facebook before probably any news channel”. (p1)

Language was also a deciding factor in news access. One participant explained they did not have enough Swedish to be able to understand the news that is broadcast on television and therefore accessing news through their smartphone, where they could choose the language, was a better option.

Many participants also stated that they used social media applications or recommendations from Google for news access more often than referring to specific news applications. The few participants who did refer to specific news
applications named CNN, SVT, Aftonbladet, and Dagens Nyheter as sources that they consult. However, Swedish news applications were used for local and national news within Sweden whilst international news was sought from other sources, often through social media. This suggests participants may feel that news sources in Sweden lack information about international events. One participant expressed that although international news is available in Sweden it is often too generalised and not detailed enough to be sufficiently informative. They stated: “In SVT play there is no news about my homeland, they can have general news about different countries but not so specific” (p3). Several participants also described how whilst they refer to specific media outlets for their news consumption this often takes place via social media. For example, one participant checks the SVT news page through Instagram whilst another follows Aftonbladet’s page on Facebook.

Many of the study’s participants exhibited some level of apathy towards news and news consumption whilst others explained that they actively avoid the news as they find it causes stress and negativity. One participant explained, “it has made me so stressed, so I just stay away from the news” (p11) whilst another stated “I care about what is going on around the world but is not something that I spend time to know” (p12). The fact that many participants expressed apathy or feelings of stress in relation to the news may point to information overload as discussed in section 5.1.2. For these participants, news is accessed most commonly through social media or by word of mouth. One participant explained that they get all the global news they require through stories on Snapchat of people they follow whilst others mentioned partners, social networks, and classmates as common sources of news. One participant felt strongly that there was little reason for them to actively seek out news as they would hear about it from others regardless. They commented: “I haven't been reading the news for like 15 years and I haven't missed anything because everybody talks about everything” (p7). For this participant, news is something that they passively learn about through those around them.

Social media is also a way to filter news. One participant described how they can control to an extent what will appear on their newsfeeds based on accounts they follow and posts that they like. In this way they avoid topics that they believe would induce stress and receive news about areas they are interested in. Another participant described how they previously had specific news applications on their smartphone, but they had deleted them as they felt it was negatively affecting them. Instead, they just refer to certain websites if they feel a specific need to check a news story and, in this way, they are not exposed to constant news updates or notifications. The way this participant uses their smartphone to avoid over exposure to news can also be seen as a way of filtering the news.

However, not all participants expressed negative feelings towards news consumption. For one participant in particular the news applications on their smartphone were very important to them. This participant had a keen interest in politics, and they felt these news applications allowed them to engage with this interest and stay up to date on events in Sweden, their home country and globally. This participant explains:
“I have some phone applications that are so important to me such as the Aftonbladet, and Dagens Nyheter, these are the main Swedish phone apps that I usually use. I also listen to Swedish radio and SVT radio.” (p9)

Here, smartphones can be seen as facilitating information and as a central element in transnational information practices in relation to news consumption but also as allowing the user to adapt, to an extent, the news they consume to their preferences.

Evaluating news sources was also discussed as being important by some of the participants. Several participants viewed official news outlets as potentially more reliable sources than social media. For one participant, approaching news stories sceptically was the best way to evaluate credibility, whilst a second participant verified news they had learnt through social media by comparing it to other sources. This participant explained:

“When I see something on Facebook such as news that is interesting, I usually check on other online news pages. If it’s true or not. Then it is a personal decision to evaluate this information as correct or false”. (p3)

The same participant also commented that the repetition of a news story was often an indicator of credibility. Another participant employs a similar strategy to check the accuracy of Google Translate by switching between different translation applications and comparing the results. For these participants, their smartphones act as a source of news but also as a way of being able to evaluate news stories as it gives them quick access to multiple sources where they can compare what they have heard.

5.3.4 Orientation

One of the most important themes related to smartphone use that emerged from the analysis was smartphones for navigation and orientation purposes. Google Maps appears as the most commonly mentioned application, national and regional transport applications such as SJ (a Swedish railway company) were also mentioned, and one participant stated that they used Eniro or Hitta.se alongside Google Maps.

The most discussed reason for using these applications was for moving around. Participants used different terms in relation to the use of Google Maps such as moving around, getting to places, or going somewhere. All these terms relate to how participants approach navigating the area they are in. Through these applications participants were able to learn how the transportation systems work, how you buy a ticket, how to get from A to B as well as exploring the local area. For example, by exploring the map on Google a person can discover the facilities in a certain location or better understand the geography of that location. Participants discussed using these applications in this way in everyday life, for free time, for exploring and finding attractions and points of interest and for work. Transportation applications also allowed for participants to monitor public transport schedules and track delays or cancellations thus enabling participants to plan travel more effectively.

Google browser was used by several participants to check information in the area such as shop opening times. This was important as the Swedish working
day and week is different from other countries. Some participants commented on shops closing much earlier and were surprised for example that cafes were often not open in the evenings. Shopping and supermarket applications such as ICA were used by some participants to navigate the retail and grocery market in Sweden. Participants used these applications to compare prices and check for offers and deals in order to know the best place to purchase a product. In this way, smartphones are used as a tool to help participants orientate themselves in the Swedish information landscape.

It was apparent that applications through which participants can access navigational information were very important to them. One person declared: “I also cannot live without Google Maps when I’m walking or driving” (p12). For this participant they felt as if they relied on Google Maps and would find it difficult to move around without it, this suggests that it has become an essential tool for them with which to move around efficiently. However, other participants reflected that their reliance on applications such as Google Maps had lessened over time as they had become more familiar with the area they are in. Nevertheless, these types of applications were still considered important for travel and navigation in other areas, for example, for moving around within Sweden or exploring a new city. They stated:

“Maybe in another city I might use apps such as Google Maps to move around, this app I don’t use that much here because I know the city well and I can move around easier.” (p1)

Several participants also discussed how they felt they had learnt to use their smartphones more effectively since moving to Sweden as they had needed them as a resource to supply them with information more than when they had lived in their home country. One participant explains how they had to learn these skills through practice. For this participant, obtaining information with regards to navigation through their phone was not automatic but something that had to be learnt overtime. They stated: “I had to learn how to search the internet for things and move around using the transportation apps and so on” (p2). Furthermore, one participant named their regional transport application as an example of requiring information from a third party. They had not heard about this application previously and therefore did not know it existed and were told about it by their partner. This participant felt this was very important information as through this application they were able to move around more easily by themselves, purchase tickets and schedule journeys as well as getting access to cheaper tickets.

5.3.5 Independence

An important theme that emerged from the analysis was how the smartphone is also used by the participants to establish some level of independence. As discussed in section 5.2, a third party is often needed to help participants navigate the new information landscape, and consequently several participants have felt a sense of dependence or reliance on others. However, the analysis showed that smartphones can help in establishing a sense of independence in a new information landscape. Several participants were conscious of this and expressed how smartphones and more particularly phone applications helped them be more independent and not depend on others. This in turn, helped improve different aspects of their lives. Other participants did not explicitly
express an awareness of their smartphones enabling them to become more independent, however, this was communicated in their descriptions of the practices they have in regard to their smartphones. Görland & Arnold (2022) describe the smartphone as a tool for “self-empowerment” and this is also demonstrated by the participants in the present study. One participant stated: “I can be more independent when I use my phone and usually, I don’t need help” (p12).

Although a third party in many cases may act as the primary source of information, smartphones can be seen as a link to accessing this information. Several participants discussed their reliance on their partners, who had been living in Sweden longer than them, to act as guides through the new landscape. However, when they are not with their partners their smartphones enable them to embark on activities alone such as exploring new areas or taking public transport. One participant explained that they feel confident doing these activities alone because if they are lost or unsure, they can use their phone to contact their partner and ask, or if this is not possible, consult their smartphone applications to help them find their way. Having their smartphone gives them a sense of security in the new information landscape and the confidence to act alone, which in turn helps to build independence. This idea is illustrated in the following quote: “If I miss my route and I’m trying to call him and he’s not online then I check my Google Maps and then I find my way” (p5).

Interestingly, another participant even likens Google Translate to their partner given the amount of time they spend using this application currently in Sweden, indicating the importance of these applications. They declared:

“Of course it’s important. Google Translate is like my partner right now, I’m just having a lot of time with Google Translate and YouTube. There are a lot of channels that are teaching Swedish to people” (p11).

