Technology access & education for refugee women in Seattle & King County

Report
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Technology & Social Change Group

The Technology & Social Change Group (TASCHA) is a center for multidisciplinary research at the UW Information School that explores the complex relationship between digital technologies and society, and develops new models of digital engagement that advance community interests. We have a particular focus on underrepresented and marginalized groups, and fostering individual and community agency.

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Executive Summary

About the research

The main objective of this research is to understand the role of technology access and education for women who have arrived in Washington state as refugees. As part of this research, we conducted interviews with 21 refugee service providers in King County in 2019. The purpose of these interviews was to map a landscape of technology-related services and programs available for refugee women and their communities, to identify the main challenges these organizations face, and to outline the main needs for designing better programs and services for refugee communities.

Technology access and education is an important way in which people from refugee backgrounds arriving to the United States learn to navigate systems of employment, transportation, schooling, and legal and government services, and stay connected to their friends and families abroad. For women, these opportunities and social networks can be critical lifelines to more actively engage in the social, economic, and cultural life of their communities and homes. Our focus on women and technology stems from an interest in supporting and exposing services available to refugee women in the United States, where technology is socially and culturally dominated by men.

In light of the current global COVID-19 pandemic, the conversation around digital exclusion and inclusion of refugee women takes center stage. Exclusion and oppression are often exacerbated for women in migration, where language barriers, domestic responsibilities, isolation, and iterations of cross-cultural patriarchy prevail, placing them at an even higher risk of social marginalization and on the outskirts of technology. For refugees already living in vulnerable economic, social, and legal contexts, COVID-19 stands to further reify women’s existing precarity.¹

¹ See “Technology Access and Education for Refugee Women in the Context of Covid-19” for more discussion on this project and the global pandemic: https://tascha.uw.edu/2020/05/technology-access-and-education-for-refugee-women-in-the-context-of-covid-19/
Key facts about refugees in the U.S. and Washington state

➔ Close to 70 million people are displaced around the world (UNHCR, 2018), of whom 26 million are refugees.
➔ In 2019, the U.S. accepted 30,000 refugees for resettlement. Their top three countries of origin were the Democratic Republic of the Congo, Myanmar, and Ukraine.
➔ In 2020, the number of refugees to be resettled in the U.S. has been set at 18,000. The lowest in the 40-year history of the U.S. Refugee Resettlement Program.
➔ Washington state welcomed more than 14,000 refugees in the past five years, and 1,930 refugees in 2019. The state consistently ranks among the top 10 U.S. states for refugee resettlement.
➔ Seventy-two percent of Washington state’s refugees came from just five countries: Iraq, Myanmar, Somalia, Bhutan, and Ukraine.

Summary of research findings

Access to technology, particularly digital technology, represents a foundational step in the refugee resettlement process. Technology can support employment, facilitate language learning, mediate navigation around the city, and create connectedness, communication, and mobility for women.

Services

The most prominent programs and services that include technology access and education can be broadly categorized into four main areas:

➔ Technology education and employment-related services, including job search, CV preparation, entrepreneurship (i.e. home-based child care); vocational and apprenticeship training programs (i.e industrial sewing, culinary programs); and professional development programs
➔ Mobile phones, communication, and mobility for women
➔ Technology education and English as a Second Language (ESL) training
➔ Technology in family and community life
Funding

Current available funding does not meet the demand for technology education programs and is limited and inconsistently available year to year.

➔ Funding structures in relation to technology access and education programs place limitations on what kinds of programs are available and who can benefit from them. Resettlement agencies and community-based organizations tend to rely on restricted grants or other funding that dictates how and on what to use funds.

➔ There is a lack of diverse funding sources, creating unnecessary competition among the different organizations that are already struggling to find resources for these types of programs.

➔ Technology companies' support for technology education programs — through unrestricted funding, in-kind technology donations, and/or training resources — for refugee communities is infrequently available.

