



FACULTY OF EDUCATION
DEPARTMENT OF EDUCATION AND SPECIAL EDUCATION

EMPOWERING RESETTLED MIDDLE EASTERN REFUGEES: EXPLORING INFORMATION AND COMMUNICATION TECHNOLOGY FOR SOCIAL INCLUSION, AGENCY, AND WELL-BEING

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Supervisor:	Ernst Thoutenhoofd
Examiner:	Girma Berhanu

Abstract

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Aim: This study aims to investigate the role of information and communication technologies (ICTs) in facilitating the social inclusion of resettled Middle Eastern refugees in Sweden. Through a capability approach lens, the research delves into the ways in which refugees utilize ICTs to enhance their agency, self-reliance, and overall well-being within their new societal context.

Theory: Drawing upon the capability approach theory, which emphasizes individuals' capabilities to achieve valuable functionings, this study examines how refugees' interaction with ICTs shapes their paths towards social inclusion through the use of their agency. This theory provides a comprehensive framework to interpret and understand the multifaceted impact of ICT usage among refugees by the theory's emphasis on individuals' agency and empowerment, which can ultimately affect their well-being by utilizing the opportunities that they may be able to access.

Method: This qualitative study employs semi-structured interviews to gather insights from 12 Middle Eastern refugees who have resettled in Sweden. Thematic network analysis is utilized to identify distinct functional categories that underscore refugees' multidimensional journeys towards social inclusion. The study focuses on capturing the perspectives of refugees. It sheds light on their experiences, challenges, and the role of ICTs in their social inclusion process.

Results: The findings illuminate five distinct functional categories, each corresponding to specific capabilities that contribute to refugees' social inclusion. These categories include embracing the information society, learning and training journeys, emotional empowerment, building social networks in host community, and enhancing career success. The research highlights that the strategic use of ICTs enables refugees to navigate challenges, foster emotional resilience, and bridge distances. Moreover, the study underscores the significance of gender-sensitive interventions, where females exhibit a proactive approach to leveraging ICTs to enhance their social inclusion and well-being.

The study underlines the pivotal role of information and communication technology in refugees' social inclusion journeys, emphasizing its transformative potential in enhancing refugees' agency, sense of belonging, and overall well-being. Through capability approach perspective, this research offers insights into how ICTs can empower refugees to actively participate in their host society, promoting their social inclusion and enriching the broader societal fabric.

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1- INTRODUCTION

Due to the challenges posed by immigration and the refugee crisis, social inclusion and integration are extremely important in society. Although Sweden has historically been open to immigrants, there have been some difficulties that have emerged, such as an increase in immigrant sentiment and hate crimes. (Strömblad & Östh, 2019; Hudson et al., 2023) Over time, Sweden's approach to integrating refugees has shifted from multiculturalism to a focus on integration (Borevi, 2012; Hudson et al., 2021; Lidén & Nyhlén, 2015, as cited in Hudson et al., 2023).

The current integration framework expects refugees to embrace values, norms, language proficiency and ways of life. However, there are still challenges due to perceived difficulties in acquiring skills and knowledge on refugees' side (Arora-Jonsson, 2017). Municipalities play a role in welcoming and integrating refugees by providing services. To foster social inclusion for immigrants and refugees, municipalities have implemented initiatives like language training programs, occupational training programs as well as cultural exchange programs (Van Bochove & Johansson. 2019; Bevelander & Pendakur, 2014; Hudson et al., 2023).

This research focuses on investigating how information and communication technologies (ICTs) can contribute to improving social inclusion among adult refugees from the Middle East. Specifically, the study aims to identify the benefits and impacts of using ICTs on the well-being of refugees currently living in Sweden. By analyzing how ICT usage affects social inclusion, this study aims to gain insights into effective strategies for fostering a sense of belonging within this specific group.

In this opening chapter I delve into the background of social inclusion challenges in Europe with an emphasis on adult resettled refugees. My research problem clearly identifies the importance of exploring how information and communication technologies (ICTs) can contribute to social inclusion among this demographic. I outline my objectives and inquiries for the study emphasizing its significance in addressing issues related to social inclusion. Furthermore, I introduce a framework that serves as a foundation for my research analysis. I briefly explain my research methodology and its connection to education research. I also acknowledge any limitations that may arise during the study. The final section of this chapter provides an overview of the study structure and a roadmap for upcoming chapters.

Background

In the middle of 2022 there were around 32.5 million refugees who had registered themselves due to conflicts between nations, civil unrest, violence and persecution (UNHCR, 2022). While the host countries have encountered challenges associated with this influx of migrants the global community couldn't turn a blind eye to the plight faced by asylum seekers.

Host countries hold the responsibility of safeguarding refugees and ensuring their rights while refugees themselves are entrusted with rebuilding their lives in a country they choose (Andrade & Doolin 2016). However, in reality resettled refugees often encounter difficulties when it comes to integrating into society (Wilding, 2009).

Governments have introduced settlement services and preparatory programs as social inclusion initiatives for immigrants (Andrade & Doolin, 2016; Hudson et al., 2023). Information and

communication technologies (ICTs) play an increasingly prominent role in these programs, particularly in the developed world, where ICTs are increasingly pervasive. (Wilding, 2009)

It is common for industrialized countries to include such programs in their policies (Andrade & Doolin, 2016). Sweden has also introduced some preparatory programs to facilitate integration for both professional and nonprofessional immigrants (asylum seekers) (Rodin 2017; Hudson et al., 2023). This type of resettlement and preparation program becomes critical in content and purpose due to its importance for both decision-makers and program designers in terms of supporting, facilitating, and accelerating the integration level among newcomers (resettled refugees) (Ager & Strang, 2008). The concept of 'digital inclusion' was posed as a 'core component of social inclusion' in recognition of the importance of 'digital inclusion initiatives' (See section "Definition of Terms and Concepts" p.11) in social inclusion of newcomers. (Reisdorf & Rhinesmith, 2020, p. 132)

Some studies have explored the potential of digital technology to foster social capital within refugee migrant communities, ultimately promoting their social inclusion. These investigations have shed light on factors influencing the utilization of digital technology among refugee migrants, offering insights that can be harnessed by both the information and communication technology industry and government entities. Leveraging these identified factors, industry stakeholders and policymakers can collaboratively formulate strategies and initiatives aimed at mitigating the risks of social exclusion, alienation, and marginalization faced by refugee migrants in their host societies (Alam & Imran, 2015).

The ICTs' accessibility and divide have been extensively examined in previous research (Alam & Imran, 2015; Jauhiainen et al., 2022; Macia Bordalba, 2018; Neves, 2008; Reisdorf & Rhinesmith, 2020; Salinas, 2005; van Deursen et al., 2017). However, the exploration of ICT use for specific social purposes has not received equivalent attention within the literature, particularly concerning capabilities. To shed light on the capabilities and utilization of ICTs, it becomes crucial to demonstrate what individuals can actually achieve and accomplish with their ICT skills (Andrade & Doolin, 2016).

Refugees' lives are profoundly mediated by technology. Numerous studies have highlighted the ubiquitous nature of ICTs, particularly mobile phones, indicating a promising future for the field (AbuJarour et al., 2019; Alonso & Samy, 2018; Bernal-Meneses et al., 2019; Andrade & Doolin, 2018; Innocenti, 2016; Kabbar & Crump, 2006; Macia Bordalba, 2018; Modesti et al., 2020). In order to conduct effective research, it is essential to employ a user-centered approach and include refugees at the very center of the process (Patil, 2019). Their lives are profoundly shaped by technology, and including them in the research provide valuable insights for effective investigations.

When adopting a capability approach, the emphasis lies not merely in assessing whether individuals possess ICT skills or digital tools, but rather in showcasing their actual achievements and potential with ICT to facilitate social inclusion (Andrade & Doolin, 2016). Consequently, the literature lacks information regarding the aspirations of registered refugees in Sweden concerning the utilization of ICT skills for their social inclusion. To bridge this gap, the objective of this thesis is to investigate how refugees employ their ICT skills for specific social purposes, and how they perceive these skills as valuable tools for enhancing their social inclusion (Andrade & Doolin, 2016, p. 405).

Definition of Terms and Concepts

"Adaptation" pertains to changes immigrants make in behaviors, attitudes, and beliefs in response to the new cultural and social environment they encounter (Berry, 2006, p. 6).

"Digital inclusion" refers to the comprehensive effort to ensure equitable access to digital technologies, digital literacy, and online resources for all individuals and communities, irrespective of socio-economic factors or geographical location, to promote social and economic equity in an increasingly digitalized society. (United Nations, 2023)

"Information and Communication Technologies (ICTs)" encompasses "a diverse set of technological tools and resources used to transmit, store, create, share or exchange information" (UNESCO Institute for Statistics, 2009, p. 120). In addition to computers and the Internet (websites, blogs, and emails), radio, television, and telephones may be included. (Anderson & Daniel, 2020)

"Information problem for refugees" refers to the challenges refugees face in accessing, understanding, and effectively using critical information related to their rights, legal processes, services, and resources during their journey and resettlement, often due to factors like language barriers, limited digital literacy, and unfamiliarity with the host country's systems, which can impact their integration and well-being. (Caidi & Allard, 2005)

"Integration" signifies the process by which immigrants become part of the host society and are regarded as equals in rights and opportunities to its members (Alba & Foner, 2015, p. 3).

The concept of integration is also "defined as a dynamic, multidimensional, and two-way process of adaptation to a new culture that takes place over time" As Robinson (1998, p.118) has suggested "integration" is a "chaotic concept" since it has been used by many; though most people have understood and conceptualized it differently. According to Robinson the concept is more 'individualized, contested, and contextual'. He does not see it as promising to come to a 'unifying definition'. As Castles et al. clearly state it: "There is no single, generally accepted definition, theory or model of immigrant and refugee integration. The concept continues to be controversial and hotly debated" (2001, p. 12).

Integration in a new country involves the process of integrating into a different culture, society, or economy. This encompasses the acquisition of a new language, the development of social networks, and the establishment of a sense of belonging in the new environment. Additionally, refugees' successful integration is influenced by their access to various opportunities, such as employment, education, housing, and healthcare, which collectively contribute to their economic and social well-being. Importantly, the achievement of successful integration necessitates collaboration between the immigrants and the host community, fostering relationships based on mutual respect, understanding, and tolerance. (Bosswick & Heckmann, 2007, p.11)

"Refugee" refers to an individual displaced from their country of origin due to persecution, violence, conflict, or human rights violations, seeking asylum in another country for safety. Refugees often face vulnerabilities and require support, including access to basic human rights like food, shelter, and education, as established by the 1951 Refugee Convention and its 1967 Protocol (UNHCR, 2023).

"Social exclusion" refers to being excluded from the social, economic, cultural, and political systems and institutions of society (Silver, 1994, p. 6).

"Social inclusion" is "the extent to which individuals are able to participate fully in society and control their own destiny" it could involve enabling individuals and groups to fully participate in society, with equal access to essential services, employment, education, and political participation (Warschauer 2003, p. 8).

Social inclusion encompasses the facilitation of complete participation of individuals and groups within society, ensuring equal access to crucial services, employment opportunities, educational prospects, and the ability to engage in political activities. In other words, the concept of social inclusion is defined as "the extent to which individuals are able to participate fully in society and control their own destiny" (Warschauer, 2003, p. 8). This concept aims to integrate marginalized or disadvantaged individuals into the fabric of society, breaking down barriers and providing avenues for their active involvement in various aspects of community life.

Warschauer (2003) further defines social inclusion as the degree to which individuals have the capacity to participate fully in society and control their own destiny. This notion is derived from the concept of social exclusion, which refers to the way individuals "might be prevented from fully participating in the societies in which they were living" (Wilding, 2009, p. 161). The goal of social inclusion is to provide opportunities and resources to those at risk of social exclusion, enabling them to participate fully in economic, social, political, and cultural activities and achieve a standard of living considered normal in the society they inhabit. By doing so, every individual gains a greater voice in decision-making that affects their lives and the ability to exercise their fundamental rights (Andrade & Doolin, 2016).

Problem statement

There is an increasing population of individuals who have been compelled to leave their home and experience displacement due to various circumstances. Consequently, it becomes imperative to conduct research on the utilization of emerging technologies for the purpose of fostering both long-term and short-term social integration. Upon arrival in new host countries, refugees encounter a myriad of challenges, including acclimating to a foreign language, overcoming disruptions in their education, navigating interpersonal dynamics, and combating discrimination (Correa-Velez et al., 2010; Gifford and Wilding, 2013; Gifford et al., 2009; McMichael et al., 2011). These challenges are often compounded by the trauma of displacement, limited access to healthcare and education services, and restricted economic opportunities available to refugees. Moreover, refugees frequently face social isolation and encounter negative stereotypes and discrimination, further complicating their ability to successfully integrate into new communities. Additionally, they are confronted with the task of maintaining existing relationships with family and friends in their home countries while simultaneously establishing new social connections in their current place of residence (Damian & Van Ingen, 2014).

Ensuring the well-being of the population is consistently the responsibility of the government. Sweden, along with several other European nations, has grappled with elevated rates of unemployment and housing crises in recent years, thereby placing added burdens on the government. Moreover, racism, xenophobia, and crime show an upward trend, while nationalistic political agendas perpetuate obstacles to inclusive policies (Carlson et al., 2019). In such circumstances, individuals with a migrant background face a heightened risk of exclusion.

The inclusion of newcomers necessitates a society that is receptive to diverse ways of life and willing to invest in assisting them in language acquisition, finding suitable housing and employment, as well as enabling them to become more engaged and self-reliant as they adapt to their new environment (Carlson et al., 2019).

As a final step, however, it is the responsibility of refugees to utilize their capabilities in order to contribute to a more inclusive lifestyle in the host community. Therefore, it is crucial to understand what

individuals can achieve through their ICT skills or digital literacy, and how they perceive their value. Simply possessing these skills does not guarantee social participation or active engagement (Navarrete & Huerta, 2006). The study by Navarrete and Huerta (2006) reveals that the Internet has revolutionized refugee interactions, enabling them to transcend the limitations of time and distance through online communication. As a result, the Internet has become an invaluable resource for resettlement and socialization, bridging the physical and social gaps between their home and host countries. ICTs possess unique qualities that not only fulfill refugees' communication needs, but also foster a sense of belonging by combining various forms of media. Furthermore, ICTs offer refugees a platform for educational advancement and cultural expression, allowing them to maintain ties to their heritage while establishing a sense of belonging in their new home (Navarrete & Huerta, 2006).

The objective of social inclusion is to promote equal participation in society and improve individual well-being (Gingrich & Lightman, 2015). Policymakers have advocated for the adoption of ICTs as a means to facilitate reform and assist disadvantaged individuals in overcoming longstanding inequalities (Sourbati, 2012). However, it is important to note that the mere adoption of ICTs is insufficient to achieve social inclusion. ICTs must be designed and implemented in a manner that addresses the needs and expectations of disadvantaged individuals (Zheng, 2009), enabling them to accomplish their personal goals.

Newcomers exhibit diverse characteristics that influence their needs and expectations. The same ICTs that can support certain individuals and help them overcome obstacles may hinder access for others. Moreover, the desirability of an ICT plays a crucial role in its successful utilization. Therefore, information and communication technologies must consider both the capabilities and aspirations of individual users (Zamani, 2018).

Extensive research has demonstrated that ICT skills can aid newcomers in adapting to and achieving social inclusion in the host community (Abujarour & Krasnova, 2017; Abujarour et al., 2018; Abujarour et al., 2019; Alonso & Samy, 2018; Andrade & Doolin, 2019; Innocenti, 2016; Jauhiainen et al., 2022; Lloyd et al., 2013; Patil, 2019). However, existing literature has paid limited attention to individuals' agency in utilizing their ICT skills and how they perceive their roles (Andrade & Doolin, 2016). Thus, this paper aims to examine the ICT capabilities of individuals and the purposes to which they apply them, as well as their valuation of these capabilities. Rather than focusing solely on their access to ICTs, the study aims to understand how ICTs facilitate their participation in social activities.

Objectives & Research questions

This study aims to address the existing gap in the literature by examining the practical applications and outcomes of ICT usage among resettled refugees in Sweden. Specifically, the research focuses on identifying the specific functions and purposes for which refugees utilize their ICTs, as well as exploring the value they attribute to these technologies in facilitating their social inclusion process. By investigating how adult refugees employ digital literacy, the study aims to gain insights into their ability to actively participate and maintain connections within Swedish society. The research is conducted in Sweden.

Objective #1: To identify, through the lens of the Capability Approach, the role ICTs play in facilitating social inclusion for adult refugees and the different purposes they use their ICTs for in this regard.

Objective #2: To investigate, within the framework of the Capability Approach, whether gender has any effect on understanding the ICT role in social inclusion for adult refugees.

Objective #3: To assess, with a focus on the Capability Approach, if the contribution of ICT to social inclusion for resettled refugees exhibits a clear gender aspect.

This research is intended to investigate:

Thesis Question #1: Through the lens of the Capability Approach, what role does ICT play in facilitating social inclusion according to resettled adult refugees, and what are the diverse purposes for which they use their ICTs?

Thesis Question #2: Within the framework of the Capability Approach, what, if any, effect does gender have on participants' understanding and perception of the role of ICT in facilitating social inclusion?

Thesis Question #3: Applying the Capability Approach, is there a difference in the contribution of ICT to social inclusion for resettled refugees based on their gender?

Significance of the study

The utilization of information and communication technologies (ICT) by refugees presents a valuable opportunity to examine the ways in which specific ICT-mediated activities contribute to their social inclusion. As individuals who have been forcibly displaced, refugees find themselves in unfamiliar environments where they must establish meaningful lives. To navigate the challenges of daily life, adhere to laws and regulations, and familiarize themselves with new cultures and societies, these newcomers require access to relevant information. If they are unable to obtain, comprehend, and utilize pertinent informational resources, they may face exclusion and marginalization within society.

The issue of refugee social inclusion is often approached as an information problem. **Information problem for refugees** refers to the challenges refugees face in accessing, understanding, and effectively using critical information related to their rights, legal processes, services, and resources during their journey and resettlement, often due to factors like language barriers, limited digital literacy, and unfamiliarity with the host country's systems, which can impact their integration and well-being. One potential solution is the utilization of ICTs as tools to navigate the unfamiliar information landscape they encounter (Caidi et al., 2010; Lloyd et al., 2013). However, it is important to note that ICTs, particularly the Internet and social media platforms, can also facilitate communication and self-expression between refugees and a diverse range of individuals, enabling their involvement in ICT-enabled social and support networks (Caidi et al., 2010). Moreover, the use of digital media productions and virtual spaces such as websites can enhance the development and manifestation of distinctive cultural identities (Caidi et al., 2010; Panagakos & Horst, 2006).

The exclusive focus on refugees' integration into the local context of host countries overlooks the significance of geographical mobility in contemporary life. Nowadays, individuals increasingly participate in interconnected and far-reaching social networks that transcend geographical boundaries, constituting a more globally interconnected and boundary-less world (Gifford and Wilding, 2013, p. 558). Achieving social inclusion in such a world "is significantly a matter of overcoming constraints of space at particular moments of time so as to gain access to the informal networks" (Cass et al., 2005, p. 548). With the use of information and communication technologies (ICTs), belonging to a community is no longer solely dependent on physical proximity (Wilding, 2009). Consequently, ICTs empower refugees, in particular, to communicate with their families and friends in other countries, exchange information and digital content worldwide, and engage to some extent in the political affairs of their countries of origin by monitoring events and participating in political discourse (Benítez, 2012; Caidi et al., 2010; Hiller & Franz, 2004; Wilding, 2012).

In summary, this study will not only contribute to the existing body of knowledge on the role of ICTs in facilitating social inclusion within the host community but will also explore the diverse purposes for which individuals utilize their ICT skills to foster their inclusion in society both locally and globally in Sweden.

Furthermore, this research aims to address the gaps in the current literature, particularly through the lens of the capability approach in Sweden, and provide practical insights for policymakers and planners of preparatory programs. The ultimate goal of this study is to deepen our understanding of the multifaceted functions of ICTs in promoting social inclusion among refugees, thereby providing valuable insights that can guide further research in Sweden. Subsequently, the findings from such research can serve as a basis for designing effective policies and tailored preparatory programs that address the specific needs of refugees, fostering their successful integration and participation in society.

The theoretical framework

The capability approach forms the basis of this study. Capability approach, as proposed by Sen (1999), conceives of development as the freedom of individuals. Sen (1999) is concerned with "capabilities (the potential of individuals) to lead the kind of lives they value and have reason to value" (p. 18). With this approach, our focus shifts from the resources that an individual has access to, to the uses that they can make of those resources (Clark, 2005). Sen (1999) describes uses as functioning, which are "things one may value doing or being" (p. 75). A person's abilities are defined as the variety of alternative ways in which they can perform their functions (Sen 1999). As a result, a person's capabilities can be viewed as his or her potential functions, but the potential functions must be accompanied by real opportunities or freedoms that will enable the individual to perform those functions effectively (Alkire, 2005). In order for people to be able to perform specific functions, a variety of personal, social, and environmental factors (including social structures and cultural values) are considered influencing their substantive freedom of doing so (their capability set) as well as the choices they make (Clark, 2005; Robeyns, 2005; Zheng, 2009).

Research Methodology

The present research endeavors to investigate the utilization of information and communication technology (ICT) skills by Middle Eastern refugees in their quest for social inclusion within their host society. To achieve this, a qualitative study is conducted, focusing on a targeted sample of 12 refugees, comprising 10 individuals from Persian backgrounds and 2 from Syrian backgrounds, selected for the purpose of this dissertation. (Flick, 2014)

In order to gain deeper insights into the dynamics of ICT usage and its effectiveness for social inclusion, a specific interest is placed on gender-related factors. Accordingly, the sample is evenly divided, with six male and six female participants. By exploring the potential role of gender in understanding, learning, or effectively utilizing ICTs for social inclusion, this study aims to contribute to the broader understanding of ICT's impact on refugee social inclusion in the host society.

Method and Participants

This study employed a qualitative research approach, employing semi-structured interviews as the primary data collection method. By adopting this qualitative methodology, the research sought to delve into the participants' personal experiences, interpretations, and perspectives, providing a rich understanding of their lived realities (Anderson & Daniels, 2020). Between May and July 2023, a total of 12 semi-structured interviews were conducted with 12 adult refugees in Gothenburg, either in person or online. The participants, aged between 30 and 45, were selected using a combination of convenience and purposeful sampling methods. Specifically, 12 Persian and Syrian refugees were chosen based on predetermined criteria. Some interviews took place in local coffee shops, such as Espresso House, while others were conducted in the comfort of volunteers' homes. Each interview lasted for at least one hour and was audio-recorded. The interviews were conducted in either English or Persian languages. (Bryman, 2016; Creswell, 2012; Flick, 2014)

In this study, the sample comprised two distinct groups of refugees, each consisting of six participants, differing in their duration of stay in Sweden. Instead of solely focusing on their access to information and communication technologies (ICTs), the research sought to explore how their utilization of ICTs facilitated their engagement in social activities. The participants engaged in conversational interviews, where they shared their experiences of using computers and cellphones since their resettlement in Sweden. To ensure comprehensive coverage of relevant topics, interview guidelines were developed, encompassing aspects such as participants' information and communication needs, the ways they employed ICTs to address these needs, and their perceptions of the benefits associated with using information and communication technology, among other pertinent factors.

Analysis

The initial analysis of the data conducted iteratively, employing interview notes and audio recordings to carry out a thematic (network thematic) analysis. This approach allows for the identification of emerging patterns in participants' utilization of Information and Communication Technologies (ICTs). To ascertain the degree to which these practices indicate social inclusion, I subjected them to further scrutiny, examining their implications in depth. (Braun & Clarke, 2006; Attride-Stirling, 2001)

Furthermore, the data have meticulously examined to glean insights into the social inclusion of the participants. This examination involved eliciting detailed explanations from the participants about their stated intentions behind using ICTs and how they perceive the value and benefits of such technological use. Moreover, an integral aspect of the analysis entails investigating the potential ways in which ICT usage might enhance the quality of life for these individuals. (Braun and Clarke, 2006; Attride-Stirling, 2001)

To ensure the validity and reliability of the findings, a rigorous and systematic approach has been adopted. Due to the iterative nature of the analysis, themes that emerge from the data could be continuously refined and validated. Using thematic analysis, the study aimed to uncover underlying trends and commonalities in participant behaviors, attitudes, and experiences regarding ICTs and their impact on social inclusion. (Braun and Clarke, 2006)

To ensure credibility and rigor in the analysis process, I utilized appropriate coding schemes. Moreover, the study sought to address potential biases and limitations, considering factors such as the participants' demographics, cultural backgrounds, and technological proficiency. (Braun and Clarke, 2006; Flick, 2014)

By adhering to a comprehensive analysis process, this research endeavored to contribute significantly to the scholarly understanding of how ICT practices can foster social inclusion and improve the overall well-being of these individuals in contemporary society. The findings may have implications for policymakers, educators, and practitioners seeking to promote digital literacy and equitable access to technology for various communities, ultimately aiming to enhance social cohesion and inclusivity in the digital age.

Educational Research

In contemporary society, learning is a dynamic process that occurs through various means, including formal education at schools and informal channels, like interactions with others and exposure to media platforms (Hargittai & Hinnant, 2008; Rubin & Rubin, 2005). Recognizing the significance of informal learning, it has become essential to complement and reinforce formal educational initiatives to enhance knowledge acquisition (Hargittai & Hinnant, 2008; Andrade & Doolin, 2016).

Research has highlighted the role of Information and Communication Technologies (ICTs) in promoting the social inclusion of refugees in host countries (Abujarour & Krasnova, 2017; Anderson & Daniels,

2020; Andrade and Doolin, 2016; Caidi et al., 2010; Lloyd et al., 2013). By utilizing ICTs, refugees can connect with others, access vital information and services, and participate actively in social and cultural activities (Hargittai & Hinnant, 2008; Andrade & Doolin, 2016). To fully capitalize on ICTs' potential for fostering social inclusion, it is crucial to emphasize the role of education in developing refugees' digital skills and agency (Hargittai & Hinnant, 2008; Andrade & Doolin, 2016).

Both formal and informal educational programs play a significant role in empowering refugees to effectively use ICTs for their integration goals. By imparting digital literacy skills, education initiatives enhance refugees' autonomy in utilizing technology (Kearsley, 2010; Siemens, 2012). However, to effectively serve refugees, a comprehensive approach is necessary, considering their diverse needs and backgrounds (Kearsley, 2010; Siemens, 2012).

Educational interventions can assist refugees in gaining digital skills and agency in their new communities, enabling them to lead fulfilling and resilient lives (Kearsley, 2010; Siemens, 2012). Therefore, collaboration among educational institutions, policymakers, and community organizations is crucial in designing and implementing effective educational programs tailored to refugees' specific needs, utilizing information and communication technologies (Kearsley, 2010; Siemens, 2012).

Furthermore, research on refugees' use of ICTs and its implications for social inclusion aligns with educational research efforts. Acknowledging the significance of informal learning and recognizing education's role in digital skills development can foster inclusive and supportive communities for refugees in Sweden and beyond (Kearsley, 2010; Siemens, 2012).

Educators' role in supporting newcomers' informal learning experiences is vital, as they can provide guidance, recommend resources, and create customized content based on learners' values and ICT utilization (Lee & McLoughlin, 2010; Siemens, 2012). By recognizing and validating self-directed informal learning, educators can motivate and assist refugees in their learning journey, contributing to their success (Looi et al., 2010; Siemens, 2012).

The integration of ICT skills with educational research becomes evident when considering their acquisition not only in formal educational settings but also through informal learning methods (Kearsley, 2010; Siemens, 2012). Immigrants and refugees have diverse opportunities to acquire ICT skills through informal channels beyond formal education, fostering a flexible and self-directed learning experience (Kearsley, 2010; Siemens, 2012).