For many participants, the language barrier they experience in Sweden is a contributing factor to their need to rely on someone else. This is an area where smartphones are commonly employed. Challenges relating to language are discussed in more detail in section 5.5.2. The majority of participants discussed and recognised the importance of learning Swedish, and smartphones were regularly used to access language learning materials or platforms. Applications such as YouTube, Duolingo and Lunis were regularly mentioned in connection with language learning. Access to these resources through their smartphones enables participants to take more control in their language learning. Similarly, translation applications such as Google Translate where considered highly important by participants, being labelled their “go-to-app” by one participant. Translation applications were used to translate text, spoken language, and even documents and texts through the camera of the smartphone. In this way, many things participants may have had problems with because of the language could be resolved without having to seek further assistance from a third party. For example, those participants who were SFI students discussed how they can check signs or consult their phones in the classroom. However, one participant did say that using such applications was not appropriate to communicate with people in person, suggesting there are limitations to the usefulness of these applications. The use of these applications enables participants to have more control of an environment that presents challenges due to the language barrier and reduces the extent to which they need to seek further assistance from a
third party to overcome these challenges. The quote below from one participant explains how they view these applications as important in their life in Sweden:

“Yeah, I use google translate all the time. You can translate by using voice, text or even translating a full document by taking pictures. I also use Facebook groups and pages to learn the language freely. They are basic Swedish learning pages and groups but are still useful in learning a few new Swedish words a day.” (p1)

As discussed in the previous subsection (5.3.4), a key use of smartphones among participants was to aid navigation and orientation. Being able to access information related to navigation and orientation through their smartphones gives participants confidence to leave the house and explore without worrying about getting lost or not understanding transport systems for example. This is a very important aspect in the development of a sense of independence. One participant stated that the biggest obstacle for them initially had been “moving around” by themselves as they had very limited prior knowledge of Sweden, were not used to the transportation system and did not have a driving license. This meant an increased reliance on their partner. However, this participant explains that this problem is now “eliminated”, they have learnt to use their smartphone effectively to help them and they “use Google for everything”. Here, the smartphone served as a connection between them and their new environment, providing a sense of security and enabling them to overcome this “obstacle” and navigate different places with more ease and confidence. Overcoming these obstacles enables participants to be more self-sufficient and independent without a constant reliance on a third party. This in turn can contribute to making life in the new information environment easier as one participant explains in the quote below:

“If you are going anywhere, you need Google Maps for you to use so most of the things we do are on our phone, so it makes life easier for foreigners here in Sweden.” (p5)

Smartphones were also important for some participants with regards to work. One participant concisely stated, “simply, without my phone I cannot work” (p1). Participants discussed establishing relationships with clients through email and managing work-related communications, employing specific applications to enable certain jobs such as Uber and Bolt and delivery applications and social media such as LinkedIn and Facebook were used to network and explore job opportunities and receive industry updates. Furthermore, in the case of one participant, their smartphone was used to help make decisions in how work would be carried out from day to day. This participant describes how checking the weather forecast application influences their decision-making process regarding work arrangements in their role as a taxi driver as some weather conditions, such as fog, can make driving a challenging. For another participant, their smartphone acts as a way of making connections with new clients. They explained:

“I meet new clients through my work. My phone helps me a lot with that because when I do business with a client and they like my work, they recommend my company to other people, so I keep getting emails and phone calls from new people for work-related purposes.” (p10)
Through these activities, smartphones are used to help maintain and obtain work in the new information environment which contributes a key step towards independence.

5.4 Factors Influencing Smartphone Use

Another important theme that emerged from the analysis is how practices are often influenced by other factors that are not necessarily directly connected to the practice itself. This section explores how the smartphone use of participants or of people they discussed are influenced by other people, schedules and pace of life, and conditions of use.

5.4.1 The influence of others

Other people were found to often have an influence in shaping the practices of the participants in this study or of people who they discussed. This was demonstrated in the applications people had downloaded on their smartphones. The choice to download and use certain applications was often influenced by others. Many participants were recommended to download applications relating to travel in Sweden or other specific applications for life in Sweden such as BankID. Participants also discussed how preferences of family members influenced application choice. One participant describes how they enjoy using Snapchat and for this reason their partner also has Snapchat despite finding the application frustrating and not useful. They state: “My partner hates it [Snapchat], they only have it for my sake. They always say that if it’s not for you I would delete it” (p12). This participant’s partner continues to use an application that they do not personally appreciate because of their partner’s use of the same application. Similarly, another participant explains that despite hating TikTok they have it because their children have it: “I also have a TikTok app that I hate and don’t use much but I have it because my kids have it and they downloaded it for me” (p9). These two examples show people enjoying an application and wanting to share that with those close to them which influences the application choices of others. Applications that are popular become the norm.

Another participant talked about their mother, a person who had never liked social media or communication applications and chose to avoid them. However, this participant explained that since they had moved to Sweden, their mother, who still lived in the home country, had become an avid user of Viber and used it daily to communicate with her child. For this participant’s mother, their child moving to another country has influenced her smartphone use: Viber now has a clear purpose for her, rather than just being an application, it has become a connection to her child. Another participant described their use of Signal for communicating with certain friends. Their friends decided to use this application because of its privacy policies and this participant therefore uses it to stay in contact with them. Another participant mentioned having applications such as Viber, Telegram, and Snapchat installed. Even though they did not use them often, they felt that deleting these applications could result in losing contact with the individuals who relied on using them, so they were maintained for that reason. This participant explained:
“Viber, Telegram, and Snapchat apps I downloaded but I don’t use them much. I actually don’t like them, but I have them because I have one or two friends that use them, and if I delete these apps I will lose contact with them, and I don’t want to do that.” (p9)

These examples demonstrate how the choices made with regards to applications are influenced by a desire to stay connected or by other people’s preferences, which in turn, influence and play a role in shaping practices connected to smartphone use.

5.4.2 Busy Life and Ease of Use

Many participants discussed how busy schedules affect how they engage with information and the decisions they make in this regard. When discussing free time activities in the interviews, one participant stated, “I don’t know where to find these different events, to be honest, I don’t have much free time to search for other stuff” (p2). For this participant, their busy schedule influences their free time activities as they continue with the activities they are accustomed to rather than exploring other activities and local events. Furthermore, not only does their busy schedule limit the time they have available to search for this type of information, but searching is also considered time consuming. Another participant discussed their use of Reddit which they use to access news and articles connected to areas of interest. This participant stated that they were often quite frustrated with the information they found through this source and found it repetitive, unreliable, and potentially biased. However, they continue to use it as it is an easy way of absorbing information. They explained that actively searching for something interesting would require much more time and effort.

A busy lifestyle also influences how the smartphone itself is used. One participant shared how their limited free time means that certain applications they have downloaded go unused and these time limitations therefore restrict application use. They noted: “A few games apps, I downloaded them thinking that I will have time to play but as I said, I don’t have much free time” (p10).

However, for another participant the way they use their phone is again influenced by a busy lifestyle, but this participant uses their phone as a tool for helping them manage their busy schedule. This participant explains how they use reminders and alarms to help structure their day and use the notes application to create lists so that things do not get forgotten. They considered this a very valuable tool.

5.4.3 Conditions of Use

Conditions relating to the use of applications or webpages also played a role in shaping participants’ practices. The two most frequently recurring ideas among participants were that advertisements were irritating, time-consuming and to be avoided, and that free applications were preferable.