Challenges and gaps

In addition to scarce and inconsistent funding, the main challenges refugee service providers face when working with women include:

➔ Meeting the needs of diverse cultural and language groups
➔ Attending to different literacy levels, competing needs and priorities within the organizations
➔ Social and cultural norms that could deter women from participating in training programs

Some of the areas with the most pressing gaps in technology-related services are:

➔ Technology literacy, including mobile and web literacy, resources to teach online safety, privacy and surveillance, and programs that build skills in everyday technology such as driving and sewing
➔ Programs fostering entrepreneurship and self-employment
➔ Coordination and resource sharing among refugee service organizations and potentially technology companies
Introduction: Technology Access and Education for Refugee Women

Refugees, asylees, and others who experienced what is often described as “forced migration” are among the most marginalized members of U.S. society. Only a small percentage of the world’s 30.2 million refugees and asylees get resettled anywhere in the world. People are often resettled in countries where the language and customs are completely new to them. Technology access and education is an important way in which new arrivals to the United States learn to navigate systems of employment, schooling, and legal and government services, and stay connected to their friends and families all over the world. For women, these opportunities and social networks can be critical lifelines to adjust to their new environments.

This report is based on research we conducted in 2019 to understand the role of technology access and education for women who have arrived in Washington State as refugees. Our focus on women and technology stems from an interest in supporting and exposing services available to refugee women in the United States. Cultural norms around technology leave many women excluded, unable or unmotivated to learn to use or master important 21st century tools. Our research involved interviews with refugee service providers in the city of Seattle and surrounding King County area in Washington state. These interviews focused on technology access and education programs that specifically served women and communities from refugee backgrounds. We frame our findings in this report in relation to what kinds of technology programs stand out as critical to the lives of these women and their families in resettlement.

The lives of women who experience forced migration and enter the United States as refugees are often overlooked as distinctly different from the experiences of men. Daily newsreels and everyday conversation often talk about “refugees” as homogenous groups. However, country of origin, age, sex and gender, sexuality, religion, class, education, and migration paths all impact individual experiences of forced migration and resettlement. These factors also impact how host countries receive individuals, families, and communities during resettlement. This resettlement process is complex, involving government and non-government agencies, community-based nonprofit support, and locally situated networks of people who assist with navigating the small

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2 UNHCR website: https://www.unhcr.org/figures-at-a-glance.html

3 See Judy Wajcman's book Feminism Confronts Technology (1991) for a discussion about the masculine culture of technology.
and short-term government funding available and accessing other types of resources and support.

Not all women have the same experiences as a refugee and with resettlement. Some women have not had access to adequate schooling or have not participated in conventional workforce employment before their migration. Patriarchy can often take over family lives and structures in times of crisis, including around the use of technology. While many women arrive in the United States with rich workforce experience and education, others are undertrained and undereducated in relation to important skills needed to navigate new cities and towns, including literacy and numeracy (in their first language, never mind English).

These distinctions also reflect the vast class differences across communities of forced migration — some people arrive with social capital, and others arrive without such capital in hand. We recognize that many women, men, and families also build on their preexisting knowledge and capital to learn U.S. technology systems on their own, some with great success. Others are learning to use technology for the first time.

Technology is a major component of daily life in the United States, no less in booming technology hubs such as Seattle, where much of this study was based. Technology, as it exists in the living world, is both socially and culturally constituted. It is defined by the people who make it, reflecting and representing their values and beliefs. It follows that the use of these tools also shapes society and social engagements, sometimes without us even knowing, in both positive and negative ways.\(^4\) Obvious examples of this mutually shaping role of society and technology include the way internet-enabled mobile devices have changed workplace expectations around communication, such as email; and how mobile phones have increased surveillance practices, leaving women and other minoritized and racialized groups additionally vulnerable. We aim to contribute to the important research domain that explores tensions in women’s lives at the axis of technology and refugee status.