The future of education is shaped by MOOCs (massive open online courses) and a transition towards informal learning through ICTs (Siemens, 2012). As educators, we must anticipate and adapt to emerging learning methods that may complement or partially replace formal education (Siemens, 2012).

Therefore, the research on refugees' use of ICTs and social inclusion offers valuable insights for educators, emphasizing the significance of informal learning and digital skills development among refugees in Sweden and beyond. By harnessing ICTs' potential, educational interventions can empower refugees and create more inclusive and supportive communities for their successful integration. This study specifically focuses on refugees in Gothenburg, Sweden, and their ICT usage, values, priorities, and functions sought for social inclusion. Understanding their learning habits and preferences is essential in designing effective educational approaches to foster social inclusion through ICTs.

The Limitation of the Study

The study encountered several limitations. Resource constraints restricted data collection to only one city, Gothenburg, potentially limiting the generalizability of the findings. The sample size was confined to refugees from two specific nationalities, Persian and Syrian, which may limit the representation of

diverse backgrounds. Future research could explore whether the observed phenomenon is specific to the studied region or prevalent throughout Swedish society. Additionally, investigating ICT factors that significantly contribute to the long-term social inclusion of refugee migrants is warranted. (Alam & Imran, 2015).

Another limitation arose from my dual role as the interviewer, raising concerns about potential subjectivity in data analysis. Efforts to approach the analysis objectively included peer debriefing and member checking. Moreover, a reflexive journal documented personal biases, ensuring transparency in the research process. The power dynamics between me as a non-refugee individual and refugee participants were acknowledged, and measures were implemented to minimize imbalances, such as building rapport and selecting participants within my social circle.

Another limitation of the study is the reliance on self-reported data provided by the refugees. As with any self-reporting method, there may be potential biases or inaccuracies in the information provided. Factors such as memory recall, social desirability, language barriers, and cultural differences could influence how participants respond to survey questions or interviews. While efforts were made to ensure confidentiality and create a comfortable environment for sharing information, the possibility of response bias cannot be entirely eliminated. As a result, the findings may be influenced by the participants' perceptions, interpretations, and willingness to disclose certain details, which could impact the overall reliability and validity of the study's results.

In sum, the study delved into refugees' use of ICT for social inclusion, highlighting both benefits and limitations. The need for further research to examine broader contexts, power dynamics, and the long-term impact of ICT on promoting social inclusion among refugee populations was emphasized. To improve the rigor and validity of the findings, further research may adapt mixed methods approaches, and use longitudinal studies.

Overview of the Thesis Structure

In the introduction section, the study provides a background on the issue within the context of Europe and Sweden, along with defining important concepts and terms. Problem statement, research objectives, and research questions are subsequently articulated, clarifying the research problem and the focal points of the investigation. Following this, the theoretical framework is incorporated, and the significance of the study is presented. This section also establishes a link to educational research and acknowledges the limitations of the research.

Moving on to the second chapter, the literature review encompasses a comprehensive analysis of relevant scholarly articles concerning ICTs and refugees. This review serves to establish the groundwork and context for the study while identifying gaps and key aspects of the research topic.

The third chapter delves into the presentation of the theoretical framework, analyzing the foundational theory that underpins the study along with its key concepts.

The fourth chapter pertains to the research methodology, wherein the type of research, participant selection, data collection, and data analysis methods and tools are discussed. This chapter provides the necessary framework for the subsequent chapters. Moreover, primary results of analysis, ethical considerations and a sustainability statement are also presented in this section.

Upon collecting the data, the fifth chapter presents the results, showcasing the findings from the interviews conducted. Furthermore, this chapter conscientiously recognizes the study's limitations.

The sixth chapter, titled "Discussion," serves to conclude and correlate the obtained results with the theoretical framework and prior literature. Within this section, the study showcases the ways in which the results enrich the research topic and have the potential to inspire subsequent inquiries.

Following this, the study's conclusion is presented in chapter seven. Subsequently, the references and appendix sections follow in sequence.

2- Literature Overview

Literature Searching Methodology

The literature review in this research adheres to the procedures proposed by Randolph (2019) and draws upon the earlier works of Cooper (1986). Following Cooper's five stages of integrative research, namely problem formulation, data collection, analysis, interpretation, and presentation, a comprehensive review of 23 relevant publications was conducted. Among these sources, peer-reviewed journal articles and professionally published reports authored by researchers were included. Access to the literature was facilitated through Gothenburg University Library and Google Scholar, ensuring a comprehensive compilation of articles, reports, and studies directly relevant to the thesis topic, which centers on the role of ICT in fostering the social inclusion of refugees in Sweden.

The literature review in this study adopts an 'integrative review' approach, as defined by Cooper (1986). This method involves synthesizing existing research studies related to a specific topic, thereby presenting a comprehensive overview of the subject area. By adopting this approach, the study aims to integrate findings from diverse research studies conducted in various geographical locations. Different research designs, methodologies, and theoretical frameworks have been included in this review. As a result, the integrative review facilitates a broader understanding of the topic, enabling the identification of patterns, consistencies, and gaps within the existing literature (Cooper, 1986).

Databases and Items for Searching Literature

For this integrative literature review, a comprehensive search of various electronic databases was conducted, engaging scholars from diverse disciplines. The search encompassed prominent resources like Google Scholar and specific journal databases, such as the Journal of International Migration and Integration. The database of Gothenburg University was extensively utilized as a valuable source of relevant literature.

In addition to electronic database searches, ancestry approach (backward citation) and reference screenings were carried out. This approach ensured the inclusion of pertinent studies that might have been missed through database searches alone. By employing this rigorous methodology, the review aimed to provide a thorough and well-rounded analysis of the existing literature, thus contributing to a more comprehensive understanding of the research topic.

The systematic literature review commenced with a comprehensive search for relevant terms in digital databases, and various context-related terms were employed in the study, encompassing topics such as "integration of immigrants in Sweden," "integration of newcomers/asylum seekers/refugees in Sweden," "social inclusion of immigrants," "social inclusion and digital literacy," "social inclusion and computer skills literacy," "Information Communication Technology and social inclusion," and "ICTs and social inclusion." These phrases and groups of terms were combined or used alternatively to identify the most pertinent and suitable scholarly papers for the review.

Selection process

The selection process involved identifying 40 papers from scholarly journals, followed by additional filtering. Initially, the papers were grouped based on the relevance of their titles. Subsequently, the abstracts and finally the whole article were thoroughly reviewed, leading to the inclusion of the most

relevant articles and the exclusion of irrelevant ones. To finalize the selection, a comprehensive review of the remaining articles was conducted. Ultimately, 23 articles were chosen based on their content and topic relevance for consideration, with some supplementary articles added later to support the research idea. Throughout the selection, scanning, inclusion, and exclusion processes, specific criteria were diligently considered. These criteria encompassed the following aspects:

- To be a scholarly paper in an academic journal.
- Having relevance to the integration or social inclusion of asylum seekers or refugees.
- The focus of the articles should primarily be on refugees, refugees 'related services, and service providers rather than on policy makers or governments.
- The study should consider, study, or explore the integration or social inclusion.
- The research focused on the integration or social inclusion facilitated by Information and Communication Technologies (ICTs).

After the quality check, 23 papers were ultimately selected to proceed with the research.

Analysis of Data and Review

Following an exhaustive literature review that focused on the usage of Information and Communication Technology (ICT) by refugees, with a particular emphasis on its influence on their social inclusion, a meticulous selection of articles covering diverse aspects of the subject matter was conducted. Ensuring a robust analysis, the inclusion of articles that met stringent quality standards was deemed essential for extracting relevant data.

To assess the data in this literature review, I employed theme synthesis as outlined by Braun & Clarke (2006). This method involves identifying and analyzing patterns within qualitative data. I opted for manual coding of the data, initially consolidating certain codes, and excluding others to generate descriptive themes. Subsequently, these descriptive themes were used to develop analytical themes that addressed various aspects of the research questions.

The critical examination of the qualifying literature has yielded several distinct themes, resulting in the incorporation of the following main subsections in this literature overview: 1. Digital divide, 2. Digital literacy, 3. ICT and social Inclusion or Integration, 4. ICT and learning, 5. ICT, connection, hope and emotion, 6. Female refugees, and 7. social media and mobile phones. These themes provide valuable insights into the diverse dimensions of the research topic and contribute to a comprehensive understanding of the subject matter.

Introduction

The European continent has experienced a significant transformation with the influx of immigrants dating back to the mid-20th century, which has brought about challenges in integrating diverse cultural, linguistic, religious, and racial backgrounds into long-established societies. This has led to a notable shift in European self-perception, as ethnic, religious, and racial diversity shape the social fabric (Alba & Foner, 2015). However, within this transformative landscape, the year 2023 presents an unparalleled challenge due to emergencies such as the one in Ukraine in 2022. Approximately 117.2 million people have been forcibly displaced or rendered stateless by 2023 (UNHCR, 2023).

Alba and Foner (2015) stress the critical importance of integrating immigrants and their descendants to foster full membership, equal opportunities, and a sense of belonging. Nonetheless, native populations often express opposition and fears about newcomers disrupting established ways of life, making it crucial to address these concerns for social cohesion amidst changing demographics and ongoing

immigration in Europe. Fostering successful integration and inclusion is essential not only for the well-being and social mobility of immigrants but also for the overall harmony and stability of societies that are experiencing increased diversity. By proactively addressing these integration challenges, societies can create an environment that celebrates cultural diversity while promoting mutual understanding, cooperation, and shared prosperity.

Conceptual Definitions

In commencing the literature overview, it is essential to define the following concepts:

"Refugee" refers to an individual displaced from their country of origin due to persecution, violence, conflict, or human rights violations, seeking asylum in another country for safety. Refugees often face vulnerabilities and require support, including access to basic human rights like food, shelter, and education, as established by the 1951 Refugee Convention and its 1967 Protocol (UNHCR, 2023).

"Integration" signifies the process by which immigrants become part of the host society and are regarded as equals in rights and opportunities to its members (Alba & Foner, 2015, p. 3).

"Adaptation" pertains to changes immigrants make in behaviors, attitudes, and beliefs in response to the new cultural and social environment they encounter (Berry, 2006, p. 6).

"Social inclusion" "the extent to which individuals are able to participate fully in society and control their own destiny" it could involve enabling individuals and groups to fully participate in society, with equal access to essential services, employment, education, and political participation (Warschauer, 2003, p. 8).

"Social exclusion" refers to being excluded from the social, economic, cultural, and political systems and institutions of society (Silver, 1994, p. 6).

"Information and Communication Technologies (ICT)" encompasses "a diverse set of technological tools and resources used to transmit, store, create, share or exchange information" (UNESCO Institute for Statistics, 2009, p. 120). In addition to computers and the Internet (websites, blogs, and emails), radio, television, and telephones may be included. (Anderson & Daniel, 2020)

Previous Studies

Several of these studies have concentrated on investigating the digital divide and digital literacy, shedding light on the disparities in access to and proficiency in information and communication technologies (ICTs) among refugee populations. (Alam & Imran, 2015; Kabbar & Crump, 2006; Reisdorf & Rhinesmith, 2020; Ritchie's study, 2022) Another subset of the studies examined the role of digital literacy in the process of refugees' integration into host societies, emphasizing the significance of technological competence in facilitating their societal engagement. (Andrade & Doolin, 2018; Gifford & Wilding, 2013; Traxler, 2018) Several studies concentrate on the intersection of ICT and social inclusion or integration. (Abujarour & Krasnova, 2017; AbuJarour et al., 2019; Alencar, 2018; Andrade & Doolin, 2016). The remaining studies have focused on the multifaceted influence of ICTs on refugees' lives and their journey towards social inclusion, underscoring the pivotal role played by digital technologies in enhancing their overall well-being and connectivity within the community. Collectively, these studies contribute to a more comprehensive understanding of the complexities surrounding refugees' digital experiences and the implications for their social inclusion and integration.

In this integrative literature review, qualitative methodology is predominant across all the studies, with a primary focus on refugees' perspectives, primarily gathered through self-reported data obtained via qualitative face-to-face in-depth interviews or focus groups (Abujarour & Krasnova, 2017; Alam &

Imran, 2015; Andrade & Doolin, 2016; Andrade & Doolin, 2018; Kabbar & Crump, 2006, etc.). Ethnographical fieldwork is relatively scarce, with only a few studies adopting this approach (O'Mara & Harris, 2016; Twigt, 2018), and rare instances of studies employing alternative methodologies (e.g., Gifford & Wilding's study, 2013).

One noticeable gap in the literature is the absence of a consistent theoretical framework. Grounded theory for coding process has been applied in one study (Abujarour et al., 2021). Nonetheless, some researchers have employed specific theoretical perspectives to guide their investigations. For example, the Theory of Social Psychology of Participation was utilized in one study (Campbell & Jovchelovitch, 2000), while Kabbar and Crump (2006) applied the Diffusion of Innovation Theory (DOI), and Andrade and Doolin (2018) adopted the temporal theory of human agency.

Among the theories used in the field of refugees' ICT usage in their social inclusion, the Capability Approach emerged as the most prevalent and beneficial (Abujarour & Krasnova, 2017; Anderson & Daniel, 2020; Andrade & Doolin, 2016).

A consistent characteristic of the studies reviewed is the small sample sizes, which allow for an in-depth exploration of participants' experiences and perspectives; however, limit the generalizability. In the collection of papers here, gender differences have not been extensively addressed, with Kabbar and Crump (2006) and Ritchie (2022), Alhayek (2016) being three of the few studies to do so, and among them, only the last one directly addresses gender.

Digital Divide

Scholars have emphasized the enduring presence of distinct levels of digital divide. The first-level divide pertains to inequalities in the physical access to digital resources, the second-level divide encompasses variations in digital competencies and usage patterns, and the third-level divide manifests as divergent outcomes arising from differentiated access and utilization (Reisdorf & Rhinesmith, 2020, p. 132). These divisions persist even in technologically advanced nations where a significant portion of the populace is connected online (Van Deursen et al., 2017).

In a poster, Patil (2019, p.3) provides a comprehensive review of the role of Information and Communication Technologies (ICTs) in the lives of refugees, encompassing various articles and focusing on five core themes in the context of ICT for Development (ICTD). One of these themes is the digital divide, which refers to the inherent disparities in access to information and communication technologies (ICTs) faced by displaced populations. This multifaceted concept encompasses four crucial aspects: “1) Connectivity and Physical Access”, which pertains to limited internet infrastructure and device availability; 2) “Affordability”, highlighting financial constraints hindering access to digital resources; 3) “Usability and Poor Literacy Skills”, denoting difficulties in navigating complex interfaces and low digital literacy levels; and 4) “Identity Management”, encompassing challenges in obtaining official identification documents, hindering access to critical online services. The study underscores the urgent need for collaborative efforts to bridge the digital divide, ensuring equitable opportunities and empowerment for refugees in the digital realm.

Kabbar & Crump (2006) had conducted a qualitative study aiming to identify the factors influencing the adoption of ICTs among recently arrived immigrants, mainly refugees, in Wellington, New Zealand. The study used semi-structured interviews with 32 participants from 15 households, categorized as adopters and non-adopters of ICTs. The results indicated that most immigrants perceived ICTs as valuable tools, motivating their adoption. The study highlighted the significance of a positive attitude towards technology in influencing adoption, consistent with previous research. However, barriers to adoption were observed (referring to level two divide), particularly among older female participants with limited education. Immigrants' decisions were influenced by peers, community leaders, and the wider immigrants' community through ICTs. To promote digital inclusion, the authors recommend

raising awareness of the potential benefits of ICTs, including access to essential services and educational opportunities. The findings of this study confirm that a positive attitude towards technology has a significant impact on the adoption of technology as outlined by Rhee and Kim (2004). The study used the Diffusion of Innovation Theory (DOI) as an analytical framework, which proved useful in understanding immigrant perceptions of ICTs and the adoption process. The study's strengths lie in its qualitative approach, establishing trust with participants through multiple interviews and considering cultural backgrounds. However, the limited sample size and focus on immigrants in one city may impact the generalizability of the findings. Despite these limitations, the research contributes valuable insights into addressing digital inequality and enhancing immigrants' social integration through ICT adoption.

Similarly, Alam and Imran (2015) examined the relationship between digital technology adoption, particularly broadband internet, and social inclusion among refugee migrants. Utilizing focus groups and prioritizing thematic and theoretical motivations, the researchers identified broadband internet's potential benefits in enhancing refugee social inclusion by providing access to education, job opportunities, e-services, and social networking. However, the study also highlighted digital exclusion factors such as disparities in ICT access, literacy, and affordability. The authors acknowledged potential limitations in generalizability due to the sample composition, which emphasizes the need for a more balanced methodological approach, incorporating quantitative data and exploring diverse ICTs to enhance findings robustness.

Ritchie's study (2022) focuses on the increasing influence of ICTs in refugee contexts, with a specific exploration of the role played by civil society groups. The case study involves Somali refugees in Kenya, examining how they utilize grassroots ICTs and the local socio-economic dynamics that influence their inclusion. Adopting a micro-institutional perspective, the research reveals how mobile technology impacts refugee women's norms related to mobility and work, leading to the development of new digital norms. Notably, WhatsApp emerges as a crucial platform for fostering social coordination and cooperation among refugee women, providing them with a sense of social connectedness, support, and economic opportunities. The study emphasizes the importance of digital inclusion and literacy for vulnerable refugee groups, underscoring the strategic role of civil society groups in bridging the digital divide and promoting ICT adoption driven by cultural exchange, support, protection, and economic advancement. Overall, this research highlights the transformative potential of ICTs in improving the socio-economic lives of refugees, while also acknowledging challenges in ensuring equitable access and usage in such contexts.

According to the studies mentioned above, it is evident that addressing the digital divide is of paramount importance, because it contributes significantly to the empowerment of refugees through the provision of digital tools and facilitation of their integration into society. It is crucial for refugees to adapt their digital skills in their new country to function effectively, and this adaptation relies on a positive attitude and motivation towards learning and utilizing digital technologies. The collaboration of diverse stakeholders becomes essential in bridging existing gaps in digital access and ensuring equitable opportunities for refugees to embrace the potential benefits of digital technologies in their lives. By providing adequate support and resources, society can empower refugees to navigate the digital landscape, facilitating their successful integration and overall well-being in their host communities.

Digital Literacy & Refugees

As the following studies conclude, refugees require digital literacy to effectively utilize ICTs and improve their social inclusion, which ultimately facilitates their successful integration into a new society and enhances their overall well-being.

Gifford & Wilding (2013) titled "Digital Escapes," aimed to explore the impact of digital literacy on settlement experiences among young Karen refugees in Melbourne, Australia. Through the Homelands

project, the research sought to enhance the sense of belonging among resettled youth by maintaining digital connections with their home countries or refugee camps. The longitudinal approach, incorporating methods such as photographs and drawings, provided insights into settlement experiences over four years. The research showcased how ICTs empowered young refugees to navigate global networks, resist the refugee label, and promote positive settlement experiences beyond the national context. However, the study's lack of explicit theoretical grounding and methodology may raise concerns about the rigor of data analysis and interpretation. In addition, the sense of empowerment and belonging experienced by individuals could potentially be attributed to years of living in a new environment, and not solely attributed to the influence of ICTs.

In a similar study, Traxler (2018) examined digital literacy among Palestinian refugee communities in the Middle East. The research aimed to document digital opportunities, challenges, and resources while supporting a Palestinian conception of digital literacy theory and practice. Using a survey approach, the study focused on the Arab Digital Generation (ADG), consistent technology users aged 15 to 35 in countries such as Lebanon and Jordan. It critically examined the concept of digital literacy, emphasizing its implications for educational policy in the region and advocating for appropriate strategies and curriculum to promote digital literacy education. One of the study's strengths lies in its thorough investigation of digital literacy within the context of Palestinian refugees, but its potential limitations include the need to ensure generalizability due to the specific target age group and location.

Andrade and Doolin (2018) investigated how resettled refugees utilized information and communication technology (ICT) to adapt to their new circumstances and enhance their well-being in a foreign society. The study identified eight patterns of ICT use, “1. learning about a new environment, 2. keeping informed, 3. transacting online, 4. communicating with others, 5. managing everyday life, 6. sustaining support networks, 7. maintaining transnational ties, and 8. expressing cultural identity” (p.164). Drawing on “a temporal theory of human agency”, the authors explained how current dilemmas, cultural identities, and future expectations influence refugees' use of ICT. The study's qualitative approach allowed for in-depth insights into participants' experiences. However, the constraints of a relatively small sample size and the absence of a dedicated theoretical framework could be perceived as limitations in the research.

In comparing these three studies, I find commonalities in their exploration of the role of ICTs in the lives of refugees. All studies adopt qualitative methodologies, providing valuable in-depth insights into participants' experiences. However, two of them faces unique limitations, such as the need for broader generalizability in Traxler's study (2018), potential methodological concerns in Gifford & Wilding' study (2013). Nonetheless, these studies contribute significant insights into the digital experiences and opportunities that impact refugee communities, guiding policies and practices for supporting their integration and social inclusion.

ICT and social inclusion or Integration

Numerous studies have highlighted the significant role of ICTs in promoting social inclusion among refugees, fostering a sense of belonging, and facilitating active participation in their new communities. ICT usage has been found to offer essential connections and access to information, which are vital for refugees to engage meaningfully in their host societies. These technologies bridge the gaps in communication, providing refugees with the means to connect with others and access relevant information and services. Some of these studies are as follows:

Andrade and Doolin (2016) investigated the social inclusion of resettled refugees in New Zealand through their use of information and communication technology (ICT). Using a qualitative, capability-based approach, the study explores the experiences of refugees who underwent basic computer training under the government-funded initiative, Computers in Homes. The research identifies five key achieved

functionings facilitated by ICT usage, emphasizing their importance in rebuilding refugees' lives and fostering a sense of agency. The achieved functionings categorized in their study are as follows: “(1) participating in an information society; (2) communicating effectively; (3) understanding a new society; (4) being socially connected; and (5) expressing a cultural identity” (p.409). While the study's focus on a marginalized group and multidimensional understanding of social inclusion are strengths, potential limitations arise from participant selection bias and reliance on self-reported data. Future research could explore affordance and the reasons behind specific ICT usage patterns, considering the diverse temporal contexts and life experiences of refugee participants.

Another study exploring the impact of ICTs on the social inclusion of Syrian refugees living in Germany was conducted by Abujarour and Krasnova (2017). The researchers conducted face-to-face interviews with fifteen participants, ranging in age from 18 to above 40 years. Adopting the Capability Approach as a theoretical framework, the study identified capabilities enabled by ICT use, including effective telecommunications, social connectedness, access to information, participation in educational programs, and maintaining cultural identity. In addition, ICTs play a crucial role in facilitating communication, providing safety during the refugees' journey, supporting language translation, enhancing mobility, and preserving cultural ties. The findings offer valuable insights for policymakers to promote integration among refugees, emphasizing the significance of ICTs in achieving social inclusion.

Alencar (2018) examines how social media facilitates the integration of refugees from Syria, Eritrea, and Afghanistan in the Netherlands. To explore the significance of platforms such as Facebook, WhatsApp, and Instagram in facilitating connections and navigation in their new environment, the research uses qualitative methods, and applies a sociological approach to technology as a theory. In depth interviews are conducted with 18 recently arrived asylum seekers and refugees. The study highlights the positive impact of social media in providing information, language practice, and social connections to refugees, but also acknowledges potential risks, such as social isolation and misinformation. While the qualitative approach provides rich insights, the small sample size may limit generalizability in this study. Nevertheless, like other qualitative studies the research contributes valuable knowledge to inform policy and practice regarding refugee social inclusion and integration.

AbuJarour et al. (2019) conduct a study examining the social inclusion of Syrian refugees in Berlin through face-to-face interviews conducted in Arabic. The research investigates the participants' sense of agency and well-being in the host society, particularly focusing on how online communication using ICTs contributes to social connectedness with family and friends outside Germany. The study highlights the importance of understanding these dimensions of social inclusion and offers potential applications of this knowledge in other cultural contexts. While the qualitative approach and validation using Partial Least Squares are strengths, the limited sample size and focus on one specific refugee group may be considered limitations. Panel discussions were also held during which seven primary research themes were identified. These themes encompassed the following areas: access to information, the availability of educational and linguistic resources, opportunities for labor market integration and entrepreneurship, communication with the home country, engagement with the local population, interaction with the host government, and the coordination of volunteer efforts.

In the same vein, Abujarour et al. (2021) conducted a qualitative study using Grounded Theory for coding and analysis to explore the use of ICTs by Syrian refugees in Germany and its impact on their social inclusion. The research aimed to understand the mechanics of ICT-enabled empowerment and its interaction with refugees' perception of social inclusion. The study drew on the concepts of empowerment, global connectivity, and agency to analyze the qualitative data from thirteen face-to-face interviews with refugees. The findings revealed that smartphones played a pivotal role in refugees' lives,

providing them with a sense of control, self-efficacy, and community participation, which contributed to their social inclusion in the host society.

In comparing these studies on refugee social inclusion and ICT usage, commonalities are found in their adoption of a qualitative methodology to explore the implications comprehensively, providing rich insights into participants' experiences, and offering actionable recommendations. Alencar's (2018) study focuses on the role of social media in supporting refugee integration, while Andrade and Doolin (2016) investigate the capabilities facilitated by ICT. On the other hand, AbuJarour et al. (2019) and Abujarour & Krasnova (2017) emphasize the potential of ICT in promoting social inclusion amid the global refugee crisis, while AbuJarour et al. (2021) sheds light on the critical aspect of refugees' lives through ICT usage, offering valuable insights into how technology can empower them and foster social inclusion. All studies recognize the significance of understanding refugees' experiences navigating new environments and fostering connections with their home countries and host societies. However, each study faces unique limitations, such as small sample sizes (AbuJarour et al., 2019; AbuJarour et al., 2021; Alencar, 2018), potential participant selection bias (Andrade and Doolin, 2016), and the need for further research to gain a comprehensive understanding of the long-term implications of ICT usage on refugee integration and the robust theory (AbuJarour et al., 2021).

To enhance the robustness of the research, it is recommended to conduct further studies with larger and more diverse samples. Theoretical grounding is crucial to comprehensively understand the complexities of ICT's impact on social inclusion. Therefore, it becomes imperative for future research to adopt robust theoretical frameworks that align with the unique experiences and requirements of refugees, ensuring a holistic and well-informed approach to advancing social inclusion through ICT implementation. Additionally, considering a broader theoretical framework could provide a more comprehensive understanding of the complexities of refugee agency and empowerment within the context of ICT use. Nevertheless, the studies provide practical implications for stakeholders and decision-makers to effectively leverage ICT resources in supporting refugees' integration efforts and fostering their social inclusion in host communities.

The collective findings of these studies emphasize the significant role of ICTs in promoting social inclusion among refugees, facilitating a sense of belonging, and fostering active participation in their new communities. ICT usage enables essential connections and access to information, empowering refugees to engage meaningfully in their host societies. Various studies highlight the capabilities facilitated by ICTs, such as effective telecommunications, social connectedness, access to information, and language support, which are crucial in rebuilding refugees' lives and enhancing their agency. While the studies recognize the positive impact of ICTs, they also acknowledge potential risks, such as social isolation and misinformation. Overall, these research findings offer valuable insights for policymakers to design effective strategies to promote integration among refugees by harnessing the potential of ICTs and fostering social inclusion. By examining these studies together, researchers and stakeholders can gain a more holistic understanding of how ICTs contribute to refugee social inclusion and integration. This will enable the development of effective policies and interventions to support displaced populations in their resettlement journey.

ICT & Learning in Refugees Inclusion

Several studies have concluded that digital and ICT learning serves as a crucial aspect of ICT usage that significantly aids refugees in their intricate journey towards integration, facilitating the social inclusion process. E-learning and digital learning have been proven to be highly effective tools in assisting refugees, particularly in language acquisition and educational pursuits.