Advertisements were seen as a major deterrent by many participants, and this affected the way in which smartphones were used. Participants described how advertisements may cause them to avoid certain applications or websites, look for ways of reducing or eliminating ads, limit the time spent using a resource
because of ads or favour resources that did not employ them. One participant explains how they specifically use Google Chrome as their browser and have sought out a “hidden way of searching” so that they can avoid ads. They explained:

“If you use Google Chrome, I like to use it and there’s a hidden way of searching so you don’t have any history of searching and they cannot track you so you don’t get any ads so that’s a good thing to use.” (p7)

Another participant remarked that they found YouTube particularly bad with regard to advertisements and this greatly influences the time they spend using the application. This same participant is also more likely to navigate away from a site that has pop-up ads and find an alternative resource without advertisements. They illustrate this in the following quote:

“Sometimes when I’m like at home in my home country and I don’t have anything else, and I want to watch some YouTube and it will end very quickly because it’s very time-consuming to go through ads that you can’t skip and they’re 30 seconds long and there’s 3. YouTube is the worst, I think. Some sites like can be filled with ads and pop-up windows so I usually just, if I need to click more than once off of an ad I just go back and find a new site and yeah like um, I don’t know any other.” (p8)

The same participant explained that their smartphone use in general is greatly influenced by advertisements and they therefore often favour a computer where they can use ad-blocking software instead. They explained:

“a part of the reason why I do not use my phone that much is because of a lot of ads, and I can get an ad blocker on my PC so there’s no way I want to watch YouTube or anything because there’s like 10 ads, I hate it so I choose specifically to not use my phone.” (p8)

Having to pay for applications or subscriptions to applications was also discussed by several participants as a deterrent and choice of resource was often based around whether it was free to use. Participants were more likely to use and spoke more positively of applications that did not require paid subscriptions. This idea is illustrated in the following quote:

“I forgot to mention that sometimes I use YouTube to listen to audiobooks and music. I know that there are phone apps that can be specifically used for audiobooks, but they most likely require payment fees that in my opinion are not worth it, plus they do not include books in [my first language].” (p2)

This participant uses YouTube to access audiobooks as an alternative to other services that require a fee whilst another participant discussed how they access information relating to learning Swedish through Facebook as the information can be found “freely” there. For these participants, it may then be the case that avoiding a paid subscription takes priority over avoiding advertisements whilst for others the opposite may be true. However, these are both key factors that contribute to the shaping of practices observed in this study.
5.5 Challenges to Information Access

The results of this study show that most participants felt access to information had become easier over time and the challenges connected to information access had become fewer. Several participants stated accessing information in Sweden was in fact quite easy and they found most things to be accessible online. Of the 12 participants in this study, a small number had been living in Sweden prior to smartphones being readily available to the public. These participants expressed how access to information was much easier today with smartphones and the Internet to hand. The interaction between two participants below demonstrates this. The first participant had been living in Sweden since before the introduction of smartphones whereas the second participant had access to smartphones and the Internet at the time of moving to Sweden:

P1: “At the time we only had old mobile phones such as GSM and LTE services, and no smartphones, so to get some sort of information we needed we had to call different services to get information. Routines were manual, we used paper and pen, not like today where everything is done online, now it is much easier.”

P2: “For me, it was much easier, everything was easier here.”

Information being seen as becoming easier to access over time shows that the more familiar one becomes with an information environment the easier it becomes to navigate through that environment. While this may sound obvious, there is an interesting observation that can be made. When viewed through the theoretical lens provided by practice theory and in particular the notion of transnational information practices, this can be understood as practice playing a role in shaping practice. That is to say, the activities one is involved in when having moved to a new information environment and the activities one observes around them, as well as practices from the previous information environment may lead to how activities are strung together and enacted in the future. These initial practices may then shape how a person continues to engage with information. For example, through obtaining advice from family and friends who have also immigrated, (the initial practice), practices in the new environment are likely to be shaped in some way by the advice received. Smartphones facilitate this as contact can be made easily and from many locations. The example given in section 5.2 of a participant trying to make an appointment for a haircut for the first time in Sweden also illustrates this idea. The practice they had previously been accustomed to was to go in person to the hairdresser’s. On enacting this in Sweden, they learnt they had to make an appointment online. Making appointments and other bookings has now become their normal way of doing things, however, this new practice was in part shaped by the previous practice.

Yu et al. (2020) discuss how an information action that leads to a positive experience often encourages repetition of the action and more similar actions whilst a negative experience can lead to the discontinuation of an action. This idea can also be applied to smartphones. If a person has a positive and useful experience of using their smartphone, they may be more likely to continue using it for other activities in the future. The following quote from one participant demonstrates how they have found it easier to access information in Sweden over time and that their smartphone as well as information from third parties, in this case their partner, have been instrumental in helping to initially
learn and navigate the new information environment. Using their smartphone in Sweden is now an established practice for them:

Interviewer: “Do you find it difficult to access the information you need for life in Sweden nowadays?”
P12: “Hmm in the beginning yes, but not anymore, like I said before, I use Google for everything to find all information that I need, and my partner also helps me a lot with the things that I need to know and I help him with many stuff that he doesn’t know as well, so nowadays it is not hard as it was in the beginning when I first moved here.”

However, difficulties can occur when elements of the new information environment cannot be informed by a previous environment making it harder to learn about the new environment quickly. This is clearly summarised by one participant: “The problem is that some immigrants do not have information about the existence of the information” (p9).

One common example was the use of the BankID application in Sweden. Several participants discussed how in their home country there was not an equivalent application or that identity verification applications were not used in the same way or to the same extent as they are in Sweden. One participant recounts how they discovered the existence of BankID for the first time when trying to schedule a doctor’s appointment, stating:

“I couldn’t do it because I didn’t have the BankID, I couldn’t log in into anything and I couldn’t register so that was certainly a point where this is an important thing” (p8)

It was through this experience that they discovered BankID and understood the importance of having the application for their everyday life in Sweden. They also experienced frustration that they had not had the information to obtain the application and found the process complicated and challenging. They declared: “Like it was a mess in my opinion. Like, you can’t do anything before you have that thing!” (p8)

Similar experiences were shared by other participants and with other applications, for example Swish. One participant explained that at their school canteen payments are only accepted through the Swish application and so not knowing about the application or not knowing how to obtain it can present challenges. Another participant described how they learnt about both BankID and Swish through their bank when they opened an account. The same participant felt strongly that information about such applications, which they considered to be a core part of everyday life in Sweden, should be provided to immigrants on arrival in the country. In the quote below they reason that this was essential information given the reliance on smartphone applications in everyday life in Sweden: “Yes, this is Sweden, and we are living with technology here and 70-80% of their, our lives it’s working by apps” (p11).

Moreover, participants in this study highlight that searching for information can be challenging when you do not know exactly what you are searching for. Even when searching for specific information it can be difficult to find something if you do not have the right wording or know the name of a website. One participant gave the example of trying to google a football club for their
child that had been recommended to them, but they could not find it through a Google search. They therefore relied more heavily on Facebook and Instagram pages.

5.5.1 Identifying Key Obstacles

Another common finding was that certain types of information appear to be more problematic, such as legal information, information connected to the health system, and culture. As discussed in section 5.5 in relation to the use of BankID in Sweden, areas in which the information landscape is unfamiliar often present problems. Areas of the information landscape may be unfamiliar because they differ to that of the home country so previous knowledge cannot be transferred to the new landscape. Examples of areas that were unfamiliar due to differing systems are health systems and transportation systems. One participant explained their difficulties with the transport system in Sweden, the system differed to that of their home country, and it therefore made navigation and movement challenging for them initially. They explained:

“The main obstacle for me was moving around by myself, I did not have a problem communicating with people in English, but getting to places by myself was a bit of a struggle because I was not used to the transportation system here and I did not have a driver's license, but now I’m used to the transportation system, and I have a driver’s license so this issue is now eliminated.” (p12)

Areas of information may also be unfamiliar due to their complexity or the infrequency with which a person encounters such information, for example legal information as well as a combination of different systems and complex information. Information from government agencies was given as an example. One participant expressed that they knew information was made available online by these agencies but that the difficulty came when searching and locating the correct information. Concerns about having an accurate understanding of laws and regulations in Sweden were also expressed. Previous research has similarly found that official sources often present greater challenges to accessing information (see for example Allard, 2015; Kaufmann, 2018; Suh & Hsieh, 2019).

Another area that posed problems for participants was the Swedish culture. Several participants expressed that this was a challenging area to gain information about or that it was an area that they would like to know more about. Culture, unlike other discussed areas of information such as the Swedish transportation system, is much more abstract. It is not an area of knowledge that can be learnt simply through an online search, “you can’t google this information” as one participant stated. Cultural information is much more nuanced and complex and therefore more difficult to find answers to. One participant expressed this idea in the following quote: “There are a lot of things about what to do and not do that are unknown to us immigrants” (p1).