Finally, our broad definition of technology includes all of the following domains: information and communication (mobile phones, computers, social media, and apps); manufacturing (e.g., industrial sewing; cooking); transportation (driving, using transit card readers); domestic technology (card systems for paid laundry machines, home appliances); employment and financial (clocking systems, accounting software, banking); gardening; textile technology and crafts (weaving, sewing, upcycling). In taking such an expansive view, we want to highlight technological activities that are undervalued in our

For example, textiles and crafts involve particularly overlooked technologies associated with women’s work, such as sewing and sewing machines. These tools and their associated activities are often considered less significant than, for example, using a computer, though the complexity of skills, techniques, and machinery used for production are no less complex than digital technology. Sewing, for example, takes discrete artistry and time to master the tool, and has economic, social, and cultural value; modern sewing machines and industrial machines also integrate digital screens and touch-screen systems into their design. Including these technologies is a crucial part of understanding women’s experiences of refugee resettlement and technology.

The Context: Refugees in Washington state and the U.S.

We use the term “forced migration” throughout this study to acknowledge that the legal parameters of entering the United States as a refugee differ from those seeking asylum or entering on special immigrant visas, to name a few of the different legal categories that shape a person’s experience of migration and resettlement. Many of the practitioners interviewed in this study also discussed how their programs impacted women who have entered the U.S. under these other forced migrant categories. Thus, we enter this conversation understanding that the language of refugees carries systemic, legal, and structural implications for the women who are designated as such, in addition to their varied social, cultural, and political backgrounds. Although we focus on programs that target refugees in resettlement, in some cases asylees, Special Immigrant Visa (SIV) holders, and other immigrant groups also frequent and benefit from the available services.

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5 96th United States Congress. An Act to amend the Immigration and Nationality Act to revise the procedures for the admission of refugees, to amend the Migration and Refugee Assistance Act of 1962 to establish a more uniform basis for the provision of assistance to refugees, and for other purposes. Pub. L. No. 96–212 (1980). Retrieved from https://www.acf.hhs.gov/orr/resource/the-refugee-act

6 According to the Department of Homeland Security, a refugee is defined as a person displaced from their country and unable or unwilling to return because of persecution or a well-founded fear of persecution on account of race, religion, nationality, membership in a particular social group, or political opinion. An asylee is a person who meets the definition of refugee and is already present in the United States or is seeking admission at a port of entry. Refugees are required to apply for Lawful Permanent Resident (green card) status one year after being admitted, and asylees may apply for green card status one year after their grant of asylum. Retrieved from: https://www.dhs.gov/immigration-statistics/refugees-asylees
In 2019, the United States accepted 30,000 refugees for resettlement. Their top three countries of origin were the Democratic Republic of the Congo, Myanmar, and Ukraine.\cite{7} The number of refugees to be resettled in the United States in 2020 was set at 18,000, the lowest in the 40-year history of the U.S. Refugee Resettlement Program.\cite{8} At the time of publication, the Trump administration had indefinitely suspended the refugee resettlement program, using health risks due to the pandemic to justify more restrictive immigration policies.\cite{9} Washington state consistently ranks among the top 10 U.S. states for refugee resettlement. The state welcomed more than 14,000 refugees in the past five years, and 1,930 refugees in 2019.\cite{10} The countries where most of Washington's refugees have come from in this time period include Myanmar, the Democratic Republic of Congo, Iraq, Somalia, and Ukraine.\cite{11} While the numbers tend to fluctuate depending on global events, the current political priorities have placed unprecedented restrictions on most types of migration as well as further limitations on available funding for support services and resettlement programs. These conditions impact and limit all programs, specifically those that offer specialized support to women and other groups facing layered marginality in their migration, such as those who are women, queer, and/or disabled.