O'Mara and Harris (2016) conducted an ethnographic study investigating the use of digital technologies among 24 migrant and refugee-background young people through the Culture Shack arts pedagogy

program in Melbourne, Australia. The study explored how online pedagogies, including animation, Facebook, Photoshop, mobile phones, and YouTube, can bridge cultural, gender, and educational gaps when applied in ways that align with communication preferences and discourses of culture and ethnicity. Drawing on public pedagogy and cyberculture theories, the authors framed creative ICT use as a contested space where young participants shape their educational experiences and imagine futures elsewhere. It provided valuable insights into the potential of digital technologies in engaging and supporting migrant and refugee communities. The study's theoretical framework could have been strengthened by incorporating more multidisciplinary perspectives, and future research should consider employing mixed method approaches to capture diverse viewpoints and address potential biases and power dynamics in the digital learning environment.

Abujarour and Krasnova's (2018) study investigates the potential of e-learning in promoting social inclusion for Syrian refugees in Germany. Conducted through face-to-face interviews with 28 participants, the research explores refugees' use of E-learning resources, particularly in learning the German language. The findings highlight the advantages of E-learning, such as flexibility and accessibility through familiar platforms like YouTube, Facebook, WhatsApp, and specialized mobile apps. However, challenges such as teacher shortages and technical infrastructure need to be addressed to fully harness the benefits of E-learning for refugee integration. While the qualitative approach in this study provides valuable insights, the sample size may limit generalizability, and the lack of an explicit theoretical framework hinders a deeper understanding of the study's objectives. Despite these considerations, the research underscores the importance of providing robust technical infrastructure and suitable learning environments to foster e-learning adoption among refugees, promoting their integration.

Castañó-Muñoz et al. (2018) present a qualitative study as part of the Inclusion project, focusing on the use of free digital learning (FDL) to foster inclusion among migrants and refugees in Europe. Investigating FDL initiatives in language learning, social inclusion and employment, and higher education, the research identifies overlaps between the purposes of FDL initiatives and their design principles. The study sheds light on the potential of FDL for social inclusion but acknowledges challenges related to stable internet access and language barriers. The authors recommend personalized and guided pedagogical approaches for successful FDL implementation, particularly for civic integration and higher education purposes. The study's strengths lie in its use of qualitative research methods, including interviews and focus groups, which facilitated a comprehensive exploration of migrants' and refugees' perspectives on FDL. However, the relatively small sample size may limit generalizability, and the absence of a specific theoretical framework weakens the research's overall structure, potentially limiting insights into the complexities of FDL's effectiveness for migrants and refugees.

AbuJarour (2022) conducted a study focusing on the social inclusion of Syrian refugees in Germany through ICTs. The objective was to explore the benefits of ICT solutions, particularly in education and digital learning, for promoting the integration of refugees into the host society. In analyzing the interviews, the researchers followed the Grounded Theory. They conducted 36 face-to-face interviews over three years with Syrian refugees, emphasizing their use of educational and e-learning opportunities and how these services contribute to their social inclusion. The findings highlighted the importance of learning the German language for successful integration, with many refugees utilizing e-learning platforms such as YouTube, Facebook, WhatsApp, and mobile apps to enhance language skills and overcome educational challenges.

In examining the studies by O'Mara and Harris (2016), Abujarour and Krasnova (2018), Castañó-Muñoz et al. (2018), and AbuJarour (2022), several commonalities and strengths can be identified. All four studies utilize qualitative research methods and explore digital learning opportunities as a means of

promoting social inclusion for refugees. They recognize the significance of addressing challenges such as limited access to technology and language barriers to optimize the benefits of e-learning and free digital learning (FDL) for refugee integration. The studies also highlight the need for personalized and guided pedagogical approaches to cater to refugees' diverse needs in their learning process. However, one weakness shared among these studies is the limitation in sample size, which may impact the generalizability of their findings. To strengthen future research in this area, it is essential to incorporate robust theoretical frameworks to gain a deeper understanding of the effectiveness and impact of digital learning initiatives on refugee integration. By addressing these considerations, researchers can harness the potential of digital learning resources to promote social inclusion and support the successful integration of displaced populations in host countries.

ICT, Connection, Hope and Emotion

Another significant aspect observed in the refugee experience is the crucial role played by Information and Communication Technologies (ICTs) in providing emotional support. Through ICT-based connections to friends, families, organizations, and social media platforms, refugees receive the necessary emotional support, which, in turn, positively impacts their overall well-being, both emotionally and physically. These digital connections serve as essential avenues for support and aid in enhancing the resilience of refugees during their journey of integration into a new country. The preceding studies belong to the group of research endeavors undertaken to investigate this particular aspect:

Twigt (2018) is one of the studies that explores the experience of waiting among Iraqi refugees in Jordan and how it is influenced by transnational digital connections. Through ethnographic fieldwork, Twigt investigates the use of digital technologies in the daily lives of displaced Iraqi households. The study highlights that waiting is an affective phenomenon characterized by hope and anxiety, and digital technologies serve as orientation devices, enabling refugees to imagine futures in other places. These transnational connections provide a space for hope and optimistic visions of life elsewhere, sustaining their experience of immobility. The research emphasizes the importance of using the imagination to resist structural constraints and cope with the uncertainties of prolonged displacement.

While much of the literature on displaced populations has focused on practical aspects of digital technologies, this study sheds light on the emotional and affective dimensions of digital connections in refugee households. The presence of these transnational connections plays a significant role in shaping the everyday experiences of Iraqi refugees in Jordan, where they envision alternative futures and maintain optimistic outlooks for the future. The researcher highlights the potential of digital technologies in alleviating the challenges associated with living in limbo and provide insight into the coping mechanisms used by refugees in times of uncertainty.

In the same vein, a qualitative case study by Udwan et al. (2020) delves into the emotional aspects of refugee experiences, particularly concerning their digital connections through social media. The study highlights the challenges refugees face while adjusting to a new country, and the added stressors caused by neoliberal policies that demand resilience and successful integration. For these refugees, social media becomes a crucial tool for maintaining close ties with their families back in Syria, offering emotional support and a sense of togetherness despite the physical distance. However, the study uncovers a paradox - while social media enables communication, refugees often hesitate to share their own problems to protect their families from added stress.

The research underscores the significance of social media as a source of digital resilience, providing a platform for community support and health promotion. It also advocates for greater involvement of refugees in shaping digital initiatives and decision-making processes to improve their overall well-being and address the challenges they encounter. Overall, the study sheds light on the complex emotional

dynamics and coping mechanisms that refugees navigate through digital connections in their pursuit of integration and a sense of belonging. The study underscores the importance of addressing these resilience tactics while implementing effective online and offline practices in the context of social and health support by host countries.

Female Refugees

Siddiquee and Kagan (2006) conducted a study on the Community Internet Project (CIP) and its impact on refugee women in the UK. The CIP facilitated technological engagement outcomes, empowering the participants, aiding in identity development, and promoting active participation within a supportive community. The study utilized semi-structured interviews and non-participant observation with 6 refugee women and their course tutor during the final CIP session. Thematic analysis revealed positive outcomes such as maintaining and rebuilding social networks, facilitating resettlement and integration, as well as fostering personal and psychological empowerment. The study also recognized the potential risks of misusing ICTs to perpetuate cultural and gender stereotypes.

The research contextualized technological engagement within participatory processes, drawing on the theory of the social psychology of participation (Campbell & Jovchelovitch, 2000). It emphasized the need for further investigation to ascertain if the positive outcomes could lead to transformative changes. Based on the findings of the study, it has been concluded that the Comprehensive Integration Program (CIP) offers the opportunity to reshape social perceptions and promote inclusivity through open dialogue and greater access to information.

Similarly, Alhayek's study (2016) explored the use of ICTs by Syrian activists working with refugee women in Jordan. The research involved extensive fieldwork, including in-depth interviews and participant observation in various regions. The findings highlighted the instrumental role of grassroots activists in using ICTs to improve the lives of marginalized women, linking gender, political, and humanitarian activism in the Syrian context. The study underscored the significance of ICTs in empowering and integrating vulnerable Syrian refugee women, promoting social change through personal communication and activism. In this study by Alhayek (2016), a critical point worth noting is the absence of a clear theoretical framework guiding the research. As a result, the study appears to rely solely on qualitative research methods and in-depth interviews without establishing a theoretical framework for the analysis, which may hinder its depth and broad applicability of the findings.

Together, these studies demonstrate the transformative potential of ICTs in empowering and integrating marginalized communities of refugee women. While emphasizing positive outcomes, they also caution against potential misuses of technology that may perpetuate cultural and gender stereotypes. Overall, the studies advocate for ongoing research to maximize the transformative impact of ICTs in promoting empowerment, integration, and social change for women refugees.

Social Media and Mobile Phones

The advent of cellphones and social media has brought about significant benefits for individuals before and after displacement. These technological advancements have revolutionized the way refugees stay connected with loved ones and access crucial information during their journeys. With cellphones and social media, refugees can bridge distances and maintain vital relationships, providing a sense of comfort and support in the face of uncertainty. Moreover, these platforms have become invaluable tools for accessing real-time information, facilitating communication, and fostering a sense of community among displaced individuals, ultimately contributing to their overall well-being and resilience.

Dekker et al. (2018) focused on Syrian asylum migrants in the Netherlands and explored the role of social media in their migration decision-making process. The study includes in-depth interviews with 54 Syrian asylum seekers who obtained refugee status in the country. The findings demonstrate that

social media play a crucial role in informing migration decisions, allowing migrants to access real-time information and adapt their routes accordingly. However, challenges with Internet access and concerns about government surveillance impact smartphone use among asylum migrants. The study highlights the importance of validation strategies to ascertain the reliability of information from unknown sources.

The study by Anderson and Daniel (2020) investigates the use of social media by young refugees in Norway and its impact on their well-being. As mentioned in social inclusion section, they conducted qualitative in-depth interviews with eight young refugees and two key informants involved in running social media sites for refugees. The researchers framed the study using Sen's Capability Approach (1987) and identified five capabilities associated with social media use that significantly influence well-being: effective communication, social connectedness, participation in learning opportunities, access to information, and self-expression. The study emphasizes the importance of considering individual differences in approaching and valuing social media when using it as a tool to engage with refugees.

The existing body of knowledge

Aléncar (2020) conducted a comprehensive review on the relationship between mobile communication practices and the lives of refugees. Utilizing the concept of affordances, the study explores the possibilities and vulnerabilities of mobile communications, as well as the social conditions and agency of refugees throughout their migration trajectories. The findings reveal that smartphones offer both benefits and risks for refugees, facilitating migration organization while also exposing them to extortion and surveillance. The study underscores the role of mobile technologies in fostering interpersonal connections among refugees and their intersection with emotions and experiences of uncertainty.

The existing body of literature concerning refugees and mobile phones underscores these devices as lifelines for refugees, facilitating crucial relationships and information access. Nonetheless, there remains a demand for additional research to delve into the distinct experiences and requirements of diverse refugee groups within various contexts. As highlighted by Reisdorf & Rhinesmith (2020), the dynamics could vary significantly across different contexts, emphasizing the necessity for context-sensitive exploration. Additionally, future studies should investigate collective processes and power dynamics surrounding the adoption of mobile technologies by various migration actors in the context of forced displacement and resettlement. The analytical depth of these studies contributes to a better understanding of the complexities surrounding mobile communication practices among refugees and lays the groundwork for future investigations in this area.

In addition, Reisdorf & Rhinesmith (2020) conducted a literature review on digital inclusion and provided a compilation of research articles focusing on digital inclusion initiatives across diverse cultural contexts, aiming to mitigate digital inequities and disparities. The collection highlights the shift from solely addressing deficits to exploring proactive solutions that enhance digital inclusion. The studies encompass a range of countries and target audiences, emphasizing successful strategies to bridge digital divides. As the COVID-19 pandemic underscored the significance of digital inclusion, the articles provide valuable insights into what works to improve access to and utilization of Information and Communication Technologies for marginalized populations. By offering recommendations and unique perspectives, the study contributes to advancing both academic understanding and policy implementation to foster digital inclusion at local, state, and country levels.

Patil's (2019) in his comprehensive review explored the influence of information and communication technologies (ICTs) on the different dimensions of refugee life, with a focus on how technology can aid in improving their lives and well-being. The high penetration rates of mobile phones and the internet in urban refugee communities is highlighted based on existing research and statistics from UNHCR (UNHCR, 2016, as cited in Patil, 2019). The review emphasizes the importance of a user-centered approach and the involvement of refugees from the outset of research. Furthermore, it advocates for

collaborative efforts among researchers, policy makers, and institutions to develop scalable and sustainable ICT solutions that cater to the unique needs of refugees.

Moreover, the literature review indicates that technology can significantly impact the lives of refugees, particularly through the widespread use of mobile phones, and ICTs offering potential benefits in integrating refugees into host communities and improving their well-being. However, the effectiveness of ICT interventions may vary depending on the host country's policies and socioeconomic circumstances. The review underscores the need for a holistic approach that incorporates sociocultural studies, critical theories, and involvement of local scholars to maximize the impact of ICT initiatives. Engaging refugees in the research process is essential for obtaining contextually relevant results, promoting robustness, inclusion, and sustainability in ICT initiatives in refugee settings.

Similarly, Zamani (2018) did a literature review and explored the relationship between ICTs and social inclusion, emphasizing that while the adoption of ICTs is advocated by policymakers to address inequalities, mere adoption is insufficient without considering the design and functionality of these technologies to meet the needs of disadvantaged individuals. The study highlights that social inclusion goes beyond economic disparities and involves active participation in various aspects of society. ICTs can either contribute to inclusion by providing access, communication channels, and valuable information, or lead to exclusion due to skill gaps, lack of infrastructure, or increased costs. Gender-based inequalities persist, with women having fewer chances of Internet access than men. The research underscores the necessity of internet access and tailored technology solutions for various marginalized groups, including ethnic minorities, to participate in social activities, maintain connections, and access information. It concludes that ICTs alone are insufficient to combat social exclusion, but they can empower individuals by enhancing communication, enriching capabilities, and potentially contributing to a more stable life.

In the same vein, Wilding (2009) conducted a review about the potential outcomes of using ICTs to promote social inclusion among youth from refugee backgrounds. The research critically examines existing literature on ICT-based inclusion projects, exploring how these initiatives align with the transnational experiences, expectations, and aspirations of young refugees. While various programs focus on enhancing social inclusion for these youth, potential harms and exclusionary aspects in transnational contexts remain uncertain. The study emphasizes the need to identify communities of exclusion that may arise from inclusive efforts and highlights the importance of a comprehensive understanding of the impact of ICT-based inclusion initiatives. Although the research raises important questions about the impact of ICTs on refugee youth's social inclusion, it lacks specific recommendations or practical solutions for addressing the identified risks and challenges.

The Current Study

In comparing the reviewed studies with my own research, there are several factors that justify the use of my chosen theory, methodology, and method. First, the majority of the reviewed studies utilized qualitative methodologies, which aligns with my own research approach. Qualitative methods are well-suited for exploring the depth of refugees' experiences and perspectives on the impact and role of information and communication technologies (ICTs) in their social inclusion.

Second, the application of semi-structured interviews in both the reviewed studies and my research serves as a sound methodological choice. This approach allows for flexibility in gathering data while ensuring the research objectives are met, which, in my case, is to understand the influence of ICT use on refugees' social inclusion through the lens of Sen's Capability Approach.

Moreover, Sen's Capability Approach, as most common approach in the field, offers a relevant and comprehensive theoretical framework for analyzing the economic, social, and cultural dimensions of

refugee life impacted by ICTs. By adopting this theory, my research can critically examine the capabilities that ICTs can enable or hinder, ultimately contributing to a holistic understanding of refugees' social inclusion experiences.

The comparative analysis of the reviewed studies and my own research reinforces the importance of taking a user-centered approach, actively involving refugees in the research process. This approach is highlighted in Patil's study as well and aligns with my own intention to ensure that the voices and perspectives of refugees are central to the investigation.

Patil's (2019) review highlights the prevalent use of mobile phones and the internet among refugees. Middle Eastern refugees, particularly those from Persian and Syrian backgrounds, in Sweden are not exception. This underscores the importance of addressing social inclusion challenges faced by refugees in the host country and understanding their coping strategies. Aligning with my research objectives, the emphasis on a user-centered approach is particularly pertinent.

Moreover, Wilding's study (2009) underscores significant concerns regarding potential drawbacks of ICT-based inclusion initiatives. This insight can both inform my own research and contribute to a more nuanced comprehension of how ICTs impact the social inclusion of refugees. By incorporating these findings, I can fortify the rationale for my study and actively contribute to the development of effective, comprehensive ICT solutions for refugee communities.

To further enhance the field, it's imperative to delve into empirical data and case studies. These endeavors will provide tangible evidence and practical insights that can effectively guide efforts to mitigate risks and challenges in ICT-based inclusion strategies.

In conclusion, the reviewed studies and my research share commonalities in their qualitative methodologies and the use of semi-structured interviews to explore refugees' experiences with ICTs and social inclusion. The justification for employing Sen's Capability Approach lies in its ability to provide a robust theoretical framework for analyzing the impact of ICT usage on refugees' agency, capabilities, well-being and social inclusion. By combining these aspects, my research aims to shed light on the transformative potential of ICTs in enhancing refugees' social inclusion and well-being, while ensuring a comprehensive and participatory approach to data collection and analysis.

Research Gap

Lack of Similar Studies in Sweden's Context

Despite the growing importance of social inclusion and ICT usage among refugees in Sweden, there is a glaring gap in the literature—specifically, the lack of similar studies conducted in Sweden, in English databases. While research on this topic exists in other countries, the absence of studies in the Swedish context hinders a comprehensive understanding of the challenges and opportunities faced by refugees in this particular setting. Considering Sweden's status as a key destination for refugees and its progressive policies on integration, addressing this gap becomes essential to gain context-specific insights and inform targeted interventions. By conducting research within the Swedish context, this study aims to address this significant gap and contribute valuable knowledge that can aid policymakers and stakeholders to gain insight in promoting effective ICT-based social inclusion initiatives for refugees in Sweden.

Refugees' Agency, Capabilities and Preferences in Using ICTs for Social Inclusion

Another significant gap observed in the literature pertains to the exploration of refugees' agency and preferences in using ICTs to foster social inclusion. While existing studies have acknowledged the role

of ICTs in facilitating social connections and providing access to information, they often fall short in understanding how refugees themselves actively shape their ICT practices to promote social integration. The agency and preferences of refugees in selecting and utilizing specific ICT tools, platforms, or applications as per their social and cultural contexts remain underexplored. A deeper examination of refugees' agency in leveraging ICTs for social inclusion can provide crucial insights into tailoring interventions and support systems that align with their individual needs and aspirations.

ICT Impact on Social Inclusion and Gender

The literature review reveals a notable gap in existing studies concerning the specific relationship between Information and Communication Technologies (ICTs) and social inclusion, particularly with a focus on gender dynamics. While several studies have explored the impact of ICTs on social inclusion among refugees, few have adequately delved into the gender-specific aspects of this phenomenon. Most research has either ignored or treated the gender dimension as an end-product finding. Consequently, the understanding of how ICTs influence social inclusion differently based on gender remains limited. This gap highlights the need for further investigation into the intersection of ICTs, social inclusion, and gender dynamics to comprehensively address the unique challenges and opportunities faced by refugee women and men in accessing and utilizing ICTs for social integration.

The Chosen Methodology and Theoretical Framework

The decision to opt for a small sample size and qualitative methodology in this research is justified by several key factors. First, given the limited resources and constraints in accessing a large and diverse refugee population, a smaller sample size allows for more focused and in-depth data collection. Through qualitative methods of in-depth interviews, the study can delve into the unique experiences, perspectives, and challenges faced by Middle Eastern refugees in Sweden concerning their usage of ICTs. This approach facilitates a deeper understanding of the complex social and cultural dynamics surrounding their technological engagement. Additionally, the research aims to explore novel insights and generate preliminary findings in this context, making a smaller sample size suitable for an exploratory investigation. Moreover, by focusing on a select group of refugees, the study can identify specific patterns and issues that may not be evident in larger, more generalized studies, enabling a nuanced analysis of ICT implications on refugee integration and well-being. (Flick, 2014)

Furthermore, the choice of a qualitative approach aligns with the research's emphasis on contextual understanding and human-centered perspectives. By employing thematic network analysis, the study can unravel the multifaceted roles of ICTs in the lives of Persian and Syrian refugees in Sweden. Qualitative research is particularly well-suited for capturing the complexities of social interactions, information exchange, and communication patterns within the refugee community, shedding light on the transformative potential of technology in promoting empowerment and social change. Additionally, given the diverse backgrounds and experiences of refugees, a qualitative methodology accommodates the exploration of individual differences and diverse ICT practices, contributing to a comprehensive portrayal of the ICT landscape in the refugee context. Although the findings may not be generalizable to the entire refugee population in Sweden, the research aims to lay the groundwork to provide valuable insights for further investigation in Sweden and contribute to the growing body of knowledge on the role of ICTs in refugee integration and resilience. Overall, the combined use of a small sample size and qualitative methodology is a thoughtful and justified approach to shed light on the intricate interplay between ICT usage and the lives of Middle Eastern refugees in Sweden, offering rich and context-specific insights for both academic and practical purposes. (Flick, 2014)

Capability Approach

Furthermore, a critical observation in the existing literature is the absence of a clear theoretical framework in many studies, leading to ambiguity in the research objectives, data analysis, and results

justifications. This lack of theoretical grounding limits the depth and coherence of the findings, making it challenging to draw robust conclusions and apply the research outcomes to practical interventions. In contrast, this study seeks to address this gap by applying the Capability Approach as its theoretical framework. The Capability Approach, developed by Sen (1990), offers a comprehensive lens to understand human well-being and social inclusion, particularly among vulnerable populations like refugees. By adopting this theoretical perspective, this research aims to provide a coherent and nuanced analysis of how ICTs can enhance refugees' capabilities. It will empower them to navigate their new environment and promote their social integration in the Swedish context. The application of the Capability Approach is expected to strengthen the theoretical underpinning of the study, ensuring a robust exploration of ICTs' impact on social inclusion among refugees, and generating insights that can inform policy and practice effectively.

By addressing these gaps in the existing literature, the present study aims to contribute to the body of knowledge on the role of ICTs in promoting social inclusion among refugees, with a specific focus on the Swedish context. By prioritizing the exploration of refugees' agency and preferences, with the lens of capability approach and acknowledging the probable gender role as a secondary aspect, this research endeavors to provide valuable insights that can inform targeted and effective interventions for enhancing social integration and empowerment among refugees in Sweden.

Theoretical Framework

My review of theories introduced in the fields of social studies and human development has provided a clear theoretical basis for current research. Sen's capability approach, developed by Zheng & Walsham (2008), Andrade & Doolin (2016), Abujarour & Krasnova (2017), and Anderson & Daniel (2020), is employed to examine how ICTs, such as social media platforms and mobile-based applications, affect Middle Eastern refugees's social inclusion in Sweden (Sen, 1980, 1987, 1993, 1999; Robeyns, 2005).

This approach provides a framework for examining the capabilities of an individual in terms of their access to resources and opportunities, and how these resources and opportunities can be used to develop agency and well-being. By examining the role of ICTs on Middle Eastern refugees in Sweden, this research seeks to explore the impact of technology usage on the well-being of those who have been displaced. Considering the context of this study, a capability framework is particularly appropriate because it emphasizes individual wellbeing as well as broader aspects of social functioning and change (Robeyns, 2016). The capability approach is an important tool for understanding how ICTs can improve the wellbeing of displaced people and how it can contribute to their overall social functioning. In addition, it provides a framework for examining how ICTs can empower refugees to access resources, build networks, and become more connected to their new societies.

According to Nobel Prize-winning economist Amartya Sen, the Capability Approach provides a theoretical framework for assessing human well-being and development. Taking a broader view, the Capability Approach considers not only income and material possessions, but also individuals' ability to make choices and take opportunities. Therefore, the Capability Approach redirects attention from the resources individuals possess, including technologies, to the outcomes they can attain through their utilization. The significance and value of this approach have been demonstrated in refugee research (AbuJarour & Krasnova, 2017; Anderson & Daniel, 2020, Andrade & Doolin, 2016). This approach emphasizes the importance of human agency and the ability to achieve one's goals and dreams (Alkire, 2005; Sen, 1999).

A framework such as Sen's Capability Approach can be useful for understanding how refugees can be included in society. This approach emphasizes human agency and the ability to pursue one's aspirations and goals, including participating in society. As well as providing basic necessities such as food, shelter, and healthcare, social inclusion also involves providing refugees with the opportunity to engage in meaningful activities, build social connections, and contribute to their communities (Andrade & Doolin, 2016; Zamani, 2018).

Based on Sen's (1999) capability approach, development is viewed as a process of freedom for individuals. Sen (1999) is concerned with "capabilities (the potential of individuals) to lead the kind of lives they value and have reason to value" (p. 18). With this approach, our focus shifts from the resources that an individual has access to, to the uses that they can make of those resources (Clark 2005). Sen (1999) describes uses as functionings, which are "things one may value doing or being" (p. 75).

A person's capabilities are defined as the variety of alternative ways in which they can perform their functions (Sen 1999). As a result, a person's capabilities can be viewed as his or her potential functions, but the potential functions must be accompanied by real opportunities or freedoms that will enable the individual to perform those functions effectively (Alkire 2005). In order for people to be able to perform

specific functions, a variety of personal, social, and environmental factors (including social structures and cultural values) are considered influencing their substantive freedom of doing so (their capability set) as well as the choices they make (Clark, 2005; Robeyns, 2005; Zheng, 2009).

Capability approach and social Inclusion

Important to a capability approach is clarity on the concept of social inclusion, which is here taken to concern "the extent to which individuals are able to participate fully in society and control their own destiny" (Warschauer 2003, p. 8). This concept is derived from its dichotomy opposite social exclusion, which describes how people "may be prevented from fully participating in the societies in which they live" (Wilding 2009, p. 161).

Studies of social exclusion have traditionally focused on socioeconomic variables, such as poverty, but it is becoming increasingly apparent that social exclusion is a multidimensional, relational, and dynamic phenomenon (Selwyn, 2002; Taket et al., 2009).

Despite being clearly associated with social exclusion, social inclusion is not only the absence of exclusion (Ratcliffe, 2000). Social exclusion can be addressed by mitigating disadvantages, whereas social inclusion can be achieved by actively creating opportunities for inclusion (Phipps, 2000).

Although much government discourse on social inclusion focuses on its economic aspects (e.g., participation in productive employment, training, or care), it neglects other dimensions of inclusion, including civic and political participation, cultural identity, social interactions, and interpersonal networks (Phipps 2000; Selwyn 2002). Rather than focusing on resource distribution, Phillips (2000) emphasizes issues of participation and empowerment. According to Stewart (2009), inclusion involves not only an adequate share of resources, but also a stake in determining both individual and collective life opportunities (p. 9). When considering social inclusion as a dynamic process, it is important to examine the mechanisms that promote social inclusion in a given society (Selwyn 2002).

Social inclusion is seen as a process completed by individuals rather than something that is imposed upon them (Taket et al. 2009). Consequently, social inclusion has more to do with self-determination than it does with conforming to dominant or mainstream norms or values (Maidment & Macfarlane 2009). If social inclusion is defined as fitting within the dominant identity and preexisting parameters of society, then it is becoming increasingly apparent that social inclusion is assimilation which is not (Ratcliffe, 2000; Tascón, 2008)

As Anderson and Daniel, (2020) emphasize applying the key principles of the Capability Approach in empirical research analysis encourages researchers to go beyond viewing technologies merely as tools and access-related matters. Instead, it urges them to consider how Information and Communication Technologies (ICTs) offer people the opportunities to lead the lives they value. While acknowledging the significance of resources and access, the Capability Approach shifts the focus towards how individuals use these technologies to fulfill their own desires and needs. In recent studies, the framework of the Capability Approach has been utilized to shed light on ICT use among refugees and marginalized groups. Examples include research on the ICT use of resettled refugees in New Zealand (Andrade & Doolin, 2016), the role of ICTs in supporting the integration of Syrian refugees in Germany (AbuJarour & Krasnova, 2017), and the impact of social media on refugees' lives in a digital society like Norway (Anderson & Daniel, 2020).