As a result, the role of smartphones in providing access to cultural information may be limited. However, the use of smartphones in the Swedish context does form part of the culture, for example the use of BankID and payments through Swish. Therefore, being able to use a smartphone effectively in this way helps, to an extent, to become more fluent in the culture. Furthermore, competency
with the language and time spent with others in Sweden were expressed as being instrumental in the building of cultural knowledge. One participant explained how they had learnt local knowledge from teachers and parents at their child’s day-care. However, several participants expressed how making new contacts in Sweden could be challenging. One participant had experienced that the conventions around developing friendships in Sweden were different to what they were accustomed to. From a practice approach, this may again be an example of the practices of the social context influencing how one develops new practices. In this case, this participant has encountered a difference in practices related to social interaction and as such this may influence how they then learn about culture in Sweden.

5.5.2 Language

Language was most commonly discussed as a cause of challenges to information access. Furthermore, several limitations to online sources and smartphone applications with regards to language were identified. For example, one participant commented that they had found information to be limited when the option to change language was selected. They gave the example of 1177, an application and website that gives information about health-related topics in Sweden, stating that when the language was changed to English from Swedish they could access a much smaller amount of information. Saidabdala’s (2020) similarly found that information from translated pages was limited. Another participant expressed frustration at being able to access a limited number of videos on YouTube with subtitles in their language of choice. Transnational practices may be adopted due to these difficulties. One participant described how they preferred to use a version of an audiobook application from their home country rather than the Swedish version as, in this way, they could set the language for the materials they wished to listen too. Another participant similarly discussed how language options played a role in their choice of applications for audiobooks and music. Obtaining advice relating to health and well-being via smartphone applications from the home country rather than resources in Sweden was also discussed by one participant. They choose to use these applications because they were accessible to them through their smartphone, and they found it easier to discuss such topics in their first language. Furthermore, participants in many cases stated their smartphones and applications were set to either their first language or English.

The language barrier may also mean that participants in this study are more likely to look to a third party to facilitate information access. One participant describes the need to obtain assistance from others when initially arriving in Sweden. However, once they had obtained some knowledge of the language the need for this assistance lessened. They stated: “I could not speak Swedish, so I had to get help from others about all kinds of information until I started learning little Swedish” (p1).

Many of the third parties discussed by participants have been partners or close family members and they have played an influential role in helping them to obtain access to information and understand the new information environment. Another participant explained that they knew very few people when first coming to Sweden which made obtaining assistance from third parties more
challenging. This, in turn, motivated them to learn Swedish as they saw learning the language as a way of being able to navigate the new environment more easily. They explained:

“It was so difficult to find information about life in Sweden at the beginning, I could not speak the language and had almost no one here in this country to help me, which is why I wanted to learn the language as fast as I could.” (p9)

Smartphones can also be seen to serve as a third party with regards to language. One participant described how they rely on their phone to help with the language barrier by recording things they do not understand so that they can translate them later. They also use the voice recording function to translate what they want to say into Swedish. Many participants discussed applications relating to language learning or translation. Google Translate in particular was heavily relied upon by participants although limitations were acknowledged. One participant described how Google Translate was useful in certain contexts but not for communicating directly with others. Several participants discussed the inaccuracies of Google Translate. For one participant, translations provided by Google Translate were considered accurate enough for their needs: “it’s at least the right direction for the word so I think Google Translate is fine” (p7) and they added how they prefer to use Google Translate rather than consulting a dictionary as it is much less time-consuming. Another participant described how they use Google Translate in tandem with another translation application. In doing so they are able to evaluate the accuracy of the translations.

The importance of face-to-face learning was also highlighted as were the limitations of online learning. Several participants discussed their experiences during the pandemic and how they viewed this to have affected their Swedish language progression. Although lessons were available through online platforms and language applications were also used to supplement learning, this was not considered adequate for learning the language in comparison to physically being at school.

5.5.2.1 Knowledge of other languages

Many participants saw having a knowledge of English as important in Sweden as they found it helped facilitate access to information. One person also stated that their prior knowledge of German as well as English had helped them be better prepared and equipped to learn the Swedish language. The idea of a prior knowledge of English as being helpful in navigating the information landscape in Sweden is illustrated by one participant who explains how this allows them to feel more comfortable in making enquiries and carrying out everyday activities:

“When we go to the hospital or bank or something, you don’t have nerves or stress because all the people here speak a little bit English and I do, and everyone can speak English so it’s not very difficult and everyone is smiling and helping each other.” (p6)

Another participant shared how their knowledge of English enabled them to help family members access information. Lloyd and Wilkinson (2019) discuss how participants in their study often acted in meditational roles as they had
skills that enabled them to more easily access information other family members did not have. In the present study, this participant explains how their language skills enabled them to act in a meditational role for their family members. They commented:

“it was so difficult at the beginning, but the good thing is that we were a family, me and my brother could speak English so we could help the rest of the family to find out about things and move around and so on.” (p10)

However, a knowledge of English and other languages is not always seen as a positive. For one participant, although being able to speak English allows them to communicate with others in Sweden, they also feel that it makes it much harder for them to learn Swedish. They explained:

“We speak [first language] at home, and my relatives, friends, and family all speak [first language], so it is hard to find someone to practice with. I also speak okay English, and almost all Swedes speak English, and I can communicate with them in English, which made it even harder for me to learn the language. But now I’m learning in school and in Språkcafe, and I also try to speak to my kids and husband in Swedish.” (p12)

This participant views their ability to communicate in English and the use of another language in the home as limiting their progression with the Swedish language. This in turn may mean that although access to information is enabled in the short term through communication in English, that a more holistic or longer-term comprehension of the information environment is made more difficult. A potential illustration of this may be with regards to culture as discussed above. Some participants felt this was a difficult information area to obtain access to and it is possible that language plays a part in this.

5.6 Feeling at Home and Belonging

The participants in this study generally spoke positively of life in Sweden discussing the benefits of living in the country, such as education, opportunities for work and training, and the quality of life. Several expressed that they were content with their life and only one participant said they were seriously considering moving as they felt they would have a better quality of life in an English-speaking country. Language was viewed by many participants as a crucial step for improving or establishing their life in Sweden. Language, in this study, is then a key factor in feeling as if one belongs, without which one can feel on the outside or excluded from certain aspects of life. One participant described how after three years they felt comfortable in Sweden and that they had learnt a lot about life in the country, but that language was still a missing element for them. They stated: “I think the language is the last step to like feel totally welcome here” (p7).

Several participants expressed feelings of contentment with their life in Sweden but the concept of feeling at home presented challenges for many. One participant described how they felt a sense of belonging in both Sweden and their home country: “I belong here, but I still belong there” (p9). The same participant also used an analogy to express how life for them away from their home country was good but there was something underlying for them that was missing in the new environment which meant they were not able to feel
completely at home. Having this sense of belonging in two places was problematic for them as they have a constant sense of longing. They expressed this idea in the following quote:

“I feel like a palm tree that can only survive in the first environment, even if this palm tree manages to survive in a new environment but it will never be as green and produce fruit the same as before.” (p9)

However, comments describing a sense of being at home in connection to friends, family and people were also common, suggesting for many participants a sense of belonging or being at home is more about relationships and connections than a geographical location. One participant described this sentiment in this way: “home to me is people, not places” (p12). In this sense, smartphones can be seen as playing a role in the creation and maintenance of a sense of being at home as they are used to maintain contact. The practice of maintaining contact through smartphones may then lead to an increased sense of belonging as a person is able to continue the relationships that made them feel at home despite being in a new environment and different geographical location.

In addition to maintaining contact to family and friends, smartphones also enabled participants to maintain contact with elements of their life before they moved to Sweden. In the case of one participant, through using their smartphone they were able to continue running a business back in their home country by receiving messages and updates, and correspondence with customers. This was important for this participant as they felt that in Sweden they were not able to work and make a living for themselves in a way that they were used to, which they found restrictive and frustrating. However, continuing to run a business allowed for part of their life in their home country to continue in Sweden. These types of transnational information practices which take place through smartphones enable participants to maintain elements of their life before immigrating, parts of themselves, which may contribute to a sense of belonging in the new environment as well.