Funding is a theme interwoven throughout our findings, as it ultimately shapes what services organizations provide and whom they can serve. A network of federally and locally funded nonprofit organizations, public agencies, and public libraries provide programs and services for these populations. Many of these supporting actors are directly impacted by federal and state funding structures, which also change based on the political landscape of the time. Resettlement agencies and other organizations that receive federal funding earmarked for “refugees” typically must offer time-limited assistance or restrict services to those with refugee legal status or another eligible designation. Grant funding usually allows organizations to use the money only for

\cite{7} Ibid.
\cite{11} Ibid.
predetermined purposes. Funding may be restricted to certain program types, with limited or no overhead costs. Grants also may have performance measures that must be tracked and met to continue funding. Smaller community-based organizations may rely on volunteers and small donations. The scarcity of funding opportunities often leaves smaller organizations at a disadvantage since they have to compete for funds with bigger organizations that have more resources and dedicated staff for grant writing. Despite the recent focus on the “global refugee crisis,” organizations discussed the challenges of operating programs with little unrestricted funding and a lack of substantial financial contributions from the booming local technology industry.

**Study methods**

This research study involved:

1. A desk review (internet and literature search) to identify the different technology programs and services available to refugee women in Seattle and King County, which encompasses the city, and the different organizations that serve refugee communities.
2. Semi-structured interviews with organizations that offer services and programs for refugee communities, to learn about their strategies, successes, and challenges they face.
   a. From March to June 2019, we conducted 21 interviews with individuals or groups of service providers (n=26).
   b. The interview data was anonymized and qualitatively analyzed through a process of iterative and collaborative thematic coding. In this report, we tie together the perspectives of different organizations and provide a broad overview of the landscape of technology-related programs and services. Our interviews came from five types of service providers. (See Table 1 for a description of the participant organizations.)

Following these interviews, we also conducted seven focus group discussions and two individual interviews with women who arrived in Seattle or the King County area as refugees to discuss their technology access, education, and general use. This data is not included in this report and will be analyzed and published at a later date.
Table 1: Organizations participating in the research, by organization type

<table>
<thead>
<tr>
<th>Organization type</th>
<th>Brief description</th>
<th>Number of interviews</th>
<th>Funding examples¹²</th>
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<tbody>
<tr>
<td>Resettlement agency</td>
<td>Within the first 90-120 days after arrival, resettlement agencies provide financial support and job training, and assist refugees in registering for government and social services, acquiring a mobile phone, and adjusting to other aspects of daily life.¹³</td>
<td>5</td>
<td>U.S. Department of State contracts; local grants; partnerships with private and public organizations</td>
</tr>
<tr>
<td>Community-based organization (CBOs)</td>
<td>CBOs vary in size from small, grassroots groups to large nonprofit organizations. Some CBOs have been around for decades and were originally designed to serve different communities but adapted as refugee populations changed.¹⁴</td>
<td>9</td>
<td>Local and federal government grants; contracts; volunteers; donations</td>
</tr>
<tr>
<td>Public library</td>
<td>Public libraries have a history of serving immigrant populations.¹⁵ Most library services and</td>
<td>5</td>
<td>Local government funding; grants</td>
</tr>
</tbody>
</table>

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¹² Due to the complexities of the organizations and services provided, the list of funding sources is not comprehensive.


¹⁴ Ethnic Community-Based Organizations (ECBO) are part of the CBO category. Former refugees or others from the same ethnic community form these organizations to serve their local community. The ECBOs in our sample are smaller and have fewer resources and less power compared with other CBOs. ECBOs are distinct because their approach is informed by the personal experience of their founders, who created these groups to meet a need in the community.

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<tbody>
<tr>
<td>Other public sector</td>
<td>Provides housing, programming, support, and funding</td>
<td>2</td>
<td>Local government contracts; grants from companies</td>
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<td>from companies</td>
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<td>programming are designed for the general public, but some public libraries have started to offer specialized services to refugees.(^{16})</td>
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Technology Services & Programs: Overview of Findings

Findings from this research study suggest that access to technology, particularly digital technology, represents a foundational step in the refugee resettlement process. Technology can support employment, facilitate language learning, mediate navigation around the city, and create connectedness, communication, and mobility for women. Technology education at these levels entails supporting refugee communities to set up mobile phones and get email addresses, find options for affordable internet access at home, apply for transit cards, get library cards, and provide driving lessons, among other skills relevant to daily life and work.