The Capability Approach consists of two fundamental concepts: (1) functionings, which refer to the valuable accomplishment and activities of individuals, and (2) capabilities, which refer to the opportunities available to individuals to achieve the outcomes they value. According to Sen (1987, p.36), a function represents an accomplishment, while a capability represents the ability to accomplish, where

the former represents achievement, and the latter represents freedom. In his main thesis, Sen asserts that freedom is both the principal aim of development and its primary means (1999).

In line with Sen's perspective, this study adopts an approach where the assessment of capabilities primarily relies on identifying individuals' actual functionings (1999, p. 131). To identify capabilities associated with refugees' use of ICTs, the study explores how ICT usage adds value to participants' lives and analyzes the achievements they were able to attain, and valued achieving, as a result of its usage (actual functionings). It has also been employed in empirical research by Andrade and Doolin (2016) and others (AbuJarour & Krasnova, 2017; Anderson & Daniel, 2020; Zheng & Walsham, 2008).

3- Methodology

In this chapter, I provide a concise overview of the qualitative methodology and approach employed to gather and analyze data for the study. The research design, method, sampling strategies, sample size and characteristics, data analysis method, trustworthiness, sustainability relevance, and ethical considerations are outlined to offer a comprehensive understanding of the research process.

The Qualitative Research Approach

A research design refers to a systematic method for conducting research that encompasses broad assumptions and specific methods for collecting and analyzing data (Creswell, 2012). Various research designs can be used, including quantitative, qualitative, and mixed methods approaches, each serving a unique purpose and facilitating the analysis of diverse data sources. (Flick, 2014)

Qualitative research is applied when it is intended to explore and comprehend the meaning ascribed to social issues by individuals or groups. By using this design, I posed research questions, gathered data in the participants' natural environment, analyzed the data inductively, and interpreted its meaning. As a result of the inductive method and emphasis on individual meanings, the final report will typically exhibit a flexible structure. (Creswell, 2012) This research strategy is typically characterized by an “inductive, constructionist, and interpretive” nature. (Bryman, 2016, P. 374).

To collect data for this study, a qualitative research methodology was adopted, utilizing semi-structured interviews. Using a qualitative methodology, the research aimed to investigate participants' ICT usage experiences, interpretations, and meanings, while providing them with the opportunity to express their perspectives (Anderson & Daniels, 2020). Qualitative research uses words whereas quantitative research uses numbers, in the same vein, open-ended questions are utilized for qualitative interview questions in contrast with closed-ended questions for quantitative hypotheses (Bryman ,2016, 374). These differences stem from variations in philosophical assumptions, research strategies (e.g., quantitative experiments or qualitative case studies), and specific methods employed (Creswell, 2012, p. 22).

Qualitative research allowed me to gain a deeper and more meaningful understanding of refugees' experiences with ICT and their social inclusion. By capturing participants' experiences, feelings, and contexts, this approach provided valuable insights into the research topic. In the present study, I conducted qualitative interviews, analyzed the data, and interpreted the results with an impartial stance. This ensured the research's objectivity and rigor. (Bryman, 2016).

Method

In qualitative interviews, a "researcher gently guides the conversational partner through an extended discussion", as described by Rubin and Rubin (1995, p. 4). By pursuing follow-up questions based on the interviewees' responses, I could elicit comprehensive and detailed information on the ICT usage. Unlike surveys that adhere to a fixed set of questions, each qualitative interview is unique, tailored to

the knowledge and information that interviewees are willing to share. As noted by Creswell (2012), interviews serve as a means of capturing individuals' opinions and beliefs about diverse phenomena and events. This aligns effectively with the objectives and themes of this thesis.

Through semi-structured interviews utilizing a combination of closed-ended and open-ended questions as well as follow-up inquiries to explore the reasons and underlying mechanisms, it is possible to gain valuable insights into participants' lives on a personal and social level. (Adams, 2015, p. 493; Brinkmann, 2014, p. 278; Bryman, 2016, p. 467). Semi-structured interviews are therefore an effective way to collect open-ended data and examine participants' concerns and experiences in depth. By employing this methodology, I can acquire a comprehension of how refugees utilize information and communication technology (ICT) surpassing mere superficial answers and unraveling the underlying motivations behind their responses.

Semi-structured interviews (either face-to-face or online) were chosen for their ability to facilitate a more profound exploration of ICT usage among refugees. This approach allows for a more fluid and natural conversation, affording interviewees the opportunity to provide detailed responses, while granting interviewer the flexibility to pose follow-up questions. The method's adaptability to the interviewee's needs contributed to greater rapport and comfort during the interviews. (Bryman, 2016)

As underscored by Bryman (2016), it is essential for researchers to seek interviewees' perspectives on the study's focal topics. Semi-structured interviews enable interviewees to express themselves in their own words regarding predetermined themes established by the researcher (Given, 2008). Creswell (2012) further advocates the use of semi-structured interviews to thoroughly explore a small number of subjects and capture elements of casual conversation, making another validation for employing this approach for a small number of participants.

The interviews were audio-recorded and later transcribed using a table layout to ensure precise data collection and proper categorization. A qualitative analysis approach (Thematic Network analysis) was then applied to identify patterns and themes emerging from the data. The resulting findings were utilized to draw conclusions and formulate recommendations in the study. (Flick, 2014; Attride-Stirling, 2001)

Sampling Techniques

The sampling strategy employed in this study involved a thoughtful combination of convenience and purposive sampling methods. Convenience sampling entails selecting potential participants who are readily available in terms of time, location, and willingness to take part in the study. On the other hand, purposive sampling refers to the deliberate selection of a sample based on predetermined criteria or shared characteristics. (Sidhu, 2014; Bryman, 2016)

Through the incorporation of both convenience and purposive sampling techniques, the study successfully recruited 12 refugees who met specific eligibility criteria. These criteria encompassed individuals of a Middle Eastern background, possessing refugee status, falling within the age range of 30 to 55 years, residing in Gothenburg, and having lived in Sweden for a duration of 2 to 8 years. The careful consideration of these predetermined criteria ensured a level of cultural homogeneity among the participants, thereby bolstering the consistency and reliability of the data collected. This approach facilitated a more accurate and precise analysis of the results, with the aim of identifying discernible trends and patterns within the dataset.

The available refugees who met the specified criteria were approached and invited to participate voluntarily in the study. Through this sampling strategy, the research aimed to gain valuable insights into refugees' experiences and perspectives of ICT usage. The selected sample size and characteristics proved instrumental in shedding light on the impact of ICT skills on social inclusion within the refugee community, contributing to a deeper understanding of the study's focal objectives. Overall, this sampling approach served as a robust foundation for generating meaningful findings and drawing informed conclusions, advancing knowledge in the field of refugee social inclusion and the role of ICTs.

Bryman (2016) emphasizes the shared focus of qualitative researchers on both the content of participants' statements and the manner in which they express themselves. To capture these essential aspects, all interviews in this study were meticulously audio-recorded, and thorough transcriptions were produced to facilitate in-depth analysis. The systematic organization of the gathered information into tables and categories further supported the analysis process. By preserving the participants' words, their unique styles of expressing and communication, the study aimed to gain comprehensive insights and draw meaningful conclusions from the data.

Sample Size and its Characteristics

The study aimed to have a sample size of at least 12 participants, in accordance with the recommendation by Guest et al. (2006). The final sample consisted of twelve Middle Eastern refugees, comprising 6 males and 6 females, all aged between 30 and 55. This age range was deliberately chosen as individuals within this demographic are likely to be in the prime of their social and working life, possessing a wealth of shared experiences and knowledge relevant to the study's focus. Furthermore, their direct experiences with the issues being investigated make them valuable contributors to the research.

Initially, educational attainment was not a criterion for inclusion in the study. However, during the interview process, it became evident that nearly all participants were pursuing some level of university education. Only one individual had completed high school education in their homeland and subsequently received occupational training after arriving in Sweden. Among the participants, five individuals had achieved master's degrees, either in their homeland or after arriving in Sweden. This educational background and their age range equips them with the ability to provide meaningful feedback and explanations regarding their ICT skills and usage. Thus, their inclusion in the study adds depth and valuable insights to the research findings.

All participants in the study have resided in Gothenburg for two to ten years, ensuring an informative understanding of city life and the potential impact of ICT on their daily lives. This made them well-suited to offer valuable insights and feedback. All participants had family members and relatives still residing in Iran or Syria at the time of the study. While all participants had permits to live in Sweden, two of them lacked a personal number and a bank ID. Regrettably, one participant had to leave Sweden a few days after the interview due to a rejection after six years, and another refugee was still awaiting a final decision after eight years. Detailed demographics of the interviewees are provided in Table 1.

It's certainly clear that every individual went through a complex process as a refugee. This included waiting in countries, moving to different nations, and living in refugee camps for extended periods of time. Throughout this journey they had to leave behind their belongings, dreams, social connections and loved ones. As a result all participants encountered physical difficulties while adjusting to their new and unfamiliar surroundings

Table 1. The demographic information of the participants (Adapted from AbuJarour & Krasnova, 2018, p. 4).

Gender	Male	6
	Female	6
Age group	30–35	2
	35–40	5
	Above 40	5
Education	School degree (high school)	1
	College or university (B.A/B.S)	6
	Master's degree	5
Employment	Male Yes	4
	Female Yes	3
	Total Yes	7
Married	Yes	6
	No	6
Children	Yes	5
	No	7
Current residency	Shelter	0
	Rental Apartment	9
	Shared residence/apartment	0
	Temporary residence	0
	Rental House	3
Arrived Sweden	20-24 months	3
	2-4 years	1
	4-8 years	8
Residence permission decided	Yes	10
	Not yet	2
Citizenship decided	Yes	6
	Not yet	6
Family members in Iran/Syria	Yes	10
	No	0
Family members in Sweden	Yes	2
City of Residence	Gothenburg	12

Data Collection Process

To carry out the interviews, I developed a semi-structured interview guide, following Bryman's (2016) steps for formulating questions that address the study topic. The guide comprised a variety of question types, carefully tailored to elicit comprehensive and insightful responses from the participants. It included six opening questions, two content questions with additional small follow-ups, five exploration questions, three supplementary questions, and one final question, ensuring a comprehensive and well-rounded approach to data collection.

To recruit participants, individuals of Persian and Syrian origin with refugee status within my community were identified. Those who met the predetermined criteria were approached and invited to participate in the research project. Informed consent letters were provided, and the interview schedule was arranged according to the participants' preferences and availability. Participants were given the flexibility to choose either face-to-face or online interviews. While the majority preferred face-to-face interviews, three interview sessions were conducted online via Zoom to accommodate time constraints. The interviews lasted approximately 55-60 minutes and were audio-recorded using a cellphone, with additional notes taken as backups. To ensure confidentiality, participant names and identities were protected as promised in the consent form and pseudonyms were used.

Prior to commencing the interviews, each informant was given the opportunity to pose any questions they might have. This was both before the first question and after the last question, fostering a supportive and transparent atmosphere. The structured nature of the interview guide ensured that all participants were asked the same set of questions. This facilitated the comparison of responses and the derivation of meaningful conclusions from the data. The guide also provided a brief overview of the study's topic, purpose, researcher, and potential publication. This established context offered participants the chance to share their perspectives.

Nine interviews were primarily conducted in Persian, with only a few words or expressions in English or Swedish. Additionally, three interviews were conducted entirely in English, in accordance with the participants' preferences. The audio recordings were transcribed, primarily utilizing a table format and supplemented by some narrations. Thorough analysis of the transcripts allowed for the identification of key themes and insights, which in turn led to drawing conclusions and preparing a comprehensive report summarizing the analysis and results.

During the interviews, I adeptly tailored follow-up questions to each participant's responses and level of willingness to share, resulting in the acquisition of accurate and comprehensive data. This approach facilitated a deeper understanding of the participants' experiences and perspectives, contributing to a more nuanced comprehension of the research topic.

Thematic Network Analysis was employed as the primary analytical technique to examine the interview data. The goal was to identify and explore significant themes within the text at various levels. Thematic networks provided an effective organizational framework and representation method, facilitating the transition from textual data to interpretation (Attride-Stirling, 2001, p. 388-389).

To ensure a comprehensive understanding of the data, I followed a meticulous process involving several key steps. Firstly, significant time was dedicated to familiarizing oneself with the interview transcripts, allowing for immersion in the data and facilitating deeper reflection. Next, an initial set of codes was identified in the dataset, providing a fundamental framework for subsequent analyses. (Flick, 2014)

After establishing the initial set of codes, I further refined the analysis by developing a set of prospective basic, organizing and then global themes. These themes emphasized the similarities and patterns present in the data, allowing for a more comprehensive understanding of the research findings. To effectively organize the themes, I created categories that provided a coherent structure for incorporating the selected themes and facilitating data interpretation. (Flick, 2014)

This systematic approach ensured a thorough and rigorous analysis of the data, contributing to the generation of meaningful insights and conclusions in the study. By carefully examining the data through the lens of organizing themes and global themes, the research was able to uncover significant patterns and trends, enhancing the overall understanding of the ICT usage among Middle Eastern refugees in Sweden. (Flick, 2014; Anderson & Daniels, 2020)

During the coding process, the research employed inductive and deductive coding approaches. The results obtained from inductive coding were then compared to the findings of prior studies (Andrade & Doolin, 2016; AbuJarour et al., 2019; Abujarour & Krasnova, 2017; Anderson & Daniels, 2020), where deductive codes were initially utilized. This comparative analysis allowed for the consideration of both pre-existing knowledge and emerging insights from the data (Braun & Clarke, 2006).

Inductive coding proved particularly valuable as it enabled the capture of unique perspectives and nuances that could not be obtained through pre-established deductive codes, especially considering the different context of the current study compared to previous research. This flexibility allowed me to explore unexpected insights that emerged during the analysis, enriching the overall depth and comprehensiveness of the findings.

Data Analysis

This section aims to present the analytical framework employed to analyze the collected data. It also provides the findings derived from interviews conducted with 12 Middle Eastern adult refugees, consisting of 10 Persians and 2 Syrians, in Gothenburg, Sweden. As a reminder to the reader at the start of this part, the research objectives of this study were to assess the facilitative role of ICTs in promoting the social inclusion of adult refugees, and to investigate the diverse purposes for which they utilize these technologies. The research also seeks to explore whether gender influences the perception and understanding of ICTs' role in facilitating social inclusion. Furthermore, the study aims to investigate whether the impact of ICT on social inclusion varies based on the gender of resettled refugees.

Emerging initial themes

In the initial phase of developing the preliminary codebook, a series of tabulated transcripts were thoroughly examined in an iterative manner. Through this process, the codebook underwent refinement, and any ambiguities were effectively resolved, resulting in a well-defined framework. Subsequently, each transcript underwent coding, wherein distinct codes were elicited and subsequently grouped into overarching categories. Our primary focus lay on exploring themes pertaining to the utilization of ICTs by the respondents and the degree to which these technologies contributed to their sense of social inclusion.

Within the codebook, special attention was devoted to themes related to the resources offered by ICTs, encompassing their empowering attributes, the various capabilities they provided, and the accomplishments of refugees concerning their social inclusion into society, including their well-being and sense of agency, which were informed by previous studies (Abujarour & Krasnova, 2017; Anderson & Daniels, 2020; Andrade & Doolin, 2016). Employing a complementary approach of selective coding allowed us to discern patterns across themes and establish their interrelationships based on the capability approach elucidated earlier. The capability framework served as a guiding lens for formulating codes, themes and analyzing emerging patterns, thereby facilitating a comprehensive and structured analysis of the data.

Analysis

The process of data collection and initial analysis was systematic and iterative. Thematic analysis is employed due to its inherent flexibility. By virtue of its theoretical versatility, thematic analysis offers a flexible and valuable research methodology that has the potential to yield a comprehensive and intricate understanding of data (Braun, & Clarke, 2006). Thematic analysis has been defined by Braun and Clarke (2006, p. 79) as “a method for identifying, analyzing”, and documenting patterns or themes within a “data set”. The purpose of this method is to systematically organize and describe the data in detail, ensuring that a comprehensive understanding of the data is achieved. In addition, thematic

analysis does not have a pre-existing theoretical framework, so it can be applied to a variety of theoretical frameworks.

The study chose to employ Thematic Network Analysis to examine the interview data, aiming to identify and explore significant themes within the text at different levels. Thematic networks served as an effective organizational framework and representation method, guiding the “transition from textual data to interpretation” (Attride-Stirling, 2001, p. 388-389).

As per the thematic network approach, the data was coded to extract three levels of themes: (i) Basic Themes, representing lowest-order premises evident in the text; (ii) Organizing Themes, grouping categories of basic themes to summarize more abstract principles; and (iii) Global Themes, encapsulating the principal metaphors across the entire text. The global and organizing themes were represented as in table 2, depicting their “salience and illustrating their relationships at each level” (Attride-Stirling, 2001, pp. 388-389). The findings section presented five identified global themes. To enhance the credibility of the analysis, the codes generated were compared with the existing literature in the final stage (Abujarour & Krasnova, 2017; Anderson & Daniels, 2020; Andrade & Doolin, 2016). The resulting themes from the analysis of interview data are summarized in table 3.

Throughout the investigation, notable patterns of ICT usage among refugees emerged, holding significant relevance to the research objectives. By thoroughly analyzing participants' interview responses, I initially organized the data into thirty coded clusters, encompassing diverse dimensions: *Health, Nutrition, Clothing, Finance, Parenting, Identification, Transportation, Offices, Weather, Accommodation, Translate, Online education, Digital Education, Educational Apps, Information, Plans & Events, Fun & Pleasure, Social Media as an Information Source, Social Media as a Linking Device, Native Websites, News, Content Production, Homeland's Events, Social Media Informing Group, Social Media, Network Organization, ICT Based Correspondence & Communication, Job Application, Hire Personnel, Improving Job Performance.*

These initial codes were further consolidated into 12 different basic themes comprising a multitude of dimensions: 1. Accomplishing daily and routine tasks using ICTs, 2. ICT-Enabled Interaction with Host Governments & Environment, 3. Online Language Learning Platforms, 4. Utilizing ICT for Language Acquisition, 5. ICTs for Education, 6. Understanding Swedish Society, 7. Ethnocultural Connectivity, 8. Embracing Cultural Identity, 9. Building and Expanding Networks in a New Land, 10. Communicate effectively in a new or unfamiliar language, 11. Facilitating Refugees' Access to Labor Markets, 12. Strategies for Enhanced Productivity & Work Management

To enhance the precision of the analysis, response tables underwent continual updates, aligning with the emergence of new concepts and final themes during successive coding cycles. During the initial coding phase, data were diligently identified and classified into provisional codes and then basic themes, in alignment with the research objectives and inquiries. Subsequently, in the second coding cycle, related codes were clustered into broader categories, giving rise to 'organizing themes' that reflected interconnected subject matters. As the analysis progressed, the code clusters underwent iterative development, encompassing various dimensions of ICT usage, purposes, and impacts on the lives of refugees. Ultimately, 8 organizing themes and 5 'global themes' surfaced, encapsulating the foundational patterns that typify the experience of ICT usage among refugees."

Global Themes:

Global Theme 1. Embracing the Information Society

Global Theme 2. The Journey of Learning and Training

Global Theme 3. Empowering Emotional Support within the Community

Global Theme 4. Building a Social Network in Emerging Communities

Global Theme 5. Maximizing Career Success:

Organizing theme:

- Organizing Theme 1. Connecting, Empowering, and Engaging
- Organizing Theme 2. Education and linguistic resources,
- Organizing Theme 3. Understanding new society
- Organizing Theme 4. Being socially connected (fellow community).
- Organizing Theme 5. Expressing culture identity
- Organizing Theme 6. ICT-Enhanced Local Community Connection
- Organizing Theme 7. Effective communication
- Organizing Theme 8. Enhancing Refugee Labor Market Access
- Organizing Theme 9. Efficiently Handling Job-related Affairs

Table 1. Global and organizing Themes (capabilities & Functionings)

Global Themes	Organizing Themes
Embracing the Information Society	Connecting, Empowering, and Engaging
The Journey of Learning and Training	Education and Linguistic Resources
	Understanding New Society
Empowering Emotional Support within the Community	Being Socially Connected (Fellow Community)
	Expressing Cultural Identity/Self-Expression
Building a Social Network in Emerging Communities	ICT-Enhanced Local Community Connection
	Effective Communication
Maximizing Career Success	Enhancing Refugee Labor Market Access
	Efficiently Handling Job-Related Affairs

The initial coding process captures the deliberate ICT-based activities undertaken by participants to achieve their desired goals, focusing on the basic themes. These themes are subsequently grouped into overarching organizing themes (capabilities), and global themes, reflecting the specific achievements (functionings) participants aim to attain through the strategic use of ICTs, all with the overarching objective of enhancing their social inclusion through the exercise of agency. By harnessing the power of ICTs, they enhance their overall well-being in the context of the new society they have resettled in. This systematic approach to coding and categorization enables a comprehensive understanding of how participants leverage ICTs to shape their experiences and foster a sense of belonging and integration in their new social environment. (Abujarour & Krasnova, 2017; Anderson & Daniels, 2020; Andrade & Doolin, 2016)

The exploration of these themes sheds light on the comprehensive experience of refugees in utilizing ICTs and the multifaceted ways it influences their lives, including the relationship and impact of ICT usage on their social life. The findings reveal how ICTs serve as a crucial bridge for connecting with others, accessing social media platforms, participating in network organizations, and facilitating correspondence and communication. These digital tools have a profound effect on their social

interactions, social support systems, and sense of belonging within the host community as well as maximizing their career success. Understanding the intricate interplay between ICT usage and social life is essential for comprehending the broader implications and opportunities that technology offers to refugees. (Abujarour & Krasnova, 2017; Anderson & Daniels, 2020; Andrade & Doolin, 2016)

Trustworthiness

The concept of "trustworthiness" is attributed to Lincoln and Guba (1985 & 1994, as cited in Bryman, 2016) as an alternative approach to assess qualitative research quality. Frequently, it is used as a replacement for concepts associated with quantitative research, such as validity, reliability, and replication. To ensure trustworthiness in this study, four distinct criteria, namely credibility, transferability, dependability, and confirmability, were employed. (Bryman, 2016, p. 384) This section describes how I attempted to address reliability criteria as part of this research.

Credibility

Credibility, a concept parallel to internal validity in quantitative studies, pertains to the alignment of findings with reality, as emphasized by Merriam (2009). It is a crucial aspect in establishing research trustworthiness. According to Bryman (2016, p.384) findings is tied to both the verification of ethical procedures employed by the researcher and the dissemination of research outcomes to the public. This process, known as "respondent validation," involves confirming that the researcher's findings and impressions resonate with the perspectives of the individuals on whom the research was conducted, while also exploring areas of discrepancy and their underlying reasons (Bryman, 2016, p. 384).

To ensure credibility in this study, rigorous methodologies were employed to accurately represent the perspectives and experiences of participants. (Flick, 2014) The use of in-depth interviews with refugees allowed for an immersive exploration of their lived experiences with ICTs and social inclusion. The findings were shared with the interview participants, engaging them in the respondent validation process to confirm the accuracy and alignment of the research outcomes with their viewpoints. The iterative process employed in this study strengthened its credibility and ensured an authentic representation of refugee voices. Additionally, academic staff contributed to the research's trustworthiness through peer debriefing, providing scholarly guidance and constructive feedback (Bryman, 2016; Merriam, 2009).

Transferability

Transferability, which parallels external validity in quantitative studies, is concerned with the applicability of research findings to other contexts or settings. The primary objective of this research's methodology is not to generalize its results, as qualitative studies prioritize depth over breadth. Qualitative research often emphasizes the contextual uniqueness and significance of the social phenomenon under investigation (Bryman, 2016, p. 384). Therefore, the focus lies on obtaining specialized and in-depth information from a limited sample of refugees residing in Gothenburg, rather than seeking broad generalizations. This approach aligns with the notion of "thick descriptions" (Geertz, 1973a, as cited in Bryman, 2016), which facilitates information transferability assessment by providing rich and detailed accounts.

In recognizing that qualitative research lacks generalizability, this study aimed to offer contextually nuanced and comprehensive insights instead. Detailed descriptions of the study context, the use of ICT, and the experiences of refugees in terms of social inclusion were provided throughout the study. Through presenting comprehensive narratives and experiences, the research invites readers to determine the applicability of the findings to other similar contexts where refugees are integrating into new societies (Bryman, 2016; Lincoln et al., 2011).

Dependability

Dependability, akin to reliability in quantitative research, revolves around how the study is documented and recorded, enabling effective communication with readers. For this study, meticulous documentation of the research process, including participants' research processes, interview transcripts, data analysis, and issue formulation, has been preserved and made accessible upon request. The methodology section offers comprehensive insights into the research steps undertaken. Thorough documentation throughout the research process ensures the study's dependability, encompassing detailed records of data collection, coding, analysis, and interpretation. By maintaining transparency in the research procedures, readers can assess the study's credibility and consistency of conclusions. Additionally, seeking feedback from academic peers enhances the methodological rigor and reliability of the study (Bryman, 2016).

Confirmability

Confirmability, akin to objectivity in quantitative research, ensures that the researcher approaches the study with reasonable care, free from personal views or theoretical biases that could influence the research's conduct (Bryman, 2016). Analysis and interpretation were carried out in an impartial and systematic manner to achieve confirmability. Conscious measures were taken to avoid preconceived notions or biases that could impact the research outcomes. By providing a detailed account of the research procedure and the rationale behind analytical decisions, the reader gains insight into the study's objectivity and can assess its confirmability (Bryman, 2016).

By employing these approaches, I aimed to bolster credibility, transferability, dependability, and confirmability, thereby upholding the research's validity and reliability. Adhering to these rigorous standards enables the study to yield valuable insights into leveraging ICT practices to foster social inclusion and empowerment among refugees.

Ethical Considerations

In the exploration of the impact of ICTs on social inclusion among refugees, stringent adherence to ethical guidelines, as proposed by Bryman (2016, p. 125-134), is paramount. These guidelines are rooted in principles that prioritize the well-being and rights of the participants.

Before providing informed consent, all participants received comprehensive information about the research's purpose, procedures, and potential risks, with their participation being entirely voluntary. Additionally, participants were assured of the right to withdraw from the study at any point without facing adverse consequences. To address language barriers and cultural sensitivity, consent forms were made available in participants' native languages, and interpreters were provided as needed.

Maintaining participant confidentiality was of utmost importance, particularly considering the vulnerable nature of the refugee population. To protect their privacy, pseudonyms were utilized during data analysis and report preparation, ensuring that personal information remained undisclosed (confidentiality). Recognizing the potential emotional impact of the study on participants, interviews were conducted with compassion and support, providing a safe space for sharing experiences at their own comfort level. Appropriate measures were in place to address participant distress throughout and after the study.

In line with a participatory approach, I emphasized the "dual imperative," actively involving refugees in the research process. They contributed insights into follow-up interview questions and data interpretation. As part of the commitment to the refugee community, I pledged to reciprocate the benefits of the research beyond the findings. Although the findings are not generalizable, they will be published to give insights to relevant stakeholders, policymakers, and NGOs to advocate for improved social inclusion policies and ICT interventions, aiming to positively impact the lives of the participants.

By adhering to, this research on ICT usage and refugee social inclusion upholds the values of informed consent, confidentiality, harm avoidance, and the "dual imperative." This unwavering commitment to ethical research underscores my responsibility to contribute valuable insights and promote the welfare and empowerment of refugees in the long run. (Abujarour & Krasnova, 2017; AbuJarour et al., 2019; Andrade & Doolin, 2016; Anderson & Daniels, 2020)

Sustainability Relevance

The study's focus on ICT usage links it to various Sustainable Development Goals (SDGs) set forth by the United Nations (United Nations General Assembly, 2015).