Maintaining interests through smartphones was also a common theme. Several participants discussed how the pace of life and cultural differences in Sweden had been a challenge for them. For example, several participants expressed that in the area they lived there was not that much to do in free time and shops and restaurants closed very early. They found the pace of life much slower than what they had previously been accustomed to and there were fewer services and amenities available. One participant used their phone as a source of entertainment in response to this, accessing information and entertainment through TikTok as well as communicating with friends in their homeland. This participant uses their smartphone to try to maintain the social life or feeling of the social life they had previously experienced before immigrating. They stated:

“In my homeland I was always out with friends and did not have much time to use the phone, but when I moved here, things were different, there were not many friends here so mostly I use my mobile phone to communicate with my friends there in my homeland.” (p4)
Shopping activities through smartphones were also discussed by some participants. For several participants, shopping was a “fun” activity that their use of smartphones facilitated. One participant explained that they feel the area in which they live in Sweden has limited shopping options but through their smartphone they are able to buy whatever they need. Another participant also discussed how their smartphone enables finding products and how through Facebook Marketplace they were able to furnish their new home in Sweden. Several participants also commented that they had more applications now as they maintained applications from their home country and had downloaded new applications in Sweden. One participant explained that they kept shopping applications from their home country as it facilitated the purchase of presents to send to friends and family members.

Smartphones were also used to help adapt to life in Sweden in terms of routine and daily life. Several participants discussed using supermarket and other shopping applications before going to the shop in person to check offers and prices and see what was in stock. One participant explained that the pace of life in Sweden had been challenging for them initially as they perceived it to be much calmer than their home country. They had had problems initially adapting to opening hours for example. However, they now felt that they had successfully adapted into the Swedish pace of life and had used their smartphone to help them adapt by setting alarms and reminders, checking opening hours, planning meals, writing shopping lists, and scheduling activities from the space of their smartphone. In this way, the smartphone acts as a tool to aid adaption to life in the new information environment. Smartphones then may be understood as facilitating activities that the participants in this study carry out to help them feel more at home or as if they belong. Moreover, through these information and transnational information practices enacted with the help of smartphones, a sense of belonging may also be increased.
6 Discussion

This chapter starts by discussing the results of the study in relation to the three research questions outlined in section 1.1. The results are then discussed in relation to the previous research and theory presented in chapters 2 and 3. This discussion has been divided into the following subsections: Understanding the New Information Landscape, Maintaining Connections to Home, Creating a Sense of Belonging and Limitations of Smartphones in the Immigration Process. The final section of this chapter considers the study’s limitations and gives suggestions for future areas of research.

6.1 Answering the Research Questions

This section returns to the three research questions of this study and attempts to provide brief answers based on the results presented in chapter 6.

1. How do immigrants to Sweden reason about accessing information through smartphones?

The results of this study highlight that smartphones are considered to be extremely important by the participants and are thought of as a valuable tool in their immigration journeys. Smartphones act as a space for participants through which they can learn more about their new information landscape, helping them navigate the new environment and orientate themselves, overcome language barriers and build a sense of independence. Smartphones also play an important role in learning about practices in Sweden such as booking appointments in advance and working hours, for example cafes closing early in the evening. However, in order to tap in (Lloyd & Wilkinson, 2019) to the information smartphones can provide, prior knowledge is often needed. This knowledge may be either based on someone’s prior experience or through a third party, often someone within an already established social network or from an official organisation. Many participants acknowledged the important role partners, family members or others around them played in the immigration process which helped them to use their smartphones more effectively in Sweden.

Participants also reason that convenience is a key component. Information that is restricted due to advertisements or paid subscriptions may be avoided and activities that are the least time-consuming or require the least amount of effort are often favoured. Many participants also reason that smartphones may present some level of risk either related to privacy concerns or overuse and overexposure to information.

2. In what ways, if at all, do smartphones serve as intermediary tools between Sweden and the home country?

The results of the study show that for participants, smartphones enable many transnational information practices. Smartphones are used as a way of accessing global news, in particular via social media applications. In this way, international news can often be accessed more quickly and in more detail as well as in a language chosen by the participant. Furthermore, news access in
this way also better allows participants to choose what type of news they want to receive. Smartphones are also seen to give participants more connection to their first language by providing access to resources in that language. This serves as an intermediary tool between Sweden and the home country in two ways: first by allowing participants to experience a resource, for example, an audiobook, in their first language which provides a connection to the home country and secondly, by giving access to resources from the home country. The most important way smartphones act as an intermediary tool for the participants in this study is by helping to maintain contacts and ties to the home country and family and social networks in other locations through social media and messaging applications.

3. How are smartphones implicated as intermediary tools in shaping the sense of belonging of people with migration experience?

Smartphones were shown to help establish a sense of orientation in the new country and were used for navigation and language purposes. For some participants, smartphones were also used to find or support work. However, this is limited as the study also highlights the importance of third parties in helping to navigate the new information landscape. Several participants expressed that feeling as though they are reliant on others affects their sense of independence. Having access to smartphones through which participants can effectively help themselves plays a role in building independence in the new environment which in turn can assist in the development of a sense of belonging.

Furthermore, smartphones enable contact with social networks in the home country and internationally. Through maintaining regular contact and being able to share aspects of everyday life with those close to them lessens, to an extent, the feeling of not having one’s social networks physically nearby. This is extremely important for how at home an individual feels and can contribute to a sense of belonging.

6.2 Discussion in Relation to Previous Research

Many of the studies discussed in the literature review (chapter 2) have found online and digital sources to be very important during the immigration process (see for example Díaz Andrade & Doolin, 2016; Kaufmann, 2018; Lloyd et al. 2017; Shoham & Kaufman Strauss, 2007). The present study confirms this and finds the same to be the case. Through smartphones, participants could access a range of online and digital sources that supported their immigration process. Kaufmann (2018) found that people have a reliance on their smartphones and often form an emotional attachment to them. Whilst the extent to which participants in this study rely on their smartphones varies, all participants consider their smartphones to be useful and valuable regardless of time in Sweden. However, the way in which smartphones are used and valued may change with time. This is an area that would benefit from further research. For some participants, their smartphones represent a way of navigating as well as managing the new information environment and consequently an emotional attachment is formed. Comments likening smartphones to a companion, a baby and a partner exemplify this.
6.2.1 Understanding the New Information Landscape

A salient way in which smartphones were found to assist in the immigration process is by helping participants make sense of the new information landscape. An important way in which smartphones were used to understand the new information landscape was for navigation and orientation purposes. Other studies have also identified smartphones as important sources for navigational and orientational information (see for example Gough & Gough, 2019; Görland & Arnold, 2022; Lingel, 2013). Smartphones have also been found to help overcome the difficulties of everyday life in a new country after immigrating (Kaufmann, 2018). Participants in the present study carried out activities such as referring to translation applications to translate signs they could not understand, get directions to help them navigate around their local area or farther afield, and google opening hours of shops, among others. Participants identified factors relating to cultural differences and differences in the pace of life as challenging on first arriving in Sweden. For some participants, they were unaccustomed to the working hours that are typical in Sweden which led to a level of disorientation. However, being able to refer to their smartphones to check this type of information helped them adapt and develop a better understanding of how elements of the new information landscape work and fit together. This finding is in line with Díaz Andrade and Doolin’s (2016) conclusion that ICTs play an important role in understanding the new society. Khoja (2020) studied digital media use and similarly found that digital media provide “a means to cope with the new environment” (p. 69). Smartphones, as a way of connecting to digital media, are used in this way to help understand and manage the new information landscape.

Lloyd and Wilkinson (2016; 2019) highlight the important role everyday spaces have for learning about a new information landscape. Lloyd and Wilkinson (2019, p. 253) state that digital spaces “form a seamless part of everyday life for all young people” and therefore everyday spaces can be physical, virtual, digital or emotional. Given the smartphone’s role in this study as a tool for helping the participants understand the new information landscape, smartphones can also be seen as an everyday space. Lloyd and Wilkinson’s (2019) study focused on young people and consequently their findings are in relation to young people. However, this study, whose participants ranged in age from early twenties to early sixties, also found that smartphones, which give access to many digital spaces, were entwined in the lives of all participants, and used daily for many activities. In this study, age does not play a role in whether smartphones are considered important and used, however, the effect age may have on practices, or the extent of practices is unknown. This is an area that would benefit from further research. Lloyd and Wilkinson (2019) discuss the concept of tapping in which they define as developing “ways to recognize, locate and draw information from the host community or country” (p. 253). They state that in order to effectively tap in to a space, certain literacies are required. They specifically discuss digital, local, and visual literacies. In other words, prior knowledge helps a person make sense of a new environment. Lloyd (2010) discusses how prior information landscapes play a role in understanding a new information landscape. Allard (2015) similarly observed that the understanding of a new information landscape is developed through reference to previous information landscapes: “understandings of place are referential” (p. 194). This can also be seen in the findings of the present
study as digital literacies are required to effectively use the smartphone, that is, one must already have some level of know-how in terms of using a smartphone: how to download applications, how to best use Google Maps, to give just a few examples. Several participants stated that they feel they have learnt to use their smartphones more effectively since living in Sweden. Through using their smartphones, participants learn to better and more effectively use their smartphones in the Swedish context which in turn leads to an improved understanding of the information landscape.