In this section, we present a more detailed view of the types of programs where technology access and education are found, based on the interviews conducted with people providing services to refugees and with a focus on women. The most prominent and interesting programs and technology-related themes that surfaced in these interviews include:

1. Mobile phones, communication, and mobility for women;
2. Technology education and employment-related services;
3. Technology education and English as a Second Language (ESL) training; and
4. Technology in family and community life.

Interviews with service providers show that there is a wide range of ways in which organizations provide access to technology and opportunities for women to learn how to use the varied tools and services available. These include: formal digital literacy programs; employment-related programs that use and teach technology as part of the world of work; and English language lessons, sometimes built into other programs such as sewing classes, where women gain valuable and employable skills as they master the use of sewing machines. This type of textile technology and training program is almost invisible outside the community of service providers and community members who know their importance first-hand.

Considering the integrated issue of funding in relation to technology programs and the current dominance of digital technology, recentering what types of technical and technological programs are valuable for women matters. The structure and funding of these programs also matters because funding limitations narrow the scope of what kinds of programs are available and who can participate. Individuals within organizations often end up supporting women and men through ad hoc technological support to better use personal mobile phones, by using office-based computers to
troubleshoot access to online resources, or by explaining how to use day-to-day technology such as ATMs and electronic payment public transit systems.

Libraries are also important sites of technology access and education as services that are available consistently to the public. Importantly, library programs do not “time out” with regard to the legal parameters of resettlement, nor do they necessarily target or market to refugee communities specifically. Library programs range from general technology classes open to everyone to partnerships with local community organizations and nonprofits that allow for digital literacy classes tailored to specific community needs taught in community spaces and in languages other than English.

In the following pages, we discuss the ways in which technology access and education programs and opportunities serve, support, or hinder women — and sometimes men and families — in resettlement.

**Mobile phones, communication, and mobility for refugee women**

Interviewees described that mobile phones, especially smartphones, represent the primary — and sometimes only — device through which program participants communicate and access the internet. This is particularly relevant for women, who can experience distinct forms of isolation compared to men and children. This isolation may relate to language barriers, child-care and domestic responsibilities that limit time and mobility, and patriarchal social norms that make mixed-gender social environments sometimes more difficult for women to frequent comfortably. Having access to mobile devices allows women to communicate with their new community in the U.S. and aids connections to family members who may still be dispersed internationally. Mobile phones can also be important tools for women to seek and apply for employment, manage their business, practice English skills using language apps, communicate with schools, and manage their health or immigration appointments. Interviews showed that organizations that serve refugees touch on all of these components of a mobile phone’s value across their technology access and education programs.

The affordances of mobile phones and smartphones make communication tools and the internet more accessible to women than ever before, at times and places that are convenient for them to use. In relation to learning how to use mobile devices, some service providers offer digital literacy programs and a few focus on mobile literacy specifically; fewer still are considering offering such programs for women-only groups, though many interviewees identified that such sex-segregated programming would be valuable and better attended by women. Essentially, funding and capacity within
organizations for such programming was a barrier to meeting what providers already see and know to be a need.

Much of the mobile literacy training also happens through other digital-skills training, or *ad hoc* as part of English language learning, sewing, or other women's groups and classes where women share information, pictures, etc. using personal mobile phones. Service providers also teach clients how to use smartphone resources that help in everyday life. This happens at various times within and outside of formal education programs and includes texting, maps, banking, and translator apps. Women receive these types of training through organizations as well as in libraries.

Public libraries host various types of digital literacy training programs — most designed for the general public, but interviewees discussed emerging programs that occur outside the library and are created for specific cultural communities. One of the public libraries that participated in the research also has a “welcoming ambassador” who connects immigrants and refugees with library or community services such as English language classes and legal assistance. Public libraries also provide the main source of free public WiFi and computer access.