Specifically, the study aligns closely with SDG 10, which seeks to reduce inequalities between and within countries. By exploring how ICTs can bridge gaps and empower refugees in accessing vital resources, the research endeavors to contribute to the fulfillment of SDG 10's mission of fostering more equitable and inclusive societies. Understanding the role of ICTs in leveling the playing field for refugees and reducing disparities in access to opportunities is of paramount importance in driving sustainable development. (United Nations Development Programme, n.d.a)

Furthermore, the study is closely tied to SDG 16, which advocates for establishment of peaceful and inclusive societies. As refugees navigate their integration into host communities, the role of ICTs in enhancing their communication, connectivity, and information access becomes instrumental in fostering a sense of belonging and social cohesion. A profound understanding of how ICTs can promote inclusivity and facilitate peace-building efforts aligns with the objectives of SDG 16, aimed at creating harmonious and resilient societies that can sustainably progress towards development goals (United Nations Development Programme, n.d.b).

The study also seeks to collect insights and evidence that can inform policy decisions and interventions. When taken on board effectively in public administration, such evidence can help foster a more inclusive and harmonious coexistence between refugees and their host communities. In sum, the research strives to illuminate the transformative potential of ICTs in the ambitions of SDGs 10 and 16, underscoring the crucial role of migration and technology in advancing the global sustainability development agenda.

3- Findings

In this section, I delve into the outcomes of my analysis. In an endeavor to identify the capabilities linked to refugees' ICT use, I closely examined the achievements participants reported and the value they attributed to these achievements. My analysis revealed five distinct categories of functioning and their corresponding capabilities resulting from refugees' engagement with ICTs: 1. Embracing the Information Society, 2. The Journey of Learning and Training, 3. Emotional Support within the Community, 4. Building a Social Network in Emerging Communities, 5. Maximizing Career Success. These categories and their associated capabilities are in alignment with previous research (Abujarour & Krasnova, 2017; Anderson & Daniels, 2020; Andrade & Doolin, 2016). The findings from this analysis will be presented in this section.

An analysis of the participants' use of Information and Communication Technologies (ICTs) was carried out using a qualitative thematic network analysis approach. A number of key themes emerged from the findings related directly to refugees' experiences in Sweden and their use of ICTs. The participants offered detailed and insightful accounts of their lives in Sweden, providing a rich and valuable source of data that informed the thematic network analysis. I examined these practices in relation to ICT usage in further detail, with a specific focus on their implications for social inclusion.

The analysis paid careful attention to the particular contexts in which ICTs were used, the participants' expressed intentions behind their ICT usage, the significance they attributed to it, and the perceived enhancements it brought to their lives. By delving into these aspects, the study aimed to gain a deeper understanding of the participants' experiences with ICT and its impact on their social inclusion.

During the course of codification, organizing and global themes were added based on participants' experiences in Sweden. For each category, I outline the specific actions or activities that participants found valuable to engage in using ICT, as well as the underlying reasons for valuing these capabilities (See Appendix 3). It is apparent that a single platform, whether it be social media or other forms of ICTs, can fulfill diverse functions that encompass a range of capabilities. To ensure anonymity, pseudonyms are employed when referring to participants in reporting the findings.

Five Key Functionings Facilitated by ICT Usage

Embracing the Information Society; (2) The Journey of Learning and Training; (3) Empowering Emotional Support within the Community; (4) Building a Social Network in Emerging Communities; and (5) Maximizing Career Success. While it is acknowledged that "the sort of participation people are likely to value is unlikely to fall into neat, separate categories" (Notley, 2009, p. 1211), and Andrade and Doolin (2016) also noted this fact, I contend that collectively, these five categories of functionings and their corresponding capabilities effectively capture the multidimensional nature of ICT usage facilitating social inclusion for individuals who may be vulnerable to disadvantage.

In alignment with objective #1, the forthcoming section will present a succinct account of the findings and primary explanation of each thematic area. Due to the nature of the study, the immediate explanation of each quote was deemed to be necessary. Given the distinct categories within each topic, this approach is intended to enhance conciseness. The next chapter will provide discussion and deliberation.

The organization of the findings closely aligns with the global themes outlined in Table 2. (See Appendix 3 as well) focusing on the examination of Middle Eastern refugees' utilization of ICTs in their daily lives within Sweden. The emphasis lies on understanding the reasons behind their ICT usage and its impact on achieving specific outcomes (functionings), particularly in relation to social inclusion. The analysis takes into account individual agency and values, shedding light on how these factors influence their interactions with ICTs and contribute to their overall sense of belonging and social inclusion in the host society.

Embracing the Information Society

The process of actively integrating into Swedish society for our participants required the ability to engage in an information society where ICT played a crucial role in their daily activities. Through interviews, participants shared numerous instances where they effectively utilized ICT to navigate various aspects of their lives, such as scheduling doctor's appointments, communicating with their child's teacher and school, conducting online banking transactions and bill payments, utilizing identification services like Bank-ID, making payments or transfers through Swish, and filing tax returns online (see Appendix 3). These activities exemplify the development of ICT usage skills and behaviors, empowering individuals to engage in Swedish society more fully. Participants emphasized the significance of seemingly simple tools like internet search engines (i.e., Google), email, YouTube, Google Translate, and different functional app in their cellphones (Swish, banking apps, shopping apps, and others) in resolving everyday challenges and enhancing their quality of life in a new environment. The use of these ICT tools has facilitated their social inclusion by providing accessible solutions and streamlining various tasks in their daily routines.

Shima, a Persian participant, expressed:

In contrast with Iran, we must check and respond to emails every single day, every moment. It's not like back home where we had more relaxed communication methods. Here, it's crucial for us to stay connected via email with our landlords, my daughter's teacher, the school, offices, shops, and boutiques like H&M for receipts.

Shima's comparison of communication norms between her home country and Sweden highlights the significant shift in her reliance on email for daily activities. This shift underscores the transformative role of ICTs in refugees' lives as they adapt to new communities. Her emphasis on checking and responding to emails daily demonstrates the integral role of digital communication in managing interactions with landlords, educational institutions, and essential services. Shima's experience exemplifies how refugees leverage ICTs to navigate diverse responsibilities and establish connections, reflecting their adaptive resilience and showcasing the broader transformative potential of digital tools in fostering social inclusion.

Susan, another Persian participant, enthusiastically shares:

Learning internet shopping has truly made my life easier. Especially since I'm not familiar with the shop locations here. Moreover, conversing in physical stores is challenging for me due to my limited knowledge of Swedish and English. Thanks to the app, I can effortlessly find everything I need even while multitasking and without engaging in verbal communication. It's been invaluable for checking out sales and effectively managing my budget. While I'm unable to make payments myself, I can always seek assistance. Unfortunately, I don't possess a *Bank-ID* for online shopping. Furthermore, the app has enabled me to become more acquainted with the unique products available here in Sweden, which are different from those in my home country. What's particularly convenient is having all these options accessible on my phone,

allowing me to browse items, compare them, and make informed decisions without leaving my home. It truly simplifies the entire shopping experience.

Susan's account of her experience sheds light on her determined efforts to navigate the challenges of daily life and shopping in a new country. Her reliance on mobile apps for shopping and essential tasks is indicative of her proactive approach to simplifying her routine, especially during the initial stages of her time in Sweden when she was unfamiliar with both the local landscape and language. Her commitment to managing her responsibilities within the household is evident, as she strives to fulfill her role in household chores despite the barriers posed by language and cultural differences. The absence of a Bank ID for online transactions doesn't deter her from utilizing the apps even if it is not to their fullest potential. This highlights her adaptability and resourcefulness in seeking alternative ways to accomplish tasks and engage with her surroundings, even when traditional means are not readily available. Susan's journey reflects her determination to make a meaningful contribution to her household and to effectively manage daily tasks in her new environment, underscoring the transformative role that digital tools can play in empowering refugees to integrate and establish a sense of belonging amidst unfamiliar circumstances.

Refugees actively engage in the information society by participating in various domains essential to their daily lives. They utilize digital resources to manage their health, ensuring access to medical information and services, appointments, and healthcare services. In the realm of nutrition, they rely on online platforms to shop for food. Additionally, digital tools enable them to make informed choices about clothing, staying updated on availability and sales, and finding suitable attire for various occasions. In the financial sphere, refugees navigate banking apps, budgeting tools, and online financial services to manage their finances effectively. These digital channels also facilitate parenting responsibilities, offering resources for child development, education, and parenting advice. Moreover, refugees engage with online offices and government institutions. In terms of identification, digital platforms play a vital role in verifying identities, accessing official documents, and adhering to legal requirements. Furthermore, refugees utilize ICTs to find transportation options, compare routes, and plan commutes, enhancing their mobility and accessibility. Lastly, they check weather forecasts through digital means to make informed decisions about daily activities and travel plans. Through their multifaceted engagement with the information society, refugees leverage digital resources to empower themselves across various aspects of their lives, promoting their integration and well-being in their host communities.

The Journey of Learning and Training

The journey of learning and training toward social inclusion and successful integration for refugees comprises these two crucial aspects: learning about Swedish society and education and language proficiency. By gaining insights into Swedish culture and obtaining language skills through interactive digital resources, refugees enhance their ability to engage with the local community and build meaningful relationships. These distinct yet interconnected dimensions contribute to a smoother inclusion process, empowering refugees with the tools to navigate their new society with confidence and foster a sense of belonging.

Understanding Swedish Society

In the process of acclimating to Swedish society, the participants utilized Information and Communication Technologies (ICT) as a means to gain familiarity with the new culture and way of life. In order to navigate and understand various aspects of Swedish society, they frequently accessed informational websites and search engines, as well as different apps connected to the community.

As highlighted by Sali, "I watch STV Play on my cellphone and try to learn about the norms, traditions, events, festivals, and religious festivals such as Midsummer, Christmas, and Easter." This demonstrates the use of ICT as a tool for cultural education and understanding.

The use of ICTs provides valuable access to informative content, aiding newcomers in their transition and integration into an unfamiliar society. As another participant, Susan, highlights the significance of using Telegram as a means to connect with friends, learn new society, and access advertisements within the Persian community in Sweden. She explained:

It connects me to the new society and provides information about the things and items I need. It fosters connections among the Persian community, enabling mutual support and the exchange of experiences and information. Moreover, Telegram serves as a hub of information regarding ceremonies, celebrations, and events in both Persian and Swedish cultures, allowing everyone to participate based on their interests. Additionally, members can inquire about hard-to-find products, seek advice on purchasing or selling items, and share information on flights, cargo services, and COVID-19 testing requirements for travel. It facilitates various aspects of life and connection by providing guidance for example on registering for Swedish for Immigrants (SFI) courses, exchanging necessary books, and offering helpful tips for adaptation.

The application of ICT platforms, such as watching cultural programs, digital communication like telegram, and Facebook, and accessing community-specific information, proves instrumental in overcoming barriers and acquiring a deeper understanding of Swedish society. For refugees, the use of ICTs serves the capability of gaining relevant information and knowledge about the new culture and society, ultimately leading to the functioning of learning. As Sali articulates, "when you immigrate as a refugee, you need to learn things. All of your life will be summarized in learning." These digital resources serve as valuable tools for gaining knowledge, establishing connections, and navigating daily life, thereby facilitating the social inclusion and adaptation process in the new environment. By leveraging these capabilities provided by ICTs, refugees are empowered to overcome challenges and embark on a path of continuous learning, contributing to their successful integration and growth in the host society.

Education and linguistic resources

The participants in the study highlighted the significance of learning the language through ICT, which plays a crucial role in their understanding of the new society and culture. Language acquisition is recognized as more than just a means of communication; it involves immersing oneself in a new culture and gaining fresh perspectives. This process of language learning through ICT empowers refugees with the tools to engage more effectively with their new environment, fostering a sense of belonging and facilitating their social inclusion and integration. It was eloquently expressed by Farbod, one of the participants in our study on language learning experiences:

Learning a language goes beyond linguistic skills; it enables you to immerse yourself in a community, understand their culture, perspectives, routines, and values, thereby expanding your own perspectives. In every country I have resided in, including Spain, Cuba, Canada, and Italy, and finally in Sweden, I have learned their languages through various means such as apps, the internet, and Google Translate.

This statement emphasizes the multifaceted nature of language acquisition, where the process of learning a new language becomes an opportunity to engage with and absorb the cultural nuances and perspectives of the community. The use of ICT, such as language-learning apps and translation tools, has facilitated individuals in embarking on this language acquisition journey, thereby acquiring their

educational capabilities and achieving the function of learning. As a result, this process contributes to their inclusion and integration into the new society and broadens their horizons. Through ICT-enabled language learning, refugees gain not only the ability to communicate effectively but also the means to foster a deeper understanding of their host society, thus enriching their overall experience of social inclusion.

Amir from Syria mentioned, "Through the use of ICTs, newcomers can gain access to online educational resources and acquire language and professional skills." By using online platforms, newcomers will be able to increase their language proficiency and learn essential skills digitally, enabling them to become active participants in society. Anderson and Daniel's study (2020) also corroborates this trend, as participants in their research confirmed using social media platforms for educational purposes, especially language learning.

Mary, a Persian participant, underscores the significance of online learning, stating:

In this new society, a lack of information can incur substantial costs. As refugees, we often find ourselves unfamiliar with societal norms and unsure about the most effective methods of accomplishing tasks. The only way to understand these matters is by utilizing online platforms while adapting to a new society. Online platforms, including Google and communication tools, emerge as indispensable resources for not only acquiring information but also for gaining insights into societal dynamics, learning various skills, and understanding the appropriate approaches to different tasks as the need arises.

By using online platforms, newcomers will be able to increase their language proficiency and learn essential skills digitally, enabling them to become active participants in society. In addition to enhancing their professional skills, they can foster stronger relationships with society and its members by utilizing necessary skills.

Building a Social Network in Emerging Communities

This function entails the fulfillment of two distinct capabilities: 1) effective communication and 2) ICT-enhanced local community connection.

Effective Communication

In the initial years of arriving in Sweden, language proficiency emerged as a significant challenge for the majority of the participants, aligning with findings from Caidi et al. (2010). To overcome this barrier, participants actively utilized e-mail, Google Translate, and social media as effective communication channels. They need to establish effective communication in an unfamiliar language, Swedish. For those who lacked confidence in their English or Swedish speaking abilities, engaging in face-to-face or telephone interactions with native Swedes became a source of stress and anxiety. However, the advent of ICT offered a valuable alternative, enabling them to overcome this language barrier in their daily lives. These online tools not only reduced the likelihood of misunderstandings but also alleviated the stress associated with daily interactions in the Swedish language. The proactive use of online resources also served as a means for participants to enhance their competence and confidence in Swedish or English, reflecting their aspiration to become more engaged and integrated into Swedish society.

In the realm of government interactions, participants expressed a clear preference for utilizing email as their primary mode of communication. This choice was driven by the numerous advantages it provided. Asynchronous and typed communication allowed for more thoughtful responses and reduced the pressure of real-time interactions. Moreover, the integration of Google Translation further bolstered their confidence, ensuring effective communication in both directions.

According to Mohammad from Syria:

When I first arrived in Sweden, I had to communicate with the Migrationsverket (immigration office) quite frequently. I found it much easier to do so through email. This way, I had the time to edit, review, and manage my messages in English, and if necessary, I could translate them into Swedish. If I had to visit their office or make a phone call, I would require a translator to assist me.

By leveraging these digital tools, participants found themselves navigating the challenges of communication in a new environment with greater ease and confidence. The use of ICT not only served as a communication bridge, but also instilled a sense of empowerment and control over their interactions, contributing to their overall sense of well-being and social inclusion in Swedish society.

According to Susan:

I rely on Google Translate to help me translate and understand various things, especially product labels and instructions in supermarkets. However, there are times when it translates incorrectly, leading to confusion and misunderstandings. In such cases, I usually reach out to a friend and ask for their assistance. Nonetheless, overall, Google Translate has been a great help to me. It enables me to communicate with Swedes and ask for their assistance when needed.

Connecting through mail, or texting and communication via google translate can significantly contribute to refugees' social connection with the local community, assisting their effective communication, facilitate the building of social networks, and ultimately enhance their social inclusion in society. Utilizing email and texting as a mode of communication offers several advantages for refugees facing language barriers. Asynchronous communication allows them to compose, review, and edit messages in a language they feel comfortable with, thereby reducing language-related anxiety and improving the clarity of communication. This enables refugees to engage in meaningful exchanges with locals, fostering mutual understanding and a sense of belonging.

The integration of Google Translate as a language assistance tool proves instrumental in comprehending essential information, such as product labels or instructions, in various settings, including supermarkets. While occasional inaccuracies may arise, refugees find alternative ways to clarify misunderstandings, including seeking assistance from friends or directly communicating with native Swedes. The availability of google translate enhances refugees' confidence in navigating everyday tasks, fostering independence and empowering them to interact more seamlessly with the local community.

In addition to the communication tools mentioned earlier, there are also several other apps which assist all residents, including refugees, in their interactions with offices and institutions. Apps such as Kivra and PostNord aim to streamline communication and provide valuable support to those navigating the complexities of settling in a new country. Furthermore, having access to telephone translators proves to be another invaluable service that facilitates communication during the initial years of refugees' arrival, helping bridge language gaps and ensuring effective communication with various service providers and authorities.

ICT-Enhanced Local Community Connection

During the early stages of resettlement in Sweden, refugees encounter challenges arising from cultural disparities and language obstacles, hindering the establishment of meaningful connections with both native Swedes, and settled immigrants from different backgrounds. Consequently, many refugees resort to digital platforms as a means to bridge these gaps and engage with diverse communities. In this study,

participants highlighted the difficulties they encountered in building and expanding their social networks, emphasizing the significance of digital tools like Facebook and its online marketplaces.

Susan highlighted the significance of Facebook for connecting with others, stating:

People connect with each other through Facebook. I didn't have Facebook in Iran, but I do now. Marketplace is also a useful resource; I have acquired furniture at minimal or no cost. I can even communicate with others through chat without knowing the language.

For Susan, this experience of connecting with people from different cultures and finding what she needed was truly remarkable. Facebook served as a valuable communication tool, allowing her to interact with individuals despite the language barrier.

Pedro, a Persian participant, shared a similar sentiment, noting that Facebook was not widely used in Iran due to internet filtering and popularity differences. However, in Sweden, it became an essential and prevalent platform for communication. Pedro remarked:

Here, Facebook is popular and useful. It also connected us to one of our Swedish friends. We had to have Face Book to connect with him; there was no other way like in Iran. In Iran, people use WhatsApp, but here Facebook is more common. People share their lives through FB and establish connections within the community.

Consequently, Facebook emerged as a vital tool for Pedro, facilitating social connections and inclusion in the new country.

Mary, another Persian participant, emphasized the significance of Facebook in Sweden, particularly for connecting with Swedish individuals, given the cultural differences. She remarked:

Facebook is very important here in Sweden, and it helps you connect with Swedish people because of the cultural disparity. If I want to invite my Swedish friend, I should do it through Facebook, but with Persians, I would simply make a phone call.

Utilizing Facebook, therefore, streamlines communication and bridges cultural gaps, facilitating more efficient interaction. Facebook plays a crucial role as a valuable platform for individuals to maintain connections with their friends and family back in their home countries, which in turn facilitates their adaptation to a new environment. For refugees, this use is particularly essential as it provides them with emotional support, thus falling under the emotional support category and will come under next functioning section. Additionally, Facebook and similar platforms offer users the opportunity to explore and engage with various groups that revolve around shared interests and experiences in their new society. It is evident that the same platform, whether social media or other types of ICTs, can serve different functions that encompass various capabilities.

In addition, participating in social organizations like Kompis Sverige (via email, and text messages) offers refugees opportunities to broaden their social circles and establish connections with local individuals within a structured and supportive setting. These organizations play a pivotal role in facilitating social interactions, enabling refugees to meet new people, exchange experiences, and engage in various social activities. By nurturing friendships and social bonds, refugees gain access to essential support networks in new social context.

In the process of adapting to life in Sweden, refugees often encounter challenges in forming social networks and establishing connections. However, organizations like Kompisar Sverige play a crucial role in assisting refugees to overcome these challenges. Shima attested to the positive impact of this

organization, stating, "I found two friends through Kompisar Sverige." By utilizing online platforms and focusing on common interests and family backgrounds, Kompisar Sverige connects newcomers with individuals who share similar experiences. Through this initiative, participants have experienced success in building meaningful friendships and a sense of belonging. The organization's approach acknowledges the significance of shared interests and family dynamics in nurturing authentic relationships, ultimately contributing to the overall well-being and integration of refugees.

Empowering Emotional Support within the Community

A crucial part of facilitating social inclusion for refugees is empowering their emotional support within the new community, which encompasses two key capabilities: being socially connected and expressing cultural identity. Having these capabilities enables refugees to achieve their ultimate goal of social inclusion as they engage actively with the functions of emotional support provided by their social networks and identity expression.

Being Socially Connected

In today's world, mobile apps have emerged as a cost-effective means of communication, enabling refugees to maintain connections with their loved ones across the globe and enhancing their adaptability to the new environment. Aside from providing access to maps and contact information, these apps enable refugees to stay connected and informed within their local communities, which has already been discussed.

Refugees can utilize mobile apps and social media to maintain connections with their loved ones, enhancing their sense of belonging in the host country. According to Gifford and Wilding (2013), the extent of these connections can significantly impact the refugees' feeling of belonging. Additionally, these digital communication channels serve as sources of emotional support, assisting refugees in navigating the difficulties associated with resettlement.

In response to the challenges faced while adapting to a new country, the participants actively seek out interaction and support from fellow members of their ethnocultural groups, both within Sweden and abroad. Platforms like WhatsApp, Telegram, and Imo serve as prominent tools for informal communication among refugee communities. Ayda, an Iranian refugee, recounted an incident where she sought assistance from a friend back in Iran through WhatsApp when encountering a technical problem, she couldn't resolve on her own. Ayda says:

I experienced a situation where I lost access to my Word Office and noticed certain settings disappearing from my Mac after accepting a software update. This created a predicament where I couldn't log in with the correct credentials, subsequently leading to the loss of access to my university site. As a new student, this was particularly distressing for me. Despite feeling significant stress, I sought to find assistance within my university community which finally turned out not to be helpful. Eventually, I reached out to a friend in Iran who is an IT engineer through WhatsApp. He suggested using the email address I commonly and frequently used to log into my laptop. Surprisingly, this simple solution, provided by someone outside of Sweden, resolved my issue.

Ayda's story highlights the pivotal role of social connections and the use of ICT platforms in addressing the technical challenges faced by refugees. Leveraging WhatsApp and reaching out to her friend in Iran, Ayda found the necessary support that was unavailable in her immediate surroundings. This emphasizes the importance of maintaining connections and seeking assistance from trusted individuals, regardless of their geographical location, to navigate and overcome various hurdles encountered during the settlement process.

In the context of participants' experiences, ICTs play a crucial role in facilitating communication and interaction between individuals and their dispersed family members, either remaining in their countries of origin or residing as refugees in other nations. By overcoming the constraints of distance and time, ICTs offer the means to transcend spatial boundaries. Mary emphasizes the significance of this connectivity, stating:

I use WhatsApp to connect and update with my family. It makes me feel peaceful and content to carry out my daily activities. My son is in Iran, and through the use of ICTs, we remain connected. Conversations with him brighten up my day for sure.

Through applications available on smartphones and laptops, enabling voice and video calls over the Internet, individuals are granted the opportunity to communicate with their loved ones in their native language and, often, visually perceive their presence.

Sali, an Iranian refugee, highlights the profound impact of this connection, remarking:

Maintaining ties with Iran and my family, we engage in video calls and conversations to exchange information, which brings us great comfort and helps us cope with immigration challenges. I have spoken with refugees and immigrants who arrived 30 to 40 years ago, and they did not have access to such conveniences. They spent years in tears. Internet connectivity was unavailable, and regular phone calls were prohibitively expensive. Now, we can engage in hours-long conversations and see each other through video calls. Our homesickness is alleviated, enabling us to integrate better into our daily routines and societal commitments. This emotional connection is profound. Sometimes, you can witness your mother's every moment, observing her eating, getting through her day, sharing her thoughts. This is vastly different from the past when they could only hear each other's voices once every four or five months. When they were finally reunited, it was like witnessing the resurrection of a deceased loved one. Using current technologies minimizes the sense of missing one's beloved family members, allowing individuals to experience reduced homesickness, even though the interaction occurs through social media rather than in person.

Despite occasional challenges related to internet problems in Iran, Sali's enthusiasm for visual communication exemplifies the emotional support and comfort derived from this technological connection. ICTs have become instrumental in maintaining meaningful relationships and alleviating homesickness, providing refugees with a powerful tool to stay emotionally connected with their families and loved ones. Notably, the study reveals the importance of refugees staying connected with their family and friends both in their home country and in their new community in Sweden. Such connections positively impact the lives of refugees and contribute to their well-being. On the contrary, the absence of these connections can have adverse effects. The research also highlights the significance of family connections in enhancing the refugees' positive outlook and coping abilities in new situations.

Refugees in this study exhibit a diverse range of ways in which they harness ICTs to engage in various activities. These activities encompass not only communication with family and friends in their home country and other nations but also the acquisition of information about their loved ones or country of origin. Additionally, refugees interact with individuals from their ethnocultural background within social networks. It becomes evident that the multifaceted utilization of ICTs empowers refugees to maintain transnational connections, thereby offering emotional support and psychological comfort. This dimension of connectivity serves to alleviate the emotional stress and social isolation that are frequently encountered in a new environment.

Expressing Cultural Identity

The ethnocultural networks supported by ICT provide the participants with an avenue to reaffirm their sense of self and their cultural roots. The online consumption and creation of audio or audiovisual cultural content play a significant role in maintaining and expressing a shared cultural identity. For instance, Sali expressed how the use of ICT helps her maintain a strong emotional bond with her home country. She described how watching Iranian series and films, which are integral to their culture and background, serves as a source of connection:

It is just like being with my family. The daily 10-minute dose of content from Manoto (a specific Iranian TV channel) makes me feel good and link me back to my roots. Similarly, music, series, and films serve as powerful tools for preserving that connection to my cultural heritage.

Maintaining a sense of cultural belonging is further reinforced through consuming content in one's native language. Amir exemplifies this by explaining how he watches YouTube videos in Arabic, even when he wants to stay updated on Swedish political current affairs. "I follow Arabic-speaking YouTubers discussing Swedish political issues, such as NATO, Turkey, etc.", he stays connected with the news while benefiting from the background information he obtained in his native language. Even though he is no longer very interested in Syrian news, he still prefers news in Arabic. Engaging with content in one's native language strengthens one's sense of cultural belonging.

Similarly, certain participants actively participate in generating digital content for their local, social, and cultural communities. Hesam highlighted the value of ICT in preserving cultural identity. He described how he actively engages with a WhatsApp group where he teaches people about caring for their bodies and emotions through voice recordings. This group serves as a means to connect with individuals across Iran, fostering a sense of unity and support. Hesam emphasized that "the connections forged through ICT are particularly crucial for us (individuals) coming from countries that exhibit strong emotion and relationships" This sense of emotional connectedness helps them maintain a healthy emotional state, preventing feelings of depression. In contrast, he observed that "people here are more distant from one another. On occasions like the Iranian New Year, I engaged in conversations with 50 people within just two hours", highlighting the vibrant culture and customs they share. He expressed:

We have different cultures and customs. We are emotionally very active, and it is the only way we can keep ourselves alive. **We are alive** with each other. I feel unity with the people I love, with the world around me. I feel more united by being connected to them.