From the results of the present study, local literacies are also shown to be critical in order to use smartphones effectively to help understand the new environment. Lloyd and Wilkinson (2019) explain that local literacies concern being able to connect with “local information and knowledges that are situated, contingent or drawn from local experience and expressed at the moment of practice” (p. 256). This is an area that was found to be problematic in the present study as participants often did not initially have the required local literacy. Local literacy was required, for example, to know which applications were needed in the new information landscape or even that an application for such a purpose existed. Participants, therefore, relied heavily on family members and friends to provide this information. In many cases, a friend or family member had been in Sweden longer than the participant and had already acquired the relevant local literacy to be able to pass on this information. Therefore, social networks and interpersonal information sources also play a very important role in understanding the new information landscape (cf. Allard, 2015; Pyati, 2018; Shoham & Kaufman Strauss, 2007). The effectiveness of the smartphone in helping to understand the new information landscape may be reduced without this local knowledge, which in many cases is provided through interaction with other people.

Previous research on the process of immigration has found that the choice and need of sources of information change over time (Allard, 2015; Shoham & Kaufman Strauss, 2007). In the present study, personal contacts were often the most important primary source of information through which the phone could then be used as a secondary source of information. However, contact with third parties in some cases is facilitated by the use of a smartphone implying that this is an intertwined and iterative process. Allard (2015) also found that the information practices of newcomers were iterative and change as more of the information landscape is understood. Participants in the present study also discuss changing practices over time as they adapt to the new information landscape. For example, many participants discussed relying less on navigational applications such as Google Maps over time but that these were then employed to explore new areas of the country.

6.2.2 Maintaining Connections to the Home Country

The results of this study show that smartphones play an important role in maintaining connections and staying connected with the home country and elements of life before immigration. Many of the activities carried out through smartphones by participants pertain to this but especially maintaining contact with social networks. This finding corroborates the conclusions of previous research that has found digital sources and ICTs to be very important for maintaining ties and connections in the process of immigration (see for
example Benítez, 2012; Díaz Andrade & Doolin, 2016; Mehra & Papajohn, 2007; Nedelcu & Wyss, 2016; Suh & Hsieh, 2019). Lloyd and Wilkinson (2016) found that social media in particular was important for maintaining contact with all participants in their study naming Facebook as the primary method for communication. In the present study, social media was often discussed by participants as a way of staying connected to the home country although the most commonly named applications were TikTok, Instagram and Snapchat. However, messaging and communication applications such as WhatsApp, Facebook Messenger and Viber were used most often as a way of maintaining contact with friends and family.

Allard (2015) discusses the transnational information practices people who had moved to Canada from the Philippines engaged in with the main objective of staying in touch and connected with the home country. The types of activities carried out by participants consisted of “daily mundane conversations with family and friends in the Philippines and elsewhere; soliciting settlement advice from trusted family and friends in the Philippines; and chatting, emailing, sharing photos, and browsing social media profiles of friends and family in the Philippines and around the world” (Allard, 2015, p. 199). Many similar transnational activities were also found in the present study. Regular conversations with friends and family outside of Sweden took place through messaging applications, checking social media profiles and newsfeeds was a way of staying connected with the lives of friends and family but also life in the home country and outside of Sweden, and elements of life in Sweden could also be shared with friends and family back home for example through sharing photos via applications such as Snapchat.

Furthermore, news from the home country and international news was obtained most often through social media channels but also through specific news applications as well as digital media such as audiobooks and videos on YouTube that could be accessed in languages other than Swedish. Other studies have also highlighted the importance of access to international media after immigration (Allard, 2015; Khoja, 2020). Díaz Andrade and Doolin (2016) found that ICTs can help express cultural identity. For participants in the present study, activities such as listening to audiobooks in their first language or staying up to date with the news in their home country via social media are ways of connecting to the home country and, as such, a way of expressing their cultural identity in their life in Sweden.

Christiansen (2004) claims that a low availability of appropriate media in the new country such as access to news on television relating to a home country or in a language that can be understood promotes these types of transnational information practices. This is confirmed by activities carried out by participants in the present study. Social media was preferred by many as a source of international news as it relayed news more quickly and covered more stories and in more detail than the news sources within Sweden. Language was also a factor for many participants as news in Sweden could not always be easily understood. Furthermore, by accessing news through smartphones, participants have more choice of news sources as multiple applications from different countries can be stored and accessed almost simultaneously.
Allard (2015, p. 199) suggests that information practices, even when transnational, can positively affect the immigration process and help immigrants in settling into life in a new information landscape. Mehra and Papajohn (2007) studied the Internet use of immigrants to the USA and conclude that the Internet served two key purposes. Firstly, it enabled communication with friends and family in the home country which helped promote feelings of comfort and support. In other words, even though a person may not physically be near their social network, access and communication through digital channels enable them to still feel many of the social benefits. Secondly, the Internet gave access to information that helped participants understand and better manage their new surroundings. As Allard (2015) suggests these types of information practices, when combined, may contribute to an improved experience in a new information landscape. Baumeister and Leary (1995) state that for an individual to develop a sense of belonging they require regular, ongoing, positive interactions with the same people. The practice of maintaining communication and connections with an individual’s social network through the smartphone may then help towards developing a sense of belonging as this important aspect is maintained, albeit digitally.

6.2.3 Creating a Sense of Belonging

Through helping to shape an understanding of the new information landscape as well as acting as a link to contacts that form an individual’s support network, smartphones assist the participants of this study in developing independence. Similarly, Görland and Arnold (2022) found smartphones to reduce feelings of helplessness and thus conclude that smartphones are tools for “self-empowerment”. They reason that an increased sense of independence and empowerment can have a positive effect on an individual’s well-being. Drydakis (2021) also found that smartphone applications have the potential to positively affect a person’s well-being. To develop a sense of belonging in a situation, an individual must have some feeling of contentment or comfort within the situation. Thus, increased well-being suggests it may be easier to develop feelings of belonging. A sense of belonging can also be found through digital media in which one recognises themselves or aspects of their own situation (Khoja, 2020). In this study, smartphones are used in a way that helps participants develop a sense of familiarity in their new surroundings: Google Maps and similar applications are used to become more familiar with the area, and developing a routine and familiarity with the way things work in daily life with the assistance of the phone helps participants feel more accustomed to life in the new information landscape. This may then lead to an improved sense of belonging.

Moreover, Caidi et al. (2010) discuss how the immigration process can become increasingly “difficult and frustrating” when the information needed in order to navigate the new information landscape and feel included in the new society is not easily available. Participants in the present study describe how problems relating, for example, to the language barrier or not being able to work as having an impact on their sense of self. However, this study finds that smartphones can be used as tools to help facilitate this process by enabling access to information, which is required to navigate the new environment and, in doing so, help avoid feelings of exclusion which will affect the development of a sense of belonging.
Christiansen (2004, p. 186) discusses how researchers and the media have previously suggested that engagement in transnational practices may present issues for integration. Several participants discussed how their use of English and their first language in Sweden has prevented them from learning Swedish. Language is considered an important element of being able to integrate into the information environment. Furthermore, practices such as maintaining an old phone number rather than obtaining a Swedish number may also pose problems as certain activities in everyday Swedish life require a phone number. Thus, by not having a Swedish number an individual may not be able to partake in certain activities which has the potential to limit integration to an extent. However, some transnational information practices may in fact promote integration and a sense of belonging (Christiansen, 2004). Facilitating contact with social networks in the home country and internationally provides support which is important for one’s sense of belonging and integration process. In this sense, maintaining an old number which gives more access to social networks and important contacts in the home country may in fact be positive for integration and a sense of belonging.