Interviewees expressed that many women were already using mobile phones before arriving in the U.S. However, arrival to the U.S. may mark a woman's first use of a smartphone, and the U.S. phone ecosystem differs from many countries around the world. For example, phones or SIM cards purchased outside the United States may not work on the country's carrier networks. In many countries, paying for goods or sending money can easily be done via texting, while moving money in the United States requires bank or third-party applications. Refugee families often receive a mobile phone upon arrival from a resettlement agency, though these are not typically the most up-to-date smartphones. Whether they have older feature phones or dated smartphones, many women make it a priority to quickly upgrade their phones.

Interviewees have observed women using messaging apps and using text, video, and cameras. The ease of taking and sharing photos and videos offers a relatively easy way to enhance storytelling across language barriers. For example, an interviewee described women taking photos of completed home-sewing projects and sharing them with fellow sewing students and instructors. From the perspective of service providers, smartphone use among clients diminishes isolation, contributes to self-sufficiency and self-worth, and gives women agency.

An important component to maximizing the potential value of mobile devices pertains directly to women learning how to use them. As noted by several interviewees, women often rely on technology intermediaries, family members, or service providers for tech
support. However, in some cases these intermediaries do not teach how to use the technology and instead try to simplify or streamline access to specific applications or processes without giving them a deeper understanding of how to use the phone overall. For example, several interviewees noted that participants had someone else set up their phone for them (either a service provider or someone from their family or community) but the women may not have learned what their email address is or how to access it on another device. This assistance may have helped the women in the short term (they got their phones and email set up), but in the long term they may need additional technology instruction. Some organizations do offer precisely this type of training; however, attracting and retaining women participants can be challenging. Barriers include women's schedules with child care, expectations to take public transportation independently, long travel times, and the sometimes default assumption that learning to use digital tools is not a woman's priority.

Patriarchal family power dynamics may also limit women's abilities to manage their phone and communication tools. Interviewees from one resettlement agency discussed challenges communicating with women when a husband or father acts as the point of contact for the family. In some cases, women may not answer their own calls or access voicemail. This type of patriarchal surveillance and control is common in the lives of many women from varied socioeconomic and ethnoracial backgrounds, locally and globally. In this regard, it is difficult to say if mobile phones have a positive or negative net impact on women's lives. In effect, the answer to this is highly individualized, dependent on what degrees of relative freedom and control women carry for themselves with their personal mobile devices. Overall, service providers interviewed here mostly had positive views of the importance and role of mobile devices in the lives of women they serve.

**Technology education and employment-related services**

Refugee service organizations offer a variety of employment-related programs and services, many of which are integrated with technology education. The variety and availability of these programs depends greatly on the type of population targeted and the funding streams available to the organizations. For example, resettlement agencies working with newly arrived refugees and receiving federal funding have three months to prepare their clients for employment or economic self-sufficiency before the benefit for this support expires. During this brief period of time, basic digital technology training is the main priority of many organizations, focusing on job searches, how to apply for a job, building a resume, practicing job interviews, and professional communication. Programs that support longer-term employment outcomes for populations from refugee backgrounds with professional training — architects, engineers, doctors, etc. —
integrate more advanced technology training, including MS Office certifications, different online courses and tutorials, and professional certifications that enable them to transition into their fields of expertise. In general, employment-related programs and services that include technology as a learning component available for women from refugee backgrounds can be summarized as follows.

Job preparation and career counseling

Among our interviewees, job preparation and career counseling is the most commonly available employment-related service available for refugee communities. Job-readiness programs integrate technology training, focusing on helping people how to find and apply for a job, prepare for an interview, and generally navigate the job market. Today, much of the work of finding and applying for a job happens online and through email. Although technology education in job-readiness programs is important for all people from refugee backgrounds, it is particularly critical for newly arrived refugees, who have a limited time frame to become self-sufficient before government support runs out.