Hesam's reflection underscores the profound significance of ICT connections for individuals hailing from cultures that prioritize strong emotional bonds and relationships. He emphasizes that these digital connections provide a lifeline for maintaining emotional well-being, preventing feelings of isolation and depression. The contrast he draws between vibrant, close-knit interactions during occasions like Iranian New Year, and the perceived distance in his new environment highlights the importance of cultural connectedness. Hesam's words convey that the emotional vitality of his community's culture sustains their sense of unity and vitality. In essence, he articulates that staying connected with their cultural roots through ICTs is synonymous with being alive, underscoring the pivotal role of emotional support for refugees in their resettlement journey.

This is confirmed by Pedro, another Persian participant, engages in content creation as he explains:

I have always had an interest in business, so I designed a Persian website where I offer computer software courses, including Words, PowerPoints, Excel, Excel for accountants, film editing software, and more. I create and edit video courses that I

upload to websites. This endeavor not only provides me with financial benefits but, more importantly, it keeps me connected to my own community. I actively identify the information that people in Iran may require and produce relevant content to address their questions and needs.

Along with other participants' perspectives, Farbod also stated:

I used to maintain a weblog in the past, focusing on political events in Iran, and I was quite active on it. However, due to my current busy schedule, I am unable to continue with it. The purpose of the weblog was to shed light on the human rights violations taking place in Iran and to bring awareness to the world about these issues.

Farbod's engagement in maintaining the weblog not only served as a platform to inform the global community about the political happenings and human rights issues in Iran but also reflected a profound expression of his cultural identity. By dedicating his efforts to shed light on the challenging realities faced by his home country, Farbod demonstrated a strong sense of connection and commitment to his cultural roots. The act of sharing information and advocating for human rights through the weblog exemplifies his desire to make a positive impact on the situation back in Iran. Through this digital medium, Farbod not only sought to enlighten others about the prevailing challenges but also expressed his deeply ingrained cultural identity, which is intricately tied to his homeland and its struggles. In this manner, his endeavors not only fostered awareness but also served as a powerful means of preserving and reinforcing his cultural heritage, amplifying the voice of his community, and contributing to a wider understanding of the sociopolitical landscape in Iran. In doing so, Farbod exemplified the potential of digital platforms to be vehicles for social and cultural expression, transcending geographical boundaries and acting as catalysts for change, understanding, and empathy across the globe.

Maximizing Career Success

The findings underscore the determined pursuit of career success among refugees, highlighted by two pivotal capabilities: enhancing labor market access and efficiently handling job-related affairs.

Enhancing Refugee Labour Market Access

The participants in the study emphasized the significant role of ICTs in facilitating their access to the labor market, allowing them to explore and apply for job opportunities through various online platforms such as LinkedIn, Indeed, Bemanning, and Arbetsförmedlingen. This active engagement with online job platforms expanded their reach and increased their exposure to potential employers. Susan shared her experience, stating:

We use LinkedIn to look for jobs. My husband's job is in IT, but we hadn't used LinkedIn before. We created an account and updated it. We learned from people and YouTube how to set up and enhance our LinkedIn profile. It has proven to be very helpful in our job search.

Moreover, the participants capitalized on social media platforms like Telegram and Facebook to showcase their skills and advertise their professional expertise, further expanding their network and unearthing job opportunities that may have otherwise remained hidden.

The study illuminates the instrumental role of ICTs in broadening refugees' access to the labor market. Online platforms like LinkedIn, Indeed, and others serve as virtual gateways, providing opportunities for refugees to explore, apply, and connect with potential employers. The participants' proactive engagement with these platforms showcases how technology can transcend the barriers and empower job seekers to reach a wider pool of opportunities. The participants' skillful utilization of these tools demonstrates how technology can serve not only to assist in job hunting but also to empower refugees

in positioning themselves as strong candidates. They strategically match their skills with the needs of various industries, thereby enhancing not only their chances of getting employed but also fostering a sense of confidence as they navigate the intricate job market landscape.

In addition, ICTs played a significant role in supporting the participants' efforts to enhance their employability. They used CV builder sites to create and optimize their resumes, effectively highlighting their skills and experiences. Pedro states:

I had no idea that I needed separate CVs for different types of careers and experiences. It was only when a friend mentioned it – like, just putting down my restaurant experience in one CV. So, I turned to the digital world, used a CV builder, and reached out to people to understand these aspects and put them into practice.

Moreover, the participants proactively sought to upgrade their job-related competencies by learning new software and applications, such as Photoshop, iMovies, and Microsoft tools, utilizing ICT platforms. Amir from Suria states:

I enhance my professional skills by enrolling in courses on platforms like EDX or Coursera. They offer free courses that I can participate in. In addition, there are free courses offered by companies and other resources if you're not looking for a certificate.

These endeavors to improve their skill sets made them more appealing to potential employers, positioning them as highly competitive candidates in the job market.

Efficiently Handling Job-Related Affairs

Refugees display substantial reliance on ICTs to proficiently navigate diverse employment responsibilities in their host countries. A notable shift is evident in their engagement with digital tools for tasks that were either inaccessible or were done using alternative resources back in their home countries. Embracing these digital resources, they effectively engage in communication with colleagues, clients, and supervisors, while also accessing crucial work-related information, resources, platforms, and digital calendars. This transformation highlights their adaptability to utilizing ICTs to secure and excel in job roles, marking a departure from their previous circumstances of stability to where such technological support can bring them more reassurance and career security.

Amir states, "I rely heavily on ICTs at work. I manage my meetings and tasks through digital platforms and calendars. Without them, I wouldn't function effectively." Similarly, Hamid, who owns a pizza place, shares, "I use different apps like Foodora, Wolt, and Uber to deliver my pizzas. These apps help me manage sales and keep customers satisfied. Without them, I couldn't run my business successfully." These findings shed light on how refugees strategically leverage ICTs to streamline their job responsibilities, effectively contributing to their work environments and showcasing their adaptive and resourceful approach to career integration.

Key Findings

Insights from Participants

The findings of this study revealed a consensus belief among all participants regarding the significance of accessing the Internet and utilizing ICTs in their daily lives in Sweden. Participants expressed that these digital resources offered a more comprehensive coverage of all aspects of life compared to their experiences in their home countries. Notably, a majority of participants (70%) primarily relied on smartphones, while the remaining 30% use personal laptops as well to access ICTs. Remarkably, over 90% of participants acknowledged a substantial increase in their ICT usage since relocating to Sweden. The reasons cited for this surge in ICT use were multifaceted and included the necessity to maintain

connections with friends and family residing in other countries, the availability of improved Internet connectivity in Sweden, and, most notably, the requirement to efficiently manage their daily routines and responsibilities within the host country.

Moreover, the majority of participants revealed a compelling inclination to embrace ICTs as an indispensable aspect of 'fitting in' to Swedish society and lifestyle. They recognized the vital role of these digital tools within the local system, and this awareness significantly contributed to their motivation to fully integrate and adapt to the increasing reliance on digital technology in their daily lives.

The study findings indicate that adult Middle Eastern refugees encounter substantial hurdles during their initial years of adapting to the new environment and establishing themselves in Sweden. These challenges manifest in various forms, including difficulties in acclimating to the local society, experiencing feelings of isolation and detachment, and perceiving a lack of support and empathy from the community. However, as time progresses and the uncertainties of the early phase diminish, the refugees gradually begin to feel a greater sense of inclusion and comfort within society. Notably, this positive transition aligns closely with their development of language proficiency, familiarity with the culture, community engagement, and adherence to societal norms. The integration of Information and Communication Technologies (ICTs) plays a pivotal role in facilitating this process of adaptation and social integration for the refugees. Through ICTs, they gain access to language learning resources, cultural information, social networks, supportive communities, and labor market which contribute significantly to their overall sense of belonging and well-being.

The study reveals that refugee's sample in this study are not economically disadvantaged or lacking in technological literacy. As it is also confirmed by UNHCR that the prevalence of mobile phones and internet usage among refugees, particularly in urban settings, has been well-established (2016), refugee participants actively employ mobile phones and the internet as indispensable tools for accessing crucial information, establishing connections with their families and friends, and cultivating social support networks. Furthermore, in alignment with Ritchie (2022), the findings demonstrate that these technological resources offer pathways for accessing job opportunities and vital services, which hold the potential to enhance their quality of life. By leveraging mobile phones and the internet, individuals can capitalize on the diverse array of opportunities available to them, thereby enhancing their overall quality of life. The evidence presented challenges the misconception that refugees are technologically disadvantaged and underscores the transformative role of mobile phones and internet connectivity in facilitating refugees' empowerment and socio-economic integration. (Ritchie, 2022)

Forging Integration or Segregation: Individual Agency

While the aforementioned results were found to be consistent and prevalent in a substantial portion of the data, the data analysis indicates that the role of ICTs in fostering social inclusion and expediting the process of integration into society ultimately depends on individual usage. Although ICTs can serve as facilitators, enabling individuals to bridge social gaps and adapt more smoothly, some participants expressed how negative feelings towards their new society may lead them to prefer connecting with their members of fellow community, and so reinforce social exclusion. These findings are consistent with the results of Alam and Imran's study (2015).

For instance, Amir a Syrian refugee, who has been residing in the Sweden for eight years and works in a center assisting refugees in finding employment, emphasized the dual nature of digital tools. He states:

Digital tools can facilitate and make your life easier. But for whom? If you are immigrants living in segregated areas and you aim for that, social media helps you to remain segregated. If you want to integrate with Swedes, it helps you to integrate. So,

the media or ICTs in itself doesn't necessarily aid integration. The same platform can be instrumental in either integrating or segregating. It all depends on how you choose to use it.

The participant highlighted the versatility of ICTs, stressing that the same tools could be utilized differently based on individuals' inclinations and goals. Thus, if the individual agency aims for segregation, ICT tools can aid in facilitating that segregation.

Amir's observation sheds light on the diverse approaches refugees adopt when utilizing ICTs. He points out that while some, like himself, utilize platforms like YouTube and Google Translate to enhance language skills and facilitate integration, others may exploit the same tools for unauthorized activities or prefer to remain within their own cultural communities by using familiar religious groups or websites. Amir's perspective underscores the complicated nature of ICT usage, emphasizing that possessing digital skills doesn't automatically ensure a smoother or faster social inclusion process. Instead, the ways in which refugees choose to employ ICTs are critical, similar to how a knife can be used both for productive cooking and harmful actions. This highlights the role of individual agency in shaping the outcomes of ICT engagement, reflecting their unique goals, aspirations, and preferences.

Gender Differences

Proactive Engagement of Female Participants

In alignment with objective #3, the study's findings elucidate a discernible difference in the contribution of ICTs to the social inclusion of resettled refugees based on their gender. Notably, female participants exhibited a markedly proactive engagement with ICTs, utilizing them as catalysts for enhanced social integration and overall well-being. This heightened involvement is intricately linked to the historical disadvantages faced by refugee women in their countries of origin. These past experiences seem to have sensitized them to the potential advantages of leveraging digital tools to foster connections, bridge cultural divides, and integrate more effectively within the host society.

Multifaceted Utilization of ICTs by Refugee Women

The findings underscore the versatile and multifaceted ways in which refugee women engage with ICTs to bolster their social inclusion. These women demonstrated a willingness to employ digital platforms for a range of purposes, including effective communication, accessing essential services, building social networks, and expressing their cultural identities. The active adoption of ICTs not only promotes personal agency and autonomy but also facilitates the bridging of cultural gaps by fostering meaningful connections. Moreover, this dynamic engagement positively impacts the well-being of refugee women, as they actively seize opportunities to transcend challenges and navigate the resettlement process.

Digital Literacy

The study findings indicate a discernible gender-based disparity in self-reported digital literacy among the participants, measured on a scale of 1 to 10, with females reporting an average score of 6, while males scored significantly higher with an average of 8. This discrepancy suggests that male participants may possess a greater level of digital proficiency, self-confidence, and/or digital self-efficacy compared to their female counterparts. The investigation also considered factors such as the length of stay in Sweden and educational background, but no significant differences were observed in digital literacy scores based on these variables.

This contrast may be attributed to their higher levels of self-confidence in navigating unfamiliar territories and adopting effective learning strategies. Additionally, it is possible that their greater

responsibility for family finances necessitates the acquisition of new skills, leading them to put forth more effort in learning and adapting to digital technologies. Moreover, the availability of more time for learning could contribute to their proficiency.

It is posited that the concept of digital literacy, as assessed in the study, primarily encompasses routine digital usage, which refugees tend to acquire to a considerable extent within the initial one or two years of resettlement, while achieving mastery may take several additional years. Moreover, the relative homogeneity in educational backgrounds among the majority of participants may have limited the discriminatory potential of educational attainment on digital literacy levels.

Nonetheless, the study highlights the possibility of certain minor background differences, such as the field of study, familiarity with English or Swedish language, being relevant to digital literacy, as evidenced by notably higher scores for participants with an IT engineering background at the master's level. Future research could delve further into specific educational backgrounds to gain deeper insights into the factors influencing digital literacy discrepancies among refugees, thereby informing targeted interventions to promote digital skills and enhance social inclusion in the context of adult refugees in Sweden.

Female Age

In addition to the gender-based disparities in self-reported digital literacy, an important aspect that emerged during the study is the potential impact of age on digital literacy and ICT usage among female participants. It was observed that younger females displayed a greater willingness to learn and adapt to digital technologies, which facilitated their ability to cope with everyday digital tasks. Conversely, older female participants faced challenges in acquiring new digital skills necessary for their daily lives, often seeking assistance from others. Among male refugees, such differences in digital literacy and ICT usage were not observed. This contrast may be attributed to their higher levels of self-confidence in navigating unfamiliar territories and adopting effective learning strategies. Additionally, it is possible that their greater responsibility for family finances necessitates the acquisition of new skills, leading them to put forth more effort in learning and adapting to digital technologies. Moreover, the availability of more time for learning could contribute to their proficiency.

In contrast, the situation for female refugees is distinct, as they often bear more responsibilities regarding childcare and family duties even after displacement, maintaining their roles as Middle Eastern women for extended periods. As a result, they may encounter difficulties in finding time to engage in digital learning. Mary emphasizes the predicament, expressing:

I learned my digital skills through experience and trial and error more than formal courses. While some social courses provide guidance on digital skills, there is a need for greater inclusivity. Time becomes a determining factor in what one can achieve here in Sweden: it's not just about personal effort. I have to work and also attend to my son's school responsibilities.

This quote emphasizes the challenges faced by women in juggling multiple responsibilities, which can impede their opportunities for acquiring digital skills and further underscores the importance of creating supportive and inclusive learning environments to address their unique needs and constraints.

The “second-level digital divide” (Reisdorf & Rhinesmith, 2020, p. 132) in digital literacy based on age emphasizes the importance of generational factors that influence female participants' competence and ease with information and communication technologies. This observation aligns with the findings of Kabbar & Crump (2006), who also noted a similar divide among older female refugees with limited

education. As such, future research and intervention efforts should consider age as a crucial variable in promoting digital literacy and enhancing social inclusion among female refugees in Sweden. Tailored approaches that address the specific learning needs and preferences of different age groups can play a vital role in fostering equitable access to digital resources and empowering female refugees of all ages to effectively engage with the digital landscape.

Learning Strategy

Gender differences in ICT learning strategies were apparent among the study participants, who reported a diverse range of sources they utilized to acquire the necessary ICT skills for successful integration in Sweden. These strategies encompassed self-directed exploration, trial and error, formal courses, online tutorials (especially on platforms like YouTube), seeking assistance from friends, family members, or native Swedes, as well as engaging in hands-on practice, among other approaches. However, a notable disparity emerged in the strategies employed by male and female participants. While females expressed a greater inclination towards seeking help from their social network, male counterparts showed a preference for learning through trial and error or independent online search. Interestingly, only one male participant mentioned resorting to seeking assistance from social network. Hamid states: “When I do not know how to use ICTs, I ask my family, friends, or customers”.

Digital area

Another noteworthy gender difference in ICT usage pertains to women's greater engagement with apps and digital sources related to household chores, such as food, clothing, shopping, and managing children's school-related matters. In contrast, men appear less active in utilizing these specific apps. Furthermore, even when men use shopping apps or websites, their usage tends to focus more on electronics and work-related matters. An exception to this trend was observed in the case of Amir, a single parent, who actively utilized household-related apps. However, in general, men display higher activity in using other apps that contribute to various aspects of social inclusion.

The gender disparity in ICT usage among refugees reveals distinct digital engagement patterns, reflecting their varying needs and priorities. Women predominantly employ apps for household tasks, aligned with their caregiving roles, while men focus on electronics and work-related apps. These trends echo traditional gender roles. Amir, an exception as a single parent, challenges these norms, highlighting that individual circumstances might override gender-based expectations. Notably, men's active use of other apps indicates their interest in broader social interactions, emphasizing ICT's role in fostering social integration.

Digital Divide

Within the context of digital inclusion, it is noteworthy to mention a subgroup of participants who faced a distinct form of the digital divide. This group was characterized by their inability to access various digital services due to the lack of a personal identity number (Swedish personnummer) and BankID. Susan profoundly stated, "With no BankID or Person Number: I can't do anything online, I can't pay the rent: no life; no identity; we don't exist." She adds: "They should think about this problem and sort it out. It has taken all my energy. I do not have the right to do things. It keeps me away from society and people." Susan's direct and irresistible words underscore the significant impact that the absence of essential digital identification can have on an individual's daily life, social interactions, and sense of belonging. This inability to access online services not only limits practical tasks but also increases feelings of exclusion and isolation. Susan's experience highlights the critical role of addressing digital divide to ensure that every member of the community can participate fully and equally in the digital landscape.

Susan's situation further highlights the pressing issue of the digital divide within the refugee community. She articulates:

I cannot use the digital system. I could compare and talk about it when I was able to use all the facilities here. In my own country, my life was easy because everyone had the right to everything for example to open an account. In a lot of countries, it is so. Digitalization here is just like buying a doll for me, putting it in the window show and saying you can just look at it. It is beautiful but I cannot touch it or use it. So, it's useless.

Susan's analogy effectively illustrates the frustration and helplessness experienced by individuals like her who lack access to basic digital identification tools due to the absence of a personal ID number and BankID. Her comparison to a beautiful yet untouchable doll emphasizes the paradox of a seemingly advanced digital society where the benefits of digitalization remain out of reach for some members of the population. Susan's perspective serves as a stark reminder of the importance of addressing this digital divide, ensuring that everyone can actively participate in the digital age and enjoy the advantages it offers.

Pedro's situation underscores the profound impact of the digital divide on refugees' integration experiences. According to him:

No bank ID or Swish: no online payment makes life incredibly hard for everyone here in Sweden both in digital and normal aspects. You need to divide refugees into two groups, with Bank-ID and without. No identity: it makes you have a bad feeling about Sweden or develop negative feelings against Swedish people when you are having a hard time, even when it is not rational. But it is your bad experience that makes your bad feelings, and it makes it difficult for you to integrate well.

Pedro's words illuminate the obvious division created by the lack of access to identification or other digital tools. This is the third level divide based on the categorization of Reisdorf & Rhinesmith (2020, p. 132). Pedro's distinction between those with and without Bank-ID underscores the significant contrast in opportunities and experiences that this digital divide generates. The frustration of being unable to engage in basic online transactions not only hinders practical aspects of daily life but also takes an emotional toll. This leads to feelings of exclusion and negative perceptions. Pedro's testimony emphasizes how this digital barrier not only affects practical integration but also shapes refugees' perceptions and interactions within their host society, underlining the urgency of addressing the digital divide to promote equitable inclusion experiences for all refugees.

Limitations

In the realm of understanding the transformative potential of Information and Communication Technology (ICT) among adult refugees in Sweden, this study has embarked on a pioneering journey. With an unwavering focus, this research has embarked on categorizing the multifaceted dimensions of ICT usage, goals, and functions pursued by refugees in their pursuit of social inclusion within Swedish society. Through rigorous investigation, the study illuminates the profound impact of ICT on fostering social integration among adult refugees. However, it is imperative to tread the path of knowledge with a discerning eye, as the study's valuable insights are accompanied by the awareness of limitations that have influenced the breadth and generalizability of the findings.

One limitation arises from the geographical scope of the study, which was confined to data collected from refugees residing in one city, specifically Gothenburg. This geographical constraint could potentially limit the generalizability of the findings, as the experiences and perspectives of refugees in other regions of Sweden may differ. Therefore, while the study provides insights into ICT usage among

refugees in Gothenburg, further research is needed to determine whether these patterns hold true in broader contexts within Swedish society.

Another limitation is the homogeneity of the sample in terms of age and education level. The participants in this study primarily fell within the age range of 30 to 55 and shared somewhat similar educational backgrounds. This homogeneity may restrict the generalizability of findings to a broader spectrum of refugees, particularly those who are younger or older or possess varying levels of education. Future research with a more diverse sample in terms of age and education level could offer a more comprehensive understanding of how these factors influence ICT usage and social inclusion among refugee populations

Another limitation stems from the specific nationalities of the participants, Persian and Syrian refugees, which might restrict the representation of diverse refugee backgrounds in the findings. The experiences and challenges faced by refugees from other countries may vary considerably. Therefore, care should be taken when extrapolating the results to encompass the entire refugee population in Sweden. Future research should consider a more diverse sample to offer a more comprehensive understanding of ICT's role in social inclusion across various nationalities.

The study also acknowledges the potential influence of self-reported data provided by refugees. While efforts were made to create a comfortable environment for sharing information, self-reporting methods inherently carry the risk of biases and inaccuracies. Factors such as memory recall, social desirability, language barriers, and cultural differences could affect the participants' responses to survey questions or interviews. While the study took measures to minimize response bias through methods like peer debriefing and member checking, the possibility of such biases cannot be completely eliminated. Consequently, the findings may be influenced by participants' perceptions, interpretations, and willingness to disclose certain details, affecting the overall reliability and validity of the study's conclusions.

In conclusion, this study provides valuable insights into the role of ICT in fostering social inclusion among adult refugees from the Middle East in Sweden. It serves as a crucial initial step in understanding the patterns of ICT utilization among refugees. However, it is important to recognize that the study also brings to light certain limitations that warrant acknowledgment. The need for further research to explore broader contexts, power dynamics, and the long-term effects of ICT on social inclusion among refugee populations is evident. To enhance findings rigor and validity, future research may adopt mixed methods approaches, employ longitudinal studies, and ensure anonymous data collection. Ultimately, this study underscores both the potential benefits and the need for cautious interpretation when examining the relationship between ICT and social inclusion among refugees.

4- Discussion

This research aimed to shed light on the social inclusion of refugees using ICTs under Sen's (1999) theoretical Capability Approach perspective, emphasizing the importance of individuals having the freedom to lead lives that are in line with their values and aspirations, enabling them to pursue desired actions and activities (Robeyns, 2005). In the specific context of this study, the participants have faced extraordinary challenges, enduring circumstances that stripped them of control over their lives. As refugees, they were compelled to leave their homes and homelands, confronting the daunting task of integrating into an unfamiliar society, rebuilding their disrupted lives, and forging a meaningful existence under these new conditions. In this context, social inclusion is perceived as the extent to which these individuals can actively engage in their new society and regain autonomy over their lives. (Andrade & Doolin, 2016). In this section, I will synthesize the insights gained so far and provide an overview of how ICTs intersect with refugees' capabilities and their journey toward enhanced well-being and social inclusion.

The findings of this study suggest that the social inclusion of Middle Eastern refugees into the information society is fundamentally tied to their engagement with Information and Communication Technologies (ICTs). Based on Sen's Capability Approach (1999), capabilities are defined as the ability of an individual to fulfill valued functions - the things that they value doing or being. Through their engagement with ICTs, refugees are able to achieve functions that contribute to their overall well-being and social inclusion. The range of these functionings includes variety of practical activities such as navigating their new environment, gaining access to essential services, communicating effectively, and improving their career. This is consistent with Sen's emphasis on the importance of capabilities in enabling individuals to live the lives they value, and for which they have reasons to value.

By comparing these findings with those of previous studies such as AbuJarour and Krasnova (2017), Anderson and Daniel (2020), and Andrade and Doolin (2016), some common themes emerged regarding the importance of ICTs for refugees' social inclusion. Nevertheless, this study attempts to shed new light on how capabilities, achieved functioning, goals, aspirations, and agency interact throughout refugees' journey towards social inclusion. Our research uses the Capability Approach to gain a deeper understanding of how refugees actively use ICTs to fulfill their aspirations, navigate challenges, and contribute to their well-being and integration into their new society.

Embracing the Information society

This finding aligns with the work of Alencar (2018), Andrade and Doolin (2016), and Dekker et al. (2018), that discovered that ICTs or social media has a positive impact on providing information. The findings implies that refugees, actively engaging in the information society through ICT utilization, pursue a range of capabilities that embody their ambitions and objectives. These include forging connections, establishing networks, and participating in communal activities to foster intercultural understanding and collaboration. By embracing the information society with the aid of ICTs, refugees emerge as active agents in the process of social inclusion.

This pursuit of capabilities unfolds progressively as refugees advance along the path of social inclusion, yielding multifaceted benefits. Concerning the first Global theme and three levels of organizing themes—accomplishing daily and routine tasks using ICTs, ICT-enabled interaction with host

governments that means participating in the information society—indicate the progressive journey of refugees towards higher levels of social inclusion. As refugees progress in their journey towards social inclusion, their capabilities unfold, bringing forth a range of benefits. The initial stage involves utilizing ICTs to accomplish daily tasks, accessing services, and communicating effectively. This proficiency empowers refugees to engage with the host government and institutions, amplifying their voices and fostering recognition. Such interaction enhances economic and social integration, opening doors to employment, education, and support networks. Individuals' agency leads the refugees all the way through this journey. Similar outcomes are observed in Alam and Imran's (2015) study. This holistic inclusion cultivates a deep sense of belonging and empowerment, transforming refugees into active contributors to the host society's advancement.

The achieved functioning of the participants illustrates how they have used ICTs actively to translate their abilities into tangible desired accomplishments within the fabric of their lives. Functionings, in the context of embracing the information society, encompasses concrete achievements resulting from the use of technology. These achievements are not solely material; they also encompass improved social connections, access to information, and the ability to navigate daily tasks and challenges. Such functioning aligns with Andrade and Doolin's (2016, p. 409) concept of "participating in an information society," underlining the potential of ICTs to confer a sense of mastery and bolster the process of social inclusion. By taking part in the information society through ICTs, refugees can achieve diverse capabilities that ultimately contribute to their overall well-being. This pursuit of capabilities and achieved functionings is closely linked to refugees' goals and aspirations. Individuals' aspirations play an important role in determining the value of their functionings within the Capability Approach. According to this study, participants expressed their desire for effective integration into Swedish society, which includes access to essential services, meaningful interactions, and the ability to make a contribution to society. Their agency is evident in how they utilize ICTs to realize these aspirations. Technology enables refugees to overcome barriers and actively work towards their goals. By utilizing this technology, refugees are able to transform their potential capabilities into tangible accomplishments. Their unique perspectives and skills enrich the host society, catalyzing a more vibrant and diverse community. The similar result is obtained by Alam and Imran's (2015) study.

The Journey of Learning and Training

The journey of learning and training as a pathway to social inclusion and successful integration for refugees comprises two pivotal facets: learning about Swedish society and acquiring education and language proficiency. Through the lens of Sen's Capability Approach, capabilities signify individuals' potential to pursue valuable functionings – actions or states they value achieving in their lives. Within this framework, the utilization of ICTs empowers refugees with the capability to attain educational functionings that contribute to their overall well-being and social inclusion. This includes gaining insight into Swedish culture, navigating the new society, and acquiring language skills through interactive digital resources, among other key aspects.

The participants in this study have effectively employed ICTs to gain a comprehensive understanding of Swedish culture and societal norms. This active utilization of digital platforms underscores their agency in cultivating capabilities for cultural education. Lloyd et al. (2013) highlight that a profound knowledge of various dimensions of a society is vital for promoting social inclusion. Participants navigate and comprehend aspects of Swedish society through digital resources, such as informational websites, search engines, and community-specific apps. This empowerment through agency equips refugees to bridge gaps in their integration journey, ultimately contributing to their sense of belonging and social inclusion as the outcome they value to attain.