Moreover, practices and experience from the previous information landscape help inform the new information landscape (Allard, 2015). Prior knowledge and experience can be used to more quickly and thoroughly make sense of the new information landscape, for example, experience of using Google Maps helped participants navigate through their new location more easily. Even instances in which expectations based on prior experience differ to the way of things in the new information landscape, a better understanding of the new landscape can be developed through these experiences. Allard also suggests that the experiences and practices an individual adopts in the new information landscape will affect their understanding of the previous context. For example, in this study, how participants now use their smartphones for many things such as payment will have an effect on future “expectations and activities” (p. 183). This also means that each participant’s understanding of a new information landscape will be different based on the characteristics that form their prior landscape. For this reason, further research that takes a narrower approach is also needed. Lloyd and Wilkinson (2019) discuss how through encountering a new landscape, new information practices are required to understand the new landscape, to maintain contact with the previous landscape and also to construct a new landscape that incorporates both the old and new landscapes (p. 257). In the present study, smartphones are an instrumental tool in helping participants achieve this.

### 6.2.4 Limitations of Smartphones in the Immigration Process

The results of this study have shown smartphones can play an important role in both learning about and understanding a new information landscape, and in maintaining contact with friends and family, and a connection to the home country. These practices may in turn help in developing a sense of belonging in the new country. However, this study has also found that there are limitations to the usefulness of smartphones, in particular with regards to learning about the new information landscape.
The importance put on face-to-face learning as opposed to learning digitally was made apparent through the analysis. Participants felt face-to-face lessons or contact with other Swedish speakers was necessary to learn the language. It was also apparent from the analysis that third parties were often relied on as a primary source of information, which in many cases was required in order to then be able to effectively use a smartphone in the new information landscape. Khoja (2020) similarly found, in their study of digital media in the lives of immigrants to Sweden, that although digital media was important for informing life in Sweden, it could not “be utilized to learn about Swedish culture and the society’s traditions and norms” (p. 73). Khoja concludes that other “offline practices” (p. 2) are required for integration. Face-to-face communication is provided as an example of an offline practice which was necessary for learning about the culture and language.

Culture was identified by participants of the present study as an area in which they found it challenging to obtain information. Gough and Gough (2019) also found that whilst applications such as Google Translate can be used to aid understanding of a language their usefulness is limited in terms of spoken communication and therefore such applications are limited with regards to integration. Khoja (2020) also found that social media and communication applications were primarily used to communicate with people already known to them and not as a means of establishing new relationships. Physical locations such as SFI schools were important for making new connections and face-to-face communication played an important role in this (p. 61). In the present study, whilst smartphones were heavily used in many ways, the importance of physical locations such as SFI schools and libraries was still highlighted.

Furthermore, participants in the present study expressed difficulties or concerns about not being able to access sufficient information with regards to official or governmental material such as laws and regulations. Other participants expressed that they had initially found this type of information complicated and in many cases a third party had provided initial assistance and guidance. This finding is confirmed by previous research that found that smartphones are of limited usefulness with regards to official or governmental information (Alencar, 2018; Kaufmann, 2018). Therefore, although smartphones can be very useful tools for navigating everyday information, obtaining specific, official information presents more challenges. With this in mind, it is essential for government agencies, organizations, and service providers to comprehend how immigrants engage with information in their new environments and adapt their services accordingly. This understanding is needed to address potential obstacles that may prevent immigrants from accessing essential information, which may not be easily accessible. By making such information more readily accessible and navigable, the development of a sense of belonging and one’s social inclusion and integration into society can be facilitated.

6.3 Limitations & Suggestions for Further Research

This section outlines the limitations of the study related to the method, to finding and recruiting participants, and the conducting of interviews as well as providing suggestions for future areas of research that would build on the findings of this study and contribute to the existing literature.
Given the methodological approach, this study is not intended to be generalisable, and intends only to give insights into the experiences and information practices of the participants involved. As highlighted by Hara et al. (2003), intensive studies like this one are not primarily focused on generalisability, but rather “the intent is to describe, define, identify, etc. patterns of behavior that might lead to theory, concept, or framework development” (p. 954). Therefore, caution should be exercised when attempting to apply the findings beyond the scope of this study.

Caidi et al. (2010) emphasize that the diversity of immigrant groups and their different experiences, needs, and backgrounds justifies the need to further understand the impact of these factors on how immigrants interact with information and technological tools (p. 498). Different backgrounds, experiences and situations will have an effect on how one engages with information and understands the information landscape (ibid. p.65). This study did not consider specific factors such as age or time in Sweden in the criteria for finding participants. Nationality, first language and reason for coming to Sweden were also factors that were not considered due to GDPR and research ethics. This study instead takes a more holistic and broader approach. Much of the previous research in this area has focused on either nationality or reason for immigrating (see for example Alencar, 2018; Allard, 2015; Gillespie et al., 2018; Gough & Gough, 2019; Khoja, 2020). Therefore, given its broad approach, this study is a valuable contribution to the literature in this area. As Lingel (2013) states “the heterogeneity of participants allows for the identification of information and technological practices that emerged across these different facets of identity” (p. ii). However, studies that take a narrower approach and focus on specific factors such as nationality are also very important (Caidi et al., 2010, p. 520) and therefore future research may consider a narrower approach in line with the aim of this study. Furthermore, factors such as length of time in the new information environment and age may have effects on certain practices. These are areas that would benefit from further research.

All participants in this study had taken some active measures to learn the Swedish language being either SFI students or attendees of the Språkcafe. This was considered interesting and informative for a study with a focus on belonging as language can play such a crucial part in culture and other aspects of living in a new country. However, it would also be interesting to study other immigrant groups such as professionals who have immigrated for work and do not require Swedish in the workplace. This would be a valuable area for future research to see whether the way a different group engage with information through their smartphones is similar or differs to the results of this study. Furthermore, participants in this study were all based in the same geographic area of Sweden. Future research in different contexts will contribute to a better understanding of the topics discussed in the present study.

As the participants in the present study were all immigrants to Sweden hailing from different backgrounds, language was a key consideration. Communicating in a language that is not one’s first language, even if one has a good level of competency in that language can present challenges in how one expresses themselves. For this reason, participants were given the choice between three
languages for the interviews, and consent forms were also provided in English, Swedish and Arabic. Furthermore, after transcription, possible findings were summarised back to the participants for them to confirm, reject or add to the initial interpretation of the material. Despite these measures, it is still important to acknowledge that some form of difficulty expressing oneself or fully describing one’s thoughts and experiences may be present when using a language other than one’s native language and this may have influenced participants’ answers.

Another important factor for consideration was the possibility of interviewer influence. This was carefully considered, and the interview environment was made as comfortable and relaxed as possible for the interviewees. However, in this scenario there can always exist some form of power imbalance or influence from the interviewer, and this must be taken into consideration. Furthermore, interviews were carried out at the SFI school or the library where the Språkcafe is held so these locations were familiar to all participants. However, these locations also meant that certain interruptions or distractions were possible during the interviews such as announcements regarding closing times which interrupted the flow of conversation on occasion. Participants were also asked to refer to their smartphones during the interviews. This helped produce rich material as participants navigated through their devices throughout the interviews. However, there were instances when phones also posed a distraction as calls or messages were received during the interview time. Although these were rejected, they could still potentially have interrupted the participant’s flow in the conversation.

In this study both pair and single interviews were employed. As several participants opted for single interviews this provided a balance between the two interview types. Although pair interviews provided rich and interesting material, it is possible that certain topics may not have been discussed by participants given the presence of another person. Furthermore, whilst interviews were a good choice of method to achieve the study’s aim and in line with the theoretical approach as material was created from the participants’ perspective, this also meant that interviewers and participants only met on one occasion. As social and contextual factors play such an important role in this study, employing observations or carrying out a longitudinal study design where practices could be seen at different stages in the participants’ immigration journey could provide important insights. Therefore, future research may benefit from considering such methods. In addition, a focus on how immigrants engage with information through their smartphones at different stages in their immigration journey would also be a valuable contribution to the existing literature.
7 Conclusions

This study has aimed to create insights into how immigrants to Sweden engage with information, with a particular focus on the function of smartphones and smartphone applications as intermediary tools between their adopted Swedish society and their countries of origin. Smartphones are found to be very important in the lives of the study’s participants. Smartphone applications allow access to information that help participants better understand the new information landscape. Furthermore, smartphones can be seen as intermediary tools facilitating contact with the home country.