Entrepreneurship, building their own business

Entrepreneurial activities often have flexibility with regard to time; allow women to choose how, when, and with whom they are going to work; and in this research were often related to traditionally feminized work such as child care, sewing, and making and selling crafts. Programs that support entrepreneurial activities for refugee communities are particularly important for women who come from cultural backgrounds where working outside the home is overtly or subtly discouraged. Among the programs available to women, home child-care businesses and sewing were two of the most prominent entrepreneurial training programs that included a technology component.

Running an in-home daycare provides women with an income, child care for their own children, and a valuable service for other women in their community. However, women need to complete the state training and certification and apply for permits online. We talked to two organizations that help women obtain their certifications, one serving communities from East Africa and another working primarily with Ukrainian and Russian communities. These programs also integrate technology skills such Web literacy skills and spreadsheet software so that women can better support their businesses.

There are other resources available that support women (and men) who are already small-business owners or are interested in creating their own business. These resources are usually available through local libraries and include support finding databases in which to advertise their business, creating a webpage, learning to use library makerspaces, and even participating in certification programs to learn how to better
manage their business. These resources are available to the broader community, not exclusively to people with refugee backgrounds, but they represent an important channel for refugee women to achieve economic self-sufficiency or generate additional income for their families.

Vocational and apprenticeship training programs

Another common type of program, vocational technology education such as industrial sewing and culinary training, has seen some success in recruiting and retaining women. Often these programs have lower barriers for women's participation because they build upon women's preexisting skills. The culturally familiar activities are comfortable to women who may not have worked outside the home. And, in some cases, they don't conflict as much with cultural or family expectations about women's work. These programs are often highly structured and geared toward getting a job in a specific industry or line of work, such as industrial sewing. Again, we want to highlight the importance of including these examples in the frame of technology programs because mastering these tools requires funding and resources to offer training. Women's mastery of these tools has historically and continually been devalued as non-technical work, an incorrect assumption.

These programs usually build technical skills for women as well as soft skills, including communication, teamwork, and behavior in the workplace. For example, one of the organizations interviewed piloted an apprenticeship program approved by the Department of Labor. Through this program, the organization sought to strengthen the connection between training programs and the employment needs of particular industries, thus increasing the likelihood of program participants to find employment after graduation. However, the program had mixed success; although some women were hired directly out of the program, others turned down the job offers because the work hours did not fit with their other responsibilities.

Professional development

Mentoring and certification programs support foreign-educated professionals from refugee backgrounds to enable women to transition into their fields in the U.S. or advance their career prospects. For example, some resettlement agencies match refugee professionals with a U.S. mentor in their field. In this context, technology education plays a critical role for these professionals as they try to transition into workplaces where technology is embedded into every aspect of the work environment. Interviews showed that in addition to challenges with English fluency, the lack of specialized technology skills often holds back both women and men from these
communities. Despite having formal education, they have difficulty entering their professional fields in resettlement.

**Technology education in ESL training**

English language proficiency is a major predictor of internet adoption and use in North America.\(^\text{17}\) Many refugee women have to navigate social and technological barriers to using phones and computers, and they also face language barriers. Many come to the United States with little to no English language proficiency; members of some language groups may be preliterate in their own languages. While phones, some apps, and websites do support multiple languages, the option may not exist in a woman’s native language.

Many organizations offer English as a Second Language (ESL, aka English Language Learning or ELL) classes that include elements of technology education. Classes range from enrollment-based, multi-week courses with a set curriculum to informal or drop-in opportunities to practice English. Programs that incorporate informal language instruction aim to create consistent opportunities for practice, as well as build community connections. The focus of these classes also varies; language learning may constitute the primary goal, or it may be a learning outcome in a larger project. For example, learning English vocabulary tied to the activity happens in community gardens and sewing groups, as well as in computer classes.