Language acquisition through digital tools emerges as another pivotal element in the refugees' journey of learning and training. Language learning apps and platforms offer more than just communication – learning language provide a deeper understanding of the host society's culture, perspectives, routines, and values. According to Sen's Capability Approach, the agency plays a crucial role in pursuing educational goals, as showcased by participants' active engagement with ICTs for language acquisition. This agency underscores their commitment to seek language proficiency, which broadens their horizons and fosters a deeper connection with the society they are integrating into.

Learning about Swedish society and acquiring language proficiency through ICTs and language learning platforms play vital roles in facilitating social inclusion for refugees. Access to information about Swedish history, values, and expectations via digital platforms empowers refugees to navigate their new environment with confidence. Furthermore, language proficiency significantly enhances refugees' ability to participate in social and professional spheres, breaking down linguistic barriers and fostering their social inclusion. In many ways, this is similar to the findings of Alam & Imran (2015).

In this process, refugees actively engage with ICTs and language learning and educational platforms, using their agency to acquire the necessary knowledge and skills. This journey of learning and acquiring capabilities serves as a transformative pathway toward a more inclusive and integrated future. As refugees exercise their agency to learn about the new society and language, these capabilities significantly contribute to their well-being in the new community. The pursuit of learning becomes a means to achieve higher levels of social inclusion and successful integration into the host society. Comparatively, Andrade and Doolin (2016) identified a functioning category that resonates with this study's findings, labeled "understanding new society." This aligns closely with the achieved functionings that refugees in this study value obtaining.

Comparing this study's findings with previous research, such as AbuJarour and Krasnova (2017; 2018), Alam and Imran (2015), and Anderson & Daniel (2020), a common theme emerges regarding the potential of ICTs for enhancing social inclusion via learning among refugees. This study goes further by examining how capabilities, achieved functionings, goals, aspirations, and agency intersect within refugees' learning and training journeys. Sen's Capability Approach provides insights into the multifaceted ways in which refugees leverage ICTs to access educational resources, foster cultural understanding, acquire language skills, and achieve educational objectives. Refugees' agency to engage with digital resources for self-improvement reflects their determination to overcome educational gaps caused by displacement, contributing to their well-being and integration into the host society.

Numerous studies shed light on the role of e-learning and digital technology in fostering social inclusion among refugee populations. Abujarour and Krasnova (2018) explore the potential of e-learning for Syrian refugees in Germany, highlighting the flexibility and accessibility of platforms like YouTube and WhatsApp. Alam and Imran (2015) focus on broadband internet's potential for enhancing social inclusion, especially in terms of accessing education. Alencar (2018) examines how social media aids refugee integration through language learning. Castaño-Muñoz et al. (2018) delve into the use of free digital learning to promote inclusion among migrants and refugees in Europe. AbuJarour's study (2022) centers on Syrian refugees in Germany, emphasizing the benefits of ICT solutions, including e-learning, for integration. These studies underscore the potential of digital learning tools for refugees, despite challenges such as technical infrastructure and access divides.

Building a Social Network in Emerging Communities

In the pursuit of establishing a social network within emerging communities, two distinct functionalities come to the forefront: effective communication and ICT-enhanced local community connection. Sen's Capability Approach underscores the significance of capabilities as pathways for individuals to realize valuable functionings in their lives. One critical aspect is effective communication, a domain in which

participants encountered language barriers upon their arrival in Sweden, echoing insights from prior studies such as Caidi et al. (2010). To navigate this challenge, participants harnessed the potential of ICTs, encompassing platforms like email, Google Translate, and social media, enabling them not only to overcome language barriers but also to navigate their daily lives with newfound confidence.

By embracing ICT-mediated communication, refugees exhibited agency by leveraging tools aligned with their linguistic capabilities and aspirations, thereby facilitating their inclusion as active members of Swedish society. This strategic deployment of digital resources resonates with the essence of Sen's Capability Approach, which emphasizes the empowerment of individuals to overcome obstacles, fostering mutual understanding, and promoting social inclusion.

The integration of digital tools within the capability framework introduces a transformative dimension to effective communication. Asynchronous email exchanges, coupled with the integration of language assistance tools like Google Translate, emerge as means to address language-related anxiety, providing a platform conducive to clear and thoughtful communication. This transformative shift aligns harmoniously with Capability Approach's focus on augmenting individuals' agency. Refugees, by harnessing digital resources, actively propel themselves beyond linguistic barriers, thus cultivating an environment of mutual understanding and social inclusion to achieve their desired capabilities of effective communication.

The study's findings are consistent with previous research, emphasizing the pivotal role of technology in nurturing social capabilities (Castells, 2000; Beldad & Hegner, 2017). The capability of building social networks not only aligns with the principle of enhancing individual agency, but also resonates with Sen's emphasis on valuing interpersonal relationships as integral components of well-being and human development. The study's findings collectively underscore the transformative potential of ICTs in fostering effective communication and nurturing connections, aligning closely with the notions of Sen's Capability Approach and contributing to refugees' enhanced well-being and social inclusion.

In parallel, the functionality titled "Building a Social Network in Emerging Communities" encapsulates another important capability revealed by the study. This exploration underscores the role of ICTs in facilitating the establishment of meaningful relationships among refugees within diverse cultural and linguistic contexts. Digital platforms enable refugees to forge connections that contribute profoundly to their overall well-being and social integration. The use of ICT-based connectivity with new communities empowers them, providing them with a sense of confidence and self-sufficiency in a new environment, allowing them to connect with others to meet their needs and fulfill their desires. This finding resonates with prior research, which accentuates the vital role of technology in nurturing social capabilities (Castells, 2000; Beldad & Hegner, 2017). The capability to build social networks not only aligns with the principle of enhancing individual agency but also aligns with Sen's emphasis on valuing interpersonal relationships as integral components of well-being and human development.

Moreover, the utilization of technologies like email, texting, and language assistance platforms holds the promise of a transformative pathway toward social inclusion and integration for refugees. Through these mediums, refugees not only establish connections and networks but also enhance their capability to engage meaningfully within their new community, cultivating a profound sense of belonging and active participation. By adroitly addressing language barriers, these digital solutions, such as email and Google Translate, empower refugees to navigate communication obstacles with renewed confidence and elevated control, effectively embodying the Capability Approach's emphasis on agency. Consequently, this empowerment facilitates refugees' active participation in social interactions, thereby promoting their overall well-being and seamless inclusion and later integration-aligning profoundly with the core concepts of the capability approach.

The study's collective findings underscore the transformative potential of ICTs in fostering effective communication and nurturing connections, thus closely aligning with the fundamental concepts of Sen's Capability Approach. These digital tools, by empowering refugees to address communication barriers with confidence and control, embody the Approach's core emphasis on agency. Consequently, this empowerment facilitates active participation in social interactions, fostering overall well-being and integration, thereby resonating with the essence of the capability approach.

In conclusion, the exploration of building a social network within emerging communities through the lens of the Capability Approach reveals the transformative potential of technology-mediated communication. By fostering agency and promoting social inclusion, the study's insights resonate deeply with Sen's emphasis on valuing human agency, interpersonal relationships, and individual capabilities as fundamental elements of well-being and human development.

Empowering Emotional Support within the Community

Empowering emotional support within the refugee community involves two vital capabilities: fostering social connections and expressing cultural identity. These capabilities form the bedrock for refugees' overall well-being and social integration. By employing ICTs, refugees utilize avenues to enhance their social bonds and uphold their cultural heritage, leading to a profound sense of belonging and empowerment within their new context.

Strategic ICT usage significantly enhances social connectivity. Participants leverage mobile apps to maintain ties with family and friends across geographical boundaries, bridging distances and facilitating meaningful interactions. This digital bridge not only nurtures emotional support but also acts as an avenue for refugees to stay informed within both local and global communities. Platforms such as WhatsApp, Telegram, and Imo foster informal communication, linking refugees with ethnocultural groups and aiding them in navigating the resettlement process. Ayda's experience illustrates how digital connections can even resolve technical issues, underscoring the importance of maintaining robust social connections across borders. Furthermore, the study reveals that technology-enabled connections contribute to emotional well-being, alleviate homesickness, and amplify the sense of unity among refugees, aligning seamlessly with the principles of the capability approach.

Participants' utilization of ICT platforms to express their cultural identity highlights the capability of cultural expression. Consumption of cultural content and producing them in their native language online nurtures participants' cultural ties and provides a sense of stability. Despite all the instabilities affecting the formation of identity in a new community, refugees are able to leverage their agency to gain power by claiming comfort from their already established identities. Moreover, this technology-driven engagement bridges the gap between their past experiences and current circumstances. By actively participating in online cultural communities and creating content that celebrates their cultural heritage, refugees exercise agency in preserving and reinforcing their identities. Doing this, refugees not only preserve their cultural heritage but also navigate the complexities of their new lives with pride and dignity. Such engagement empowers refugees to counter assimilation pressures and offset the challenges of displacement. Ultimately, the capability approach highlights how ICTs contribute to refugees' well-being, cultural expression, and social inclusion, revealing the profound role of technology in quality of their lives. Through the lens of the capability approach, these expressions hold profound significance as avenues for refugees to embrace their cultural roots, thus enhancing their overall well-being and integration within the host society

Andrade and Dooline's (2016) observations highlight the enduring connection refugees have with their cultural roots. The use of ICTs, such as accessing online cultural content and news, becomes a valuable tool for safeguarding these connections. This practice reaffirms cultural identity, even amid challenges

adapting to new environments. ICTs serve as bridges, connecting refugees' past and present experiences and fostering continuity.

The findings resonate with the works of Andrade and Doolin (2016), Gifford and Wilding (2013), and Panagakos & Horst (2006), magnifying the transformative potential of ICTs in nurturing emotional support and cultural preservation. The capability approach underscores the importance of these technological connections as conduits for refugees to achieve valuable functionings, thereby nurturing their well-being, social inclusion, and agency.

As refugees foster social connections and expand their networks, their inclusion within the local community deepens. Meaningful relationships with locals facilitate a more profound understanding of cultural norms, societal practices, and values. Active involvement in local events further enhances social inclusion, dismantling barriers and bridging the social divide between different communities. This process empowers refugees, fostering a sense of acceptance and value within the broader society.

Facebook's digital platform plays a pivotal role in aiding refugees' social inclusion into the Swedish local community. These platforms serve as channels for communication, facilitating connections with the local community and helping bridge cultural gaps. Moreover, they enable staying connected with new acquaintances, discovering like-minded individuals, and staying updated about the new environment. As refugees adeptly navigate these digital resources, their social inclusion and integration into Swedish society are further catalyzed, nurturing a sense of belonging and empowerment.

Alencar (2018) similarly confirms the positive impact of social media on refugees' social connections. Digital platforms like Facebook have been instrumental in enhancing refugees' local community ties and fostering their inclusion. While the challenges of language barriers and cultural disparities hindered initial connections, Facebook, Telegram, and other social media have emerged as essential communication tools that transcend linguistic barriers. They not only facilitate connections with individuals from different cultures but also empower participants to integrate into the local community. This resonates with Sen's capability approach (1999), where such platforms empower refugees to form connections that nurture their well-being and sense of belonging.

The integral role of ICTs in building social connections and integrating refugees into the local community becomes evident (Alencar, 2018; Andrade & Doolin, 2016; Gifford & Wilding, 2013; Panagakos & Horst, 2006). The use of digital platforms extends beyond mere communication, allowing participants to establish and nurture social networks. These tools play a critical role in enhancing refugees' social inclusion, actively engaging them in local events, bridging cultural gaps, and cultivating meaningful relationships with locals. This alignment with the capability approach signifies that ICT utilization empowers refugees to expand their capabilities for meaningful social interactions, thus contributing to their emotional and societal well-being and integration into Swedish society.

The study's findings harmonize with Alencar's (2020) research, highlighting the role of smartphones in enhancing migrants' well-being. However, the study diverges on the topic of risks, as Alencar's work underscores potential dangers like extortion and surveillance. Both studies emphasize mobile technology's role in fostering interpersonal connections among refugees, intertwining with their emotions and experiences of uncertainty. Several studies support ICTs' crucial role in providing emotional support for refugees' resettlement, social inclusion, and overall emotional well-being (Andrade and Doolin, 2016; Benítez, 2012; Caidi et al., 2010; Hiller & Franz, 2004; Twigt, 2018; Udwan et al., 2020). The strategic use of ICTs also serves as a remedy for the challenges posed by forced displacement and disrupted lives (Gifford & Wilding, 2013), effectively allowing refugees to bridge the gaps between fragmented places and communities that are a consequence of their movement (Wilding, 2012). This aspect of ICTs Usage enables refugees to exercise their agency and foster capabilities that contribute to

their emotional well-being, social connection, and adaptation within their complex and evolving contexts.

Maximizing Career Success:

Maximizing career success among refugees entails the achievement of two key capabilities: enhancing labor market access and efficiently handling job-related affairs. The strategic utilization of ICTs plays a pivotal role in refugees' pursuit of economic well-being and integration within the host society. The participants' active engagement with online job platforms expands their reach and enhances their exposure to potential employers, exemplifying their agency in positioning themselves as competitive candidates. Additionally, the use of digital tools to manage job-related tasks demonstrates refugees' resourcefulness in navigating their professional responsibilities, enhancing their work efficiency, and contributing to their overall well-being. These intertwined capabilities act as cornerstones for economic betterment and stability in the host country (Ritchie, 2022). By harnessing the potential of ICTs, refugees can significantly enhance their employment prospects and optimize their contributions to the workforce.

Beyond immediate job opportunities, the effective use of ICT tools in enhancing refugee labor market access empowers them to navigate complex labor markets with greater confidence and agency. The expansion of their professional network and the acquisition of relevant skills enable them to overcome potential barriers they may encounter as newcomers to the job market, contributing to their long-term career success and seamless integration into the workforce. By utilizing these digital resources strategically, refugees can enhance their economic well-being and achieve greater stability in their new environment. The refugees' pursuit of career success, facilitated by the adept utilization of ICTs, is a testimony to their attempt toward resilience and adaptability.

By employing digital tools to access job opportunities and efficiently manage job-related affairs, refugees are not only enhancing their economic prospects but also including themselves more effectively into the host society. This dynamic interaction between technology and career aspiration demonstrates the transformative role of ICTs in fostering refugees' meaningful contributions to their new communities.

Through the lens of the capability approach, the participants' interaction with ICTs to enhance labor market access reflects the fulfillment of the capability to explore and secure job opportunities by activating their agency. In other words, by obtaining a job, they are able to achieve the kind of economic life they value. By employing technology, refugees actively amplify their chances of economic betterment and societal integration. The integration of ICTs not only supports the search for employment but also empowers refugees to address their specific job-related needs, such as creating tailored resumes and acquiring new skills. This empowerment aligns with the capability approach's focus on agency, as refugees utilize digital tools to enhance their labor market engagement and advance their own capabilities and well-being.

The capability of efficiently handling job-related affairs is equally illuminated by the participants' adept use of technology. By employing digital platforms to streamline their work-related tasks, refugees not only optimize their productivity but also foster their overall work satisfaction and well-being. The efficient management of job responsibilities through ICTs exemplifies refugees' ability to navigate complex work environments, enhancing their agency and contributing to their economic betterment and integration. This synthesis highlights the transformative role of ICTs in fostering refugees' agency, self-empowerment, economic well-being, and meaningful participation within the workforce, harmonizing with the central principles of the capability approach.

Similar findings are obtained by Ritchie's (2022) that emphasizes active engagement in the job market represents the fulfillment of the capability of enhancing labour market access. Additionally, it is

highlighted that the integration of ICTs in managing job-related communications not only enhances efficiency but also fosters a sense of control and agency. As refugees master the art of navigating job tasks through these digital channels, they contribute to their overall productivity, well-being, and work-life balance.

Interpreting these findings through the lens of the capability approach reveals the refugees' adept use of ICTs to achieve economic and well-being gains as found in Ritchie's study (2022). The deliberate use of technology empowers refugees to actively shape their work experiences, fostering a sense of control and self-efficacy. This empowerment aligns with the capability approach's emphasis on agency and self-determination, as refugees exercise their capability to engage meaningfully in their professional pursuits. Effectively managing job-related tasks through ICTs encapsulates how these tools become enablers, allowing refugees to realize their potential and contribute to their overall well-being and integration within the host society.

In summary, refugees' strategic utilization of ICTs to maximize career success aligns seamlessly with the principles of the capability approach. By enhancing labor market access and efficiently managing job-related tasks, refugees exercise their agency to improve their economic prospects and overall well-being. This integration of technology with career aspirations exemplifies the power of ICTs as enablers of capability enhancement, aligning closely with Sen's vision of fostering individuals' freedom and empowerment. The interplay between refugees' aspirations, ICT utilization, and the capability approach underscores the transformative potential of digital tools in facilitating refugees' integration, well-being, and contribution to their host society.

Key Findings

Integration of ICTs: Insights from Participants

The analysis implies that successful social inclusion of resettled refugees into society relies on several interconnected factors. Among these, digital literacy, effective communication, contextual understanding, and informal learning play pivotal roles in empowering refugees to actively participate in society and pursue their valued goals. Competence in interacting with their social and physical environment satisfies a fundamental psychological need (Vansteenkiste et al., 2008) and contributes to their overall well-being. Furthermore, participation holds intrinsic value in enhancing a person's quality of life, as it serves as an expression of empowerment and agency (Drèze & Sen, 2002). By fostering these abilities and skills, refugees can better navigate their new lives and establish meaningful connections within their host communities.

Moreover, data analysis illuminates a significant relationship between the duration of stay in Sweden, digital literacy, and the corresponding increase in feelings of belonging and well-being among refugees. Initially, ICTs are primarily employed for seeking information, performing daily tasks, and receiving emotional support from their home country. However, as refugees adjust and their digital literacy advances, their usage of ICTs evolves. This evolution encompasses a shift from connecting with their homeland to engaging with members of Swedish society, adapting economically through career development, and fostering a sense of integration. This journey resonates with the capability approach as refugees develop a broader range of opportunities for functioning and well-being.

Furthermore, the data indicates that as refugees leverage ICT platforms effectively to seek job opportunities, enhance their skills, and network, their economic conditions improve, further contributing to their overall well-being and social inclusion. This empowerment reduces their reliance on social networks from their homeland, as they establish and strengthen ties within Sweden, aligning with the transformative potential of the capability approach (Ritchie, 2022). In summary, the analysis reveals that as refugees cultivate digital capabilities over time, they experience an enriched sense of belonging

and well-being. The shift from utilizing technology for distant connections to integrating into Swedish society signifies technology's central role in their socio-economic and emotional journey. By navigating successful careers and actively participating in the local community, refugees align their economic and social lives with their new environment, fostering a comprehensive sense of belonging and contributing to their overall well-being. This finding aligns with Ritchie's study (2022), reinforcing the transformative capacity of ICTs in enhancing refugees' socio-economic well-being through the lens of the capability approach.

Forging Integration or Segregation: Individual Agency

The findings obtained from the analysis resonate strongly with the fundamental principles of the capability approach, shedding light on the pivotal role of individual agency in harnessing Information and Communication Technologies (ICTs) to achieve social inclusion and integration. The capability approach, as articulated by Sen, emphasizes that the capabilities individuals possess are instrumental in shaping their opportunities and well-being. The analysis underscores that while ICTs can indeed function as powerful facilitators in this journey, their impact is not uniform and fixed. Instead, it depends on the active choices refugees make regarding their engagement with these technologies.

In the realm of refugee agency, ICTs play a dual role as both potential facilitators and barriers to social inclusion. The capability approach's lens emphasizes that refugees' agency determines how they interact with these technologies, which can either foster integration or inadvertently contribute to segregation. When refugees actively engage with ICTs to connect with their new community, seek opportunities, and learn about their surroundings, these technologies act as facilitators, enabling them to bridge cultural and linguistic gaps. However, if refugees choose to primarily rely on ICTs to maintain connections solely with their home countries or ethnic groups, the same technologies can hinder their social inclusion into the host society. Thus, the dynamic interplay between refugees' agency and the role of ICTs underscores the need for a holistic understanding of how technology-mediated interactions can either contribute to or challenge the creation of inclusive, intercultural spaces within their new environment.

This nuanced perspective aligns with the principle of agency in capability approach, highlighting that refugees possess the freedom to choose how they utilize ICTs in their pursuit of social inclusion. The approach underscores that individuals are not mere passive recipients of technological benefits; rather, they exercise their agency to shape the ways in which technology impacts their lives. The findings underscore the need to consider the individual contexts, motivations, and aspirations of refugees when assessing the influence of ICTs on their social integration. This resonates with Sen's notion that agency is crucial for the realization of capabilities, allowing individuals to navigate challenges and opportunities based on their unique circumstances.

Furthermore, the emphasis on delving more profoundly into refugees' motivations for integration resonates with the capability approach's focus on the diversity of human aspirations and the ways in which these aspirations influence the choices individuals make. Sen's approach encourages understanding not only the objective outcomes but also the subjective evaluations individuals attach to their lives. This echoes the call for additional research to explore the underlying motivations and aspirations that drive refugees' engagement with ICTs in their pursuit of integration. By deeply delving into these motivations, researchers can gain a comprehensive understanding of the complex interplay between agency, technology, and well-being, ultimately contributing to more targeted and effective strategies for fostering social inclusion among refugees.

Gender Differences in ICT Engagement

The study's observations highlight that, as active agents of change, refugee women actively sought to leverage the capabilities offered by ICTs, ultimately shaping their paths to social inclusion. Within the

framework of Amartya Sen's capability approach, the gender-based differences observed in the contribution of ICTs to social inclusion among resettled refugees provide a profound perspective on individual agency and well-being. Sen posits that capabilities encompass not only material resources but also the ability to make choices and seize opportunities. The proactive engagement of female participants underscores the agency they exercise in leveraging ICTs as catalysts for bridging cultural divides and enhancing social integration.

Historically disadvantaged refugee women, drawing from their experiences in their countries of origin, appear sensitized to the potential of digital tools for fostering connections and integration (Alhayek, 2016). This aligns with Sen's notion of capabilities as enhancing the substantive freedom to achieve valued outcomes. By embracing ICTs, female refugees expand their capabilities, enabling them to overcome barriers and take steps toward achieving their aspirations of social inclusion and well-being within their host society.

Multifaceted Utilization of ICTs

Sen's capability approach asserts that capabilities encompass a diverse array of valuable accomplishments and activities. The multifaceted ways in which refugee women engage with ICTs resonate with this view. The women's use of digital platforms for communication, service access, identity expression, and networking enhances their capabilities, ultimately contributing to their well-being and social inclusion and finally integration. In this light, the capability approach echoes the multifaceted nature of the achievements facilitated by ICTs.

Refugee women's engagement with ICTs exemplifies their expanded set of capabilities, aligning with Sen's idea of capabilities as effective freedoms. The versatile use of ICTs by women goes beyond accumulating resources; it empowers them to lead lives they value and seize opportunities they might have been denied in their countries of origin. Thus, the multifaceted utilization of ICTs is not merely a technical accomplishment but a pathway to enhance well-being and agency.

Digital Divide

The gender-based “second-level digital divide” (Reisdorf & Rhinesmith, 2020, p. 132) aligns with Sen's focus on substantive freedoms and the expansion of capabilities. While refugees acquire routine digital skills within the initial years of resettlement, the mastery of these skills might take additional time. The lower digital literacy scores among female participants underline a potential impediment to well-being. Sen's perspective on capabilities as encompassing the freedom to achieve desired functions emphasizes the importance of interventions aimed at bridging the gender-based gap in digital skills.

Digital literacy, as an essential skill, influences refugees' access to opportunities and resources. Female participants' lower self-reported digital literacy scores signify a potential limitation in achieving their valued functionings. This resonates with Sen's idea that inadequate skills or access can limit capabilities. By addressing the digital literacy divide, interventions can empower female refugees to exercise their agency and expand substantive freedoms in order to achieve their inclusion aspirations. Therefore, the study's results underscore the necessity of gender-sensitive interventions to harness the potential of ICTs for promoting social inclusion. By acknowledging and building upon the proactive involvement of refugee women with digital resources, these interventions can be tailored to address their unique experiences and challenges, thereby enhancing their integration and well-being within the host society.

Impact of Age on Digital Literacy

Sen's capability approach emphasizes the interplay between personal, social, and environmental factors that influence capabilities. The impact of age on digital literacy and ICT usage among female participants aligns with this perspective. Younger refugees' willingness to learn and adapt to digital

technologies enhances their ability to perform daily functionings. On the contrary, older women face challenges acquiring new skills, highlighting the role of generational factors in shaping capabilities.

Sen's view that capabilities are shaped by personal, social, and environmental factors finds resonance in the age-related differences observed. The generational divide in digital literacy underscores the complexity of capability formation. Tailored interventions that acknowledge age-related differences can empower older female refugees, aligning with Sen's vision of capabilities as the freedom to lead lives according to one's valued functionings. Similar results were documented by Kabbar & Crump (2006), who similarly observed a digital division among older female refugees with limited education.

Learning Strategies and Gender Differences

The gender-based differences in ICT learning strategies reflect Sen's emphasis on individual agency, choice, and the influence of social structures. Male participants' preference for independent online research aligns with their capability to navigate unfamiliar terrain confidently. Conversely, female refugees' inclination to seek assistance echoes their prioritization of overcoming challenges collaboratively. In Sen's capability approach, the development of capabilities is influenced by personal and cultural contexts, as evidenced by the learning preferences of refugees.

This discrepancy in learning strategies could potentially be attributed to cultural factors, as in Middle Eastern culture, men may perceive asking for help as a sign of weakness. Such insights present valuable opportunities to tailor ICT education courses based on gender-specific learning preferences for refugees. However, further research is warranted to ascertain whether these observations are representative of all Middle Eastern adult refugees in Sweden. If validated, implementing gender-specific interventions, such as facilitating social circle groups for females and providing targeted YouTube educational content for male refugees, could prove instrumental in fostering their digital integration and enhancing overall societal inclusion.

Another potential explanation for the observed gender differences in ICT learning strategies is that male refugees might possess better research skills or feel more at ease utilizing ICT tools to learn independently. On the other hand, female refugees may exhibit lower confidence in their ICT skills or language proficiency, leading them to be less inclined to conduct online searches and instead prefer seeking assistance from others. The comfort of having someone explain concepts and the opportunity to ask questions can be more reassuring for their learning process. This disparity in learning preferences underscores the importance of providing diverse learning opportunities that accommodate varying learning styles and confidence levels among male and female refugees. Tailoring educational approaches to address these differences can contribute to more effective digital skill development and enhance the overall integration of refugees into the digital society.

The observed learning strategy differences align with Sen's view of capabilities as the ability to achieve valued functionings. The gender-based variations underscore the significance of tailored interventions that consider individual learning styles and preferences. This approach resonates with Sen's emphasis on individual differences, and personalized agency, enhancing the well-being of both male and female refugees through targeted learning strategies.

Gendered ICT Usage Patterns

Sen's capability approach underscores how the patterns of ICT usage align with individuals' abilities and agency to achieve their desired functionings. In the context of female refugees, their engagement with household-related apps serves as a manifestation of their agency in fulfilling caregiving roles. On the other hand, the focus of male refugees on electronics and work-related apps reflects their interest in assuming the roles of economic providers and engaging in broader social interactions. These distinct usage patterns demonstrate how access to ICTs empowers refugees to interact with digital tools that

align with their preferred roles, thereby enhancing their capabilities. Sen's perspective on capabilities as pathways to valuable accomplishments finds resonance in these observable usage trends.