Building on Lloyd and Wilkinson’s (2016; 2019) ideas of everyday spaces supporting the learning needs of immigrants, this study finds that smartphones can serve as an important everyday space for immigrants to Sweden. Using the smartphone as an everyday space helps participants develop an understanding of the new information landscape as well as helping to maintain a connection to the previous environment, primarily through contact with social networks in the home country. However, the results of the present study also indicate that in order to effectively use the smartphone to learn about and navigate the new information landscape, some degree of prior knowledge is commonly needed. This prior knowledge may be digital know-how; having an understanding of smartphones and how to best utilise them, or local knowledge in relation to the new environment. That is to say, it is difficult to make effective use of the smartphone in order to understand the new information landscape without first knowing about the smartphone in that landscape.

This study finds that in many cases a third party is required for initial guidance relating to the information landscape. Third parties are most commonly friends or family members but can also be institutions. In other words, in many cases a primary information source is required before smartphones can be used effectively as an everyday space. However, in areas where the new information landscape is similar to the old, for example with the use of navigation and translation applications, smartphones can be used almost immediately as a way to start learning about the new information landscape. Furthermore, in some cases, smartphones themselves can act as a primary information source providing access to the information needed to further and more effectively use the smartphone. The results of this study also suggest that when viewed as a facilitator to understanding the new information landscape and maintaining contact with the home country, smartphones can be seen to play a role in the development of a sense of belonging in the new country.

Despite an emphasis on the usefulness of smartphones in the immigration process, this study also highlights how smartphones are considered to present some level of risk. Considerations in relation to privacy and the need to use smartphones in moderation or have time away from their devices are common concerns among participants. Furthermore, the results of the study emphasise the importance of physical spaces for making new contacts as well as the importance of face-to-face learning. In addition, the results highlight areas that prove particularly challenging for immigrants to Sweden such as culture and official or governmental information. In these areas the usefulness of smartphones is limited.
This study focuses on a small group of participants and further research is needed within this context. Factors such as participant age, time in Sweden and previous literacies may influence the findings of this study and therefore further research with a focus on these factors is required. This study builds on findings from previous research whilst also giving new insights into how immigrants engage with information, especially through smartphones, in particular as everyday spaces, which is, to our knowledge, a previously unexplored area.
Reference list


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Appendix A  Consent Form

HÖGSKOLAN I BORÅS
The Swedish School of Library and Information Science
Hannah Mills & Ali Jasim

Consent for the collection and processing of personal data

As part of the Master’s Thesis course at the University of Borås, we are conducting a study with the purpose of furthering our understanding of how immigrants in Sweden obtain information through smartphone applications, especially in order to provide insights into the impact these information behaviours have on one’s sense of belonging.

We who are conducting the study would like you to provide certain information about yourself, more specifically your age, profession, how long you have been living in Sweden and answers to interview questions regarding how you access information through your smartphone as well as questions about your daily life and information access in Sweden.

The personal data will be used to get a picture how smartphones are used to access information and the relationship this information access has to one’s sense of belonging.

The University of Borås is the controller of the processing, and the legal basis for the processing is article 6.1 (a) in the General Data Protection Regulation, GDPR, (consent).

The personal data will be used by us and may be made available to the teachers of the current course and central administrators at the university. The data may also be public documents, which means that anyone as a general rule may access it in accordance with the principle of free access to public records.

The personal data will be stored in the EU/EEA, or countries outside the EU/EEA that the EU Commission has determined to have an adequate level of protection, i.e. sufficiently high according to the GDPR. The data will be erased when it is no longer needed.

Please note, interviews will be recorded, however, the results of the study will be presented in anonymised form, so that no data can be traced to you.

Your participation in this study is completely voluntary. If you consent to the processing of your personal data as described above, you may withdraw your consent at any time whereby we will stop using your personal data. Because of legal requirements we may however be prevented from immediately erasing your personal data.

I hereby consent that University of Borås may collect and process my personal data as described above.

____________________________
Signature

____________________________
Name in block letters

____________________________
Place and date
Privacy Notice

Your privacy is important to us at the University of Borås. We are committed to protect your personal data and only process it according to applicable laws and regulations, including the General Data Protection Regulation (GDPR).

The University of Borås is the controller of the university’s processing of personal data. If you have any questions about how we process your personal data, you are welcome to read more about this on our website, http://www.hb.se/privacy, or contact the course responsible.

Your Rights

- The university is transparent with how we process your personal data. If you want to know what personal data we process about you, you can request a copy of the personal data and information about the processing free of charge once per year. To order a copy of your personal data and information about the processing, you can use the form for this that is available on our website, http://www.hb.se/dataskydd.
- If you consent to processing of your personal data you may withdraw the consent at any time. We will then not continue to process your personal data. Personal data that have been made public, e.g. published on social media, is usually not affected by a withdrawn consent however. Because of legal provisions we may also be prevented from immediately erasing your personal data.
- You have a right not to be subject to a decision based solely on automated processing, including profiling, which produces legal, or other significantly effects. The University of Borås does not make such decisions.
- You have a right to have the processing of your personal data restricted.
- You can request rectification or supplementation of personal data that is inaccurate or incomplete.
- You have a right, under certain circumstances, to have your personal data erased.
- You have a right to receive your personal data in a structured, commonly used and machine-readable format to transmit those data to another controller.
- You have a right to lodge a complaint to the supervisory authority (Integritetsskyddsmyndigheten).

Contact us
Controller
Högskolan i Borås/University of Borås
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Email: registrator@hb.se
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Data Protection Officer
Åsa Dryselius
Email: dataskydd@hb.se
Appendix B  Interview Guide

**Background Information - Let's start with a few questions about you**

- How long have you lived in Sweden?
- How old are you?
- What do you do? (study/work etc.)
- How long have you been attending the Språkcafe/SFI for?
- How did you find out about the Språkcafe/SFI?
- Do you attend the Språkcafe often?
- How important is your phone to you?

**Smartphone Use - Tell me about how you use your phone**

- How do you use your phone on a typical day?
- How does this change at the weekend?
- What was the last app you opened on your phone before this interview?
- What is the first app you usually look at before you go to sleep?
- Look at your phone, tell me about the apps you have.
- Which apps do you like? Why? Are there any you don’t like?
- Do you have a favourite app? Why do you like it?
- Which app would you say you use the most?
- Do your friends and family use similar apps to you?
- Do you remember which app you downloaded most recently?
- Has the way you use your phone changed since moving to Sweden?
- Do you have many apps on your phone that you have downloaded since you moved to Sweden? (Which? / Why? / when did you download them? How did you find out about them?)
- Are there any other apps you use more since moving to Sweden?

**Phone use in everyday life**

- How do you meet new people in Sweden? How has your phone helped with this?
- How do you get in touch with people using your phone? Is this different for different people?
- How do you access the news using your phone?
- How do you find out about information about activities/events?
- How do you find out about information about activities/events?
- How do you find out about information about activities/events?
- How has made your language learning easier/more difficult?
- How do you use your phone to help you with Swedish? Are any of your apps in Swedish?
- How do you use your phone for in the area you live in? What apps are most important for living where you do?
- How do you make living where you do easier?

**Obstacles to Information Access - Tell me about any difficulties you have getting information**

- How did you find out about life in Sweden when you first moved here?
- Did you have any difficulties?
- Do you find it difficult to access the information you need for life in Sweden nowadays?
- What are the obstacles?
- What would you like to know more about in Sweden?
- Do you have any apps that you find difficult to use?
- Are there any apps on your phone that you haven’t used recently?
- Can you think of any functions or features that could be added to the apps you use to improve them?
- If you could design an app, what would it be for?

**Life in Sweden - Let’s talk about living in Sweden**

- Do you enjoy living in Sweden?
- What’s your favourite thing about where you live now?
- Would you consider moving to another city/country in the future?
- Do you feel part of a community in Sweden? How does your phone help with this? Do you feel “at home” here?

- Is there anything we haven’t discussed?
- Was the interview what you thought it would be? Why/why not?