The apparent contrast in ICT usage patterns between male and female refugees highlights the varying approaches they adopt when engaging with digital resources. These disparities stem from their sense of agency and the roles they perceive themselves playing within their families to achieve personal and familial well-being. This emphasizes the importance of implementing gender-sensitive ICT interventions that can cater to the unique needs and preferences of both genders. By acknowledging these gendered differences and tailoring interventions accordingly, a capability-driven approach can be realized, enabling refugees to lead lives aligned with their values while transcending traditional gender norms.

Gender-specific ICT usage patterns underscore the critical significance of gender-sensitive interventions in the realm of ICT. By recognizing and addressing these disparities, interventions can empower individuals of all genders, taking into account their distinct requirements and enhancing their utilization of digital resources. This approach acknowledges the intricate interplay between gender roles, individual contexts, and ICT usage, ultimately fostering inclusive digital empowerment and contributing to social cohesion within host communities. This aligns seamlessly with Sen's framework of employing capabilities to promote well-being and achievements, highlighting the need for tailored interventions that bridge the gender gap in ICT utilization among refugees.

Exploring Gender Differences in perceptions of the role of ICTs

In alignment with objective #2, the findings of this study resonate with research conducted by Siddiquee and Kagan (2006), who explored the gendered effects of ICTs on social inclusion. Their study revealed positive results such as maintaining social networks and empowerment, while also acknowledging the risks of perpetuating stereotypes. Similarly, Alhayek (2016) emphasized how grassroots activists utilize ICTs to empower marginalized women. Both studies highlight the potential of ICTs in promoting social inclusion while addressing gender dynamics and avoiding harmful consequences.

Similarly, the current study reveals that gender plays a crucial role in shaping refugees' perceptions of the role of ICTs in social inclusion. Female participants showed a heightened recognition of ICT's potential to facilitate their social inclusion and overall well-being in their new society. This sentiment was further evident in their active engagement and utilization of ICT resources. In contrast to traditional gender roles in their countries of origin, female participants displayed proactive efforts to bridge potential gaps in resource access, including ICTs, in their new environment. This aligns with the notion that individuals facing structural inequalities may be more inclined to maximize available resources to overcome barriers.

The observed gender differences in ICT engagement also align with the idea that social interactions and support networks are pivotal for female refugees to navigate unfamiliar territories and enhance their sense of belonging. This is similar to the findings of Siddiquee and Kagan (2006) that female refugees exhibited a stronger belief in the transformative impact of ICTs on their social inclusion journey, recognizing their capacity to build connections, access information, and facilitate communication within their host communities. This recognition likely stems from the understanding that ICTs offer a pathway to equalize access to opportunities, counteracting the gender-based disparities they may have encountered in their countries of origin.

The examination of gender differences in the perception and utilization of Information and Communication Technology (ICT) among adult refugees reveals a multifaceted landscape of digital integration. Within this context, the capability approach offers valuable insights into these findings. It's possible that these differences stem from variations in confidence and proficiency in ICT skills between genders. While recognizing the transformative potential of ICTs, female participants might exhibit lower

confidence or proficiency levels in utilizing these technologies for digital integration. This potential discrepancy in ICT skills could drive them to place heightened importance on the role of ICTs in their journey towards social inclusion. They may perceive these digital tools as essential for bridging their perceived skills gap and enhancing their overall capabilities. Therefore, they develop their agency to achieve the goal of equating their resources and opportunities with male members of the community. As a refugee, this is an essential step in the process of achieving wellbeing in a new environment.

The gender dynamics evident in the context of ICT engagement among refugees provide a compelling lens through which to interpret the findings within the capability approach framework. The theory emphasizes the agency and capabilities of individuals to lead lives they value. In this context, gender differences in ICT utilization can be seen as reflective of the distinct ways in which male and female refugees exercise agency and navigate the challenges of social inclusion. By recognizing these disparities and their potential root causes, interventions can be designed to address gender-specific needs, enabling refugees to enhance their capabilities and achieve valuable functionings. This aligns with the overarching goal of the capability approach: to empower individuals to pursue a life that aligns with their aspirations and values, overcoming barriers and fostering holistic well-being.

Digital Divide

Extensive research has focused on examining digital inequities and disparities, which pertain to the countries, communities, and individuals that are digitally marginalized or disadvantaged. Several studies have revealed that digital divides persist across three levels: a first-level divide characterized by disparities in the material access to digital resources, a second-level divide characterized by differences in digital skills and usage, and a third-level divide characterized by different access to and usage outcomes (Reisdorf & Rhinesmith, 2020, p. 132). Even in well-connected countries where the majority of the population is online, such divides continue to exist (e.g., Van Deursen et al., 2017).

Although the primary focus of this study was not on the digital divide, a compelling observation was made concerning third-level divides (Reisdorf & Rhinesmith, 2020, p. 132) as well as the fourth classification by Patil (2019) titled "Identity Management,". This type of divide encompasses challenges in obtaining official identification documents that hinder access to critical online services (p. 3), particularly among refugees who lacked access to a Person number and Bank-ID. This limitation referred to restricted access to services due to the absence of a digital ID while awaiting the approval of their refugee cases or facing residency-related issues. The refugees experiencing this exclusion felt as if they were invisible or disregarded in social life, with limited access to various digital facilities and services. Even non-digital access to certain services became difficult, as many places necessitated digital verification or identification of individual. Thus, the significance of addressing these barriers for the inclusion and recognition of refugees in society becomes apparent. Similarly, Ritchie's study (2022) underscores the transformative potential of ICTs in enhancing the socio-economic well-being of refugees, while also acknowledging the challenges in ensuring equitable access and usage within the contexts of refugees.

The concept of digital divides resonates deeply with the capability approach, as it highlights the intricate relationship between access to digital resources and an individual's ability to achieve valuable capabilities and functionings. The third-level divide, which involves varying access and usage outcomes, draws attention to the systemic barriers that can perpetuate marginalization and exclusion. This notion closely aligns with the capability approach's principle of ensuring individuals' access to resources and freedom to choose and pursue valuable functionings. The recognition of the "Identity Management" divide in this study exemplifies how lack of access to digital identification can hinder refugees' agency and participation in digital society of Sweden. Consequently, they are unable to utilize their agency in order to improve their capability to achieve their goals and desires. Addressing these divides is crucial

not only for promoting social inclusion but also for upholding the capability approach's fundamental concepts of enhancing individuals' agency and well-being, irrespective of their socio-economic context.

5- Conclusions

The exploration into the engagement of Middle Eastern refugees with Information and Communication Technologies (ICTs) in Sweden has illuminated a multifaceted landscape of functioning and capabilities that significantly contribute to their social inclusion and empowerment within their host society. The functionings identified are: embracing the information society, the journey of learning and training, empowering emotional support within the community, building a social network in emerging communities, and maximizing career success, encompass a range of dimensions that collectively shape refugees' paths to full inclusion.

Sen's capability approach, as elaborated in the theoretical framework, provides a lens through which I can interpret these findings, highlighting the interplay between individuals' capabilities, opportunities, and the transformative potential of ICTs (Sen, 1999). This conclusion synthesizes the key findings while placing them within the theoretical context of the capability approach.

Participants' unanimous consensus regarding the significance of ICTs in their daily lives underscores the role of these digital resources in fostering overall well-being. Sen's capability approach, which emphasizes an individual's potential to lead a life they value, resonates here. ICTs serve as tools that enable refugees utilizing and improving their agency to exercise their capabilities, access information, engage in communication, and establish connections that transcend geographical boundaries. This aligns with Sen's emphasis on opportunities for choice and agency as crucial determinants of well-being.

The pivotal role of ICTs in overcoming challenges, such as language barriers and feelings of isolation, aligns with the capability approach's emphasis on individual empowerment and functioning. Through tools like Google Translate and social media platforms, refugees effectively engage in meaningful interactions, fostering mutual understanding and belonging. This resonates with Sen's assertion that capabilities extend beyond material well-being to encompass an individual's ability to achieve valued goals, thereby enhancing their quality of life.

In addition, the investigation demonstrates the profound importance of ICTs in enhancing refugees' emotional well-being and cultural identity. The emergence of ICTs as enablers reveals their instrumental role in preserving essential social bonds and reaffirming cultural identities, effectively nurturing a profound sense of belonging and overall well-being. This resonates deeply with Sen's concept of capabilities, as ICTs empower individuals to engage in valued functionings, including the maintenance of social connections and the preservation of cultural identities, which collectively contribute to their substantive freedom and agency in their short and long-run wellbeing. It is evident from the study's findings that information and communication technologies have the capacity to transcend resettlement challenges and bridge geographical barriers in order to facilitate refugees' integration into their host countries and enhance their emotional well-being. Sen's framework highlights the fact that the availability and adept use of ICTs not only broadens individuals' freedom to engage in diverse functionings but also strengthen their position as active agents, capable of shaping their own well-being and fostering resilient integration in the face of challenges.

Refugees' embrace of the information society through ICT usage empowers them to access essential services, navigate administrative processes, and advocate for their rights, aligning with the capability approach's focus on expanding individuals' opportunities. The journey of learning and training

facilitated by ICTs parallels Sen's notion of capabilities as opportunities for valuable accomplishments. Language acquisition and skill development empower refugees to access job opportunities and participate actively in their host society, mirroring Sen's vision of development as freedom of individuals. The refugees gain the potential to lead a life they value.

Importantly, the study reveals that refugees' engagement with ICTs can bridge social gaps and foster a sense of belonging. This aligns with Sen's emphasis on the social aspect of capabilities, where an individual's well-being is intertwined with their social interactions and connections. Additionally, the complicated role of individual agency in utilizing ICTs echoes the capability approach's emphasis on personal agency and choice. Sen's approach recognizes that capabilities are realized through opportunities and choices, and the study details how refugees' use of ICTs reflects their individual choices in light of their aspirations and goals for social inclusion.

As a result of combining findings from refugees' engagement with ICTs in Sweden with Sen's capability approach, this study illuminates the transformative potential of technology in facilitating social inclusion. The multifaceted dimensions of functioning identified in the study - embracing the information society, learning and training, emotional support, social networks, and career success - all align with the capability approach's emphasis on capabilities as opportunities for valued achievements towards wellbeing.

The study's findings reveal a fascinating aspect within the realm of refugee engagement with ICTs: the significant role of gender differences in shaping the promotion of social inclusion among adult refugees. When viewed through the lens of Sen's capability approach, this insight gains deeper meaning. Due to their historically disadvantaged positions in their countries of origin, female participants demonstrate a proactive approach to utilizing ICTs to expand their social inclusion and general well-being, similar to Sen's capability approach, which emphasizes the expansion of freedoms and opportunities for individuals. In this context, ICTs become the tools that allow these refugee women to realize their capabilities and overcome barriers that have historically constrained their participation and agency.

By actively embracing ICTs to foster connections and inclusion into host communities, female refugee participants exemplify the empowerment that Sen's capability approach envisions. Their strategic usage of digital tools aligns with Sen's perspective that capabilities are realized through a person's ability to achieve desired functionings and lead lives they value. These proactive interactions signify their aspiration for expanded opportunities, and it demonstrates how ICTs can serve as vehicles for these women to bridge the cultural gaps that have often hindered their social engagement.

Refugee women leverage ICTs across a spectrum of purposes, including effective communication, accessing essential services, building social networks, and expressing cultural identities, aligns seamlessly with Sen's emphasis on functioning and capability expansion. Their multifaceted engagement represents an assertive move towards broader agency and autonomy. Sen's capability approach would interpret this as the unfolding of valuable functionings, each reflecting the individual's ability to choose and achieve in accordance with their personal goals and aspirations.

The constructive approach of these refugee women in utilizing digital tools carries implications beyond their immediate lives. It resonates with Sen's notion of capabilities not only as personal attributes but also as means for broader societal change. Through their determined interaction with ICTs, these women become agents of empowerment, not solely for themselves, but for the entire community. Sen's emphasis on human agency and the transformative potential of capabilities aligns with this empowerment narrative, underlining how these women transcend historical disadvantages to effect positive change in their lives and communities.

In light of this finding, it is necessary to develop a more comprehensive understanding of the role of gender-sensitive interventions in leveraging ICTs for refugee social inclusion. Sen's capability approach encourages us to view these interventions as opportunities for enhancing individuals' agency and enabling them to realize valued functionings. According to the study's findings, it is imperative to recognize not only the immediate impact of ICTs but also their long-term effects on society as a whole. As Sen's perspective is incorporated into this interpretation, the importance of digital access and empowerment for historically marginalized groups becomes apparent.

ICTs provide refugee women with the opportunity to empower themselves, bridge social divides, and transform their lives. According to Sen's capability approach, ICTs are used to increase opportunities, overcome historical disadvantages, and reshape communities. According to Sen's vision of development as the freedom to achieve well-being, the results of this study are applicable to all aspects of capability, agency, and society's progress.

Taking a step forward, it is vital that we acknowledge the complexity of this relationship. While ICTs can serve as enablers of social integration, individual motivations and contexts play a critical role. The findings presented underscore the need for gender-sensitive interventions and tailored approaches to maximize the positive potential of ICTs while acknowledging diverse pathways of engagement.

Analyzing the study's findings through Sen's capability approach lens reveals an important aspect of agency and choice in the area of ICT use among refugees. While the findings underscore the potential of ICTs to minimize social exclusion, they also suggest that the choice plays a pivotal role. Refugees have the freedom to use these tools either to promote social inclusion or to maintain segregation, depending on their agency and aspirations. According to the study's observations, divergent paths can be facilitated using the same ICT tools based on individual capabilities. This highlights the intricate interplay of choice, freedom, and agency within technology use, shaping refugees' pathways in either direction. It is a reflection of Sen's call to gain a comprehensive understanding of how capabilities translate into long-term outcomes. As a result, considering the capability approach, the study emphasizes not only the potential of ICTs but also the crucial role played by individual choices and agencies in navigating the fine line between social exclusion and inclusion through technology. The study acknowledges, however, that this dynamic is complex and requires further investigation.

Ultimately, the study enriches our understanding of the role of ICTs in refugees' lives, demonstrating their potential as catalysts for social change and enhanced well-being. The study's findings are framed within a capability approach that acknowledges that technology can enhance refugees' capabilities, give them agency, and contribute to their ability to function in society as a whole. This understanding positions ICTs not only as tools but as vehicles for fostering a more inclusive and interconnected society.

Further Research

Further research in the realm of ICT usage for facilitating the social inclusion and integration of refugees could delve into several critical avenues.

Firstly, exploring the longitudinal impact of ICT interventions on refugees' long-term social integration would provide deeper insights into digital engagement's sustained effects. By examining how refugees' utilization of ICTs influences their social networks, sense of belonging, and overall well-being over an extended period, researchers could offer valuable recommendations for optimizing ICT strategies.

Secondly, investigating the interplay between power dynamics and ICT utilization among refugees would shed light on how technology can both empower and potentially reinforce existing social hierarchies. Examining whether certain groups of refugees are more likely to harness the potential of

ICTs and whether this influences their integration differently could reveal nuances in the relationship between technology and social inclusion.

Additionally, a comprehensive exploration of the gender dimension in ICT usage among refugees could provide deeper insights into the distinct experiences of male and female refugees. Understanding how gender roles, access, and attitudes influence ICT engagement would aid in tailoring interventions to address gender-specific needs and foster equitable digital empowerment. Moreover, future research could delve further into specific educational backgrounds to gain deeper insights into the factors influencing digital literacy discrepancies among refugees, thereby informing targeted interventions to promote digital skills and enhance social inclusion in the context of adult refugees in Sweden.

Further research in the field of social inclusion and refugee integration could consider the perspectives of both refugees and the host community. While existing studies predominantly focus on refugees' experiences and efforts, delving into the viewpoints of the host community would provide a more comprehensive understanding of the integration process. Exploring how the host community perceives refugees' use of ICTs, their cultural practices, and their integration efforts could unveil barriers and opportunities that influence successful inclusion. Incorporating both sides of the integration equation would lead to more effective strategies, acknowledging that integration is a collaborative process that requires efforts from both refugees and the host community. Such research could provide valuable insights for policymakers and practitioners aiming to foster meaningful social inclusion and integration.

In addition to the avenues mentioned earlier, further research could explore the concept of "triangulating the data" in the context of social inclusion and refugee integration. Triangulation refers to the practice of using multiple sources, methods, or perspectives to validate and corroborate research findings. In the realm of refugee integration and ICT usage, triangulating the data could involve combining quantitative surveys with qualitative interviews, observations, and perhaps even analysis of digital traces (such as online interactions) to gain a more robust understanding of the complex dynamics at play.

Triangulating the data would provide a more comprehensive and nuanced perspective on the impact of ICTs on social inclusion, enabling researchers to capture a wider range of experiences, challenges, and successes. By leveraging multiple sources of data, researchers could enhance the validity and reliability of their findings, offering a more complete picture of how ICT usage influences the integration of refugees into their host societies. This approach could lead to more informed and effective interventions that take into account the intricacies of individual experiences while also considering broader social and cultural contexts.

In sum, the pursuit of a comprehensive exploration of the role of ICTs in promoting social inclusion and integration among refugees in host societies, future research could adopt mixed methods approaches. These approaches, encompassing quantitative and qualitative methodologies, would facilitate a holistic understanding of the multifaceted impact of ICT usage on refugees' social integration. Longitudinal studies could trace the evolving nature of refugees' engagement with ICTs over time, shedding light on sustained effects and adaptive strategies. Further research with a broader scope, encompassing all refugees in Sweden, a different range of ages, and educational levels, seems essential to validate the patterns identified in this study and ascertain their applicability across diverse contexts within Swedish society. Intersectional analyses would consider the intersections of various factors, such as gender, ethnicity, and age, revealing nuanced insights into how diverse refugee populations experience and leverage ICTs for integration. Moreover, delving into in-depth qualitative investigations would provide a richer exploration of the underlying motivations, challenges, and aspirations that influence refugees' utilization of ICTs. Additionally, recognizing that technology alone may not be sufficient, it would be worthwhile to explore potential instances where excessive reliance on ICTs could inadvertently lead to social exclusion. Combining these investigations with the suggested mixed-methods approaches would

yield a comprehensive understanding of how technology, agency, and social dynamics intersect to foster or hinder the social inclusion and integration of refugees, contributing to more effective and contextually sensitive interventions.

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Appendices

Appendix 1. Interview Guide



Interview guide

Interviewer

Elham Salesi

Background information provided during the interview

Hello, my name is Elham, and I would like to thank you once again for taking the time to answer my questions. During the interview, I will record audio as indicated in the consent form. I will delete the recording as soon as I transcribe it. As you are aware, this interview is intended to explore your use of ICT skills to participate in social life in Sweden. As a general term, information and communication technology (ICT) encompasses all communication devices and applications, including cell phones, computer and network hardware and software, satellite systems, and so forth, as well as the many services and applications associated with them, including videoconferencing and distance learning).

The results of the research will be published in the master's thesis I am writing, but your identity will remain anonymous. Feel free to switch to either your mother tongue or Swedish if you are having difficulty finding the words in English. If any clarifications are needed, please do not hesitate to ask.

Do you have any questions before we start? Do you feel ready to start now?

Opening questions

Can you tell me a little bit about yourself? What is your name, age, where were you born?

How long have you been living in Sweden? (At what age did you move here?)

What is your educational background? (level of education; in which country)

What kind of education have you attended in Sweden? How would you rate your use of digital technologies, such as mobile phone apps? How many hours, for example, would you estimate being online each day; and how many apps in total would you estimate are on your mobile phone?

Do you have any problem with using digital technology here? Is here more digitalized country than your home country?

Do you get help from family and friend or Swedish on how to use new technologies?

Content questions

What kind of ICTs (APPs/devices/technologies) have you used in the last several months/years?

How does it help you to be /do better in Swedish society? How did it go? What went well/right? What went wrong? Do you have an interesting example to tell us?

Probes

As I understand, you are saying that...

Can you clarify what you mean by...

As you were saying before...

To circle/ go back to what you were saying about...

Exploring Questions (in case the answers to the content questions were very short)

Do you use ICTs to connect to family and friends? /Get information?

daily activities/routines/chores/ requirement?

Do you watch films, movies, series, or documentaries produced in home /host country? Any training programs? Do they check any website in home country? Why?

Do you provide content about yourself / life in Sweden or any other topic using technology?

Other Questions

How do you feel about technological life in Sweden? Are you familiar with them or ignorant toward them? Do you think they are easy to use? Why or why not?

How did you learn all these skills? Educational course? Friends, trial and error, etc.?

Final question and ending the interview

Is there anything else that you feel you want to share with me today? Anything you would like to add that I did not ask?

Thank you again for taking the time to answer my questions today. Before I stop the recording are there any final questions that you would like to ask me?

Appendix 2. Consent Form



The Social Inclusion of Persian Immigrants and Refugees in a Computer Literacy Course in Sweden: Research Project Participation

I would like to express my sincere appreciation for your interest in this research project. My name is Elham Salesi, and I am a student at Gothenburg University in Sweden studying the International Master's in Educational Research (IMER) program. This letter introduces you to my research study and asks you to complete the consent form I need from you before I can interview you.

For my research study (part of my master's thesis) I am collecting research data concerning Persian immigrants and refugees' use of ICT skills for enhancing their social inclusion in Sweden. I will collect these data via interviews, and I greatly welcome your own contribution to the data. My master's thesis is supervised by a tutor of the Master's program. Both our contact details are listed below, should you wish for more information about my research study or the university program I am following.

Your participation in the research study requires your consent and gives you certain entitlements. For example, you have the right to withdraw from the study at any point and without needing to state your reasons for your withdrawal. Names, personal information and all information that might lead back to your identity will be removed from the data, so that your contribution is treated as entirely anonymous. Your entitlements are set out below in a research consent agreement, which I ask you to read carefully. If you agree to the terms, then please sign the consent form and return it to me.

Kind regards,
Elham Salesi

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Consent to Participate in Research

I..... voluntarily agree to take part in this research study.

I understand that I have the right to withdraw my participation in the study at any time, and I can refuse to answer any question.

I understand that participation requires ...(one or two one-to-one conversations).

I am aware that my participation in this research will not directly benefit me.

I agree to have my interview audio recorded. The audio recordings will be transcribed to text and anonymized (person names and identifiers removed) soon after the results are published, whereafter the audio recordings will be deleted. My contribution to this study will therefore be kept strictly anonymous.

I understand that any information I provide will be treated as confidential.

I have been informed that anonymized extracts from my interview may be used in the Master's dissertation by Gothenburg University

I am aware that If I inform the researcher that I or another individual may be at risk of harm, the researcher may be required to report to the appropriate authorities.

I understand that I am entitled to access the information I have provided at any time while the study is underway.

I understand I have the right to contact the individuals responsible for the research if I require clarification or additional information.

I declare that I have been provided with a written explanation of the study's purpose and nature, as well as the opportunity to ask questions.

I declare my participation in the project by sending this form, signed and dated, to ellysmith1978@gmail.com.

Date

Signatur

Appendix 3. Table 2. Codes, Basic, Organizing, and Global Themes.

Example of activity	Initial codes	Basic themes	Organizing Them	Global Theme
<p>1177/Doktor 24/All tid öppen: Registration, get appointment, remis, check your doctor reports. Digital file of your health system available everywhere, Gym App, Online training via Skype, Pharmacy system for prescription (digital), calendar</p> <p>Supermarket App (lidl, willys, Hemköp, ICA, Coop, etc.), Systembolaget, Foodora Wolt, Uber, Subway, Burger King, Espresso House, Restaurants' website</p> <p>Online shopping (Shopping sites, i.e., Shien, Amazon, Facebook Marketplace, Zalando, Blocket)</p> <p>Conducting online banking transactions and bill Payments (Bank app: Swedbank, Swish, SEB Bank, Apple pay, Wise) Making payments or transfers through Swish Filing tax returns online, Skatteverket App Budget managing; ex, Kvira Insurance & Governmental offices websites</p> <p>Findmykid Apps, App for children's school</p> <p>Migrationverkett</p> <p>Utilizing identification services like Bank-ID, Freja (digital passport, ID, etc) Västtraffik (TO GO), Taxi App (i.e. Bolt), Parking apps, Google Map</p>	<p>Health (BID)</p> <p>Nutrition (BID)</p> <p>Clothing</p> <p>Finance (BID)</p> <p>Parenting</p> <p>Offices</p> <p>Identification (BID)</p> <p>Transportation (BID)</p> <p>Weather</p>	<p>Accomplishing daily and routine tasks using ICTs</p> <p>Interaction with Host Governments & Environment</p>	<p>Connecting, Empowering, and Engaging</p>	<p>Embracing the Information Society</p>

Weather app. Boplast, Blocket	Accommodation			
Google Translate to learn language better Online program & courses to learn language, Instagram, Telegram Google Scholar, EDx, Coursera (free course) Language learning app: Duolingo, Duolingo, Chat GPT, Istelearning, Lexin, High Svenska Canvas, google meet, Zoom, Mecenat App	Translate Online Education (BID) Digital Education Apps for Education	Online Language Learning Platforms Utilizing ICT for Language Acquisition ICTs for Education	Education and linguistic resources	The Journey of Learning and Training
Search engine: Google, 8 Sidor, QR code Reader , Digital book & articles YouTube: Watch videos about Sweden, Culture, events, festivals, politics News App: STV Player, SV Radio, Netflix Informative Digital based group: Facebook group, Telegram group.	Information Plans & Events Fun & Pleasure Social Media as an Information Source	Understanding Swedish Society: Unraveling the Cultural Fabric and Lifestyle	Understanding new society	

<p>WhatsApp FaceTime Facebook Instagram Tick talk Telegram. Snapchat Imo. Skype Google meet. Zoom Health in Persian Site (Persian Google)</p>	<p>Social Media as a Linking Device</p> <p>Native Websites</p>	<p>Ethnocultural Connectivity: Bridging Boundaries with Fellow Community Members in and beyond Sweden.</p>	<p>Being socially connected (fellow community).</p>	<p>Empowering Emotional Support within the Community</p>
<p>Follow the home country news through ICTs Producing ICT based content for the home country (Facebook, YouTube, WhatsApp, Telegram, Instagram, Weblog, Website, TikTok, etc.) Follow the events, ceremonies, festivals through social media, or digital groups to participate or to be informed of Watch movies, series, and documentary in native language and culture</p>	<p>News</p> <p>Content Production</p> <p>Homeland's Events</p> <p>Social Media Informing Group</p>	<p>Embracing Cultural Identity: Empowering Voices through Cultural identity Expressions</p>	<p>Expressing culture identity</p>	
<p>Facebook Groups (other nationalities & Swedes) Sverige Kompisar (via email) Facebook Marketplace Communicating with their child's teacher and school</p>	<p>Social Media as a Bridge to the Host Community</p> <p>Network Organization</p>	<p>Building and Expanding Networks in a New Land</p>	<p>Forging Connections. ICT-Enhanced Local Community Connection</p>	<p>Building a Social Network in Emerging Communities</p>
<p>Using email correspondents (The connection with landlords, school, offices, shops, Boutiques like H&M facture) Utilizing google translate</p>	<p>ICT Based Correspondence & Communication</p>	<p>Communicate effectively in a new or unfamiliar language</p>	<p>Effective communication</p>	

<p>Apply digitally for a telephone translator Texting. Having a translator on the phone Kvira App, Post Nord App</p>				
<p>LinkedIn, Indeed, Bemanningen, Arbetsförmedlingen site, CV Producer sites Exploring and applying for job opportunities on Online platforms Advertise to get personnel</p>	<p>Job Application (BID) Hire Personnel (BID)</p>	<p>Facilitating Refugees' Access to Labor Markets through ICT</p>	<p>Enhancing Refugee Labor Market Access</p>	<p>Maximizing Career Success</p>
<p>Job related App (Photoshop, Imovies, Microsoft) Payslip app ei. Fornix Job App Job Platforms Calendar (Manage meeting &commitment)</p>	<p>Improving Job Performance</p>	<p>Strategies for Enhanced Productivity & Work Management</p>	<p>Efficiently Handling Job-related Affairs</p>	



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