Home sewing training programs offer women an opportunity to improve their English skills while maintaining cultural traditions using fabric patterns and designs that resonate with their cultural and social norms. For example, an organization created a sewing class specifically for Afghan women who arrived in the country as spouses of Afghan Special Immigrant Visa holders. In many of the families served by the organization, the women’s vulnerabilities were compounded by limited English skills, a lack of formal education due to restricted access in their home country, and different norms around navigating the public sphere. Through the integration of ESL learning through a sewing program specifically designed for women, this organization was able to overcome a cultural barrier to having mixed-gender classrooms that prevented many of these women from participating in other types of ESL classes. It also created a safe learning space where women who face isolation can interact with other women, develop social bonds, and practice their English skills. Similarly, an organization working with Somali women offers a sewing program where women learn how to use more advanced

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sewing machines, practice conversational English, and discuss culturally sensitive topics — such as reproductive health and domestic abuse — in a trusted and safe social space. The integration of technical skill learning, language learning, and social support makes programs such as this extremely successful and valuable to women.

In language learning, mobile phones are again seen as an important tool in the lives of women. Some refugees literate in their own languages use Google Translate to aid them. Texting also offers additional opportunities to practice English. At one resettlement agency, case managers use Google Voice to generate a new phone number, which they can use on their personal mobile devices. They can then use this new number to call or text their clients from their own devices while maintaining their personal privacy. Case managers saw two main benefits to this approach: another communication channel and more opportunities for participants to use written English. Training participants who have varying skill levels is a common challenge in classes that integrate language with technology. For example, a tech-savvy student with beginner English skills may end up in a beginner tech environment as well. Thus, the connection between digital literacy and language proficiency is particularly noteworthy, and is both valuable and complex.

**Technology, family support, and community well-being**

All minoritized individuals, regardless of immigrant status, must navigate mainstream U.S. institutions that normalize a white, middle-class lifestyle. However, women who have experienced forced migration often face disadvantages at multiple levels. Women must renegotiate their roles within the family, community, and society. This process is heavily mediated by technology. For example, being able to apply for jobs online relates to digital skills, but also to having confidence that you belong in the workforce. The ability to use navigation apps and public transportation is linked to a sense that you can take up space and feel safe in public. Service providers noted that training and instruction that broadly supports family life, community, and well-being are among the most important aspects of technology access and education for women.

Importantly, family programming attends to the needs of different family members, through educational and community-centered workshops, mother-child classes and other resources. This approach allows families with children to participate easily. Service providers believe that child care is one of the main barriers that prevent women from taking classes. The challenges of securing affordable, convenient child care are well-documented. In addition, the idea of employing a caregiver outside the family and community is unfamiliar and undesirable for some women. Spaces that normalize the presence of young children, and programs designed to incorporate children, can help attract and keep women in classes. This is also true for technology-focused programs
and may prove ever more critical during and after the COVID-19 pandemic in the face of additionally limited child-care and schooling options.

The following sections present some of the ways in which learning about and using technology intersect with women's navigation of family life, community engagement, and well-being.

**Participation in public life**

Recognizing the multifaceted uses of digital technology, many service providers instruct women to adapt their mobile phone use to various contexts, suggesting it is a powerful tool for women's agency. In one instance, a woman wearing hijab experienced street harassment. She held up her phone and announced that she was calling 911. This is something she learned she could do even when her flip phone was out of minutes. This example demonstrates that having a mobile phone available and knowing its affordances is crucial to refugee women's physical safety.

Digital technologies support family life beyond serving as tools to connect loved ones. Interviewees discussed a number of classes that teach women to engage with public schools. These training sessions include monitoring children's grades and communicating with teachers online and through mobile apps. Women are already strong advocates for their families. In these training sessions, they also learn about their right to ask questions and clarify their understanding about institutional rules and policies, beyond accessing information about their children.

**Managing family dynamics and nourishing community life**

The importance of centering family and community life manifested across different types of technology access and education programs. Examples of intergenerational and family programming highlight the ways in which programs can be designed to support the values of family and community. Intergenerational programming is an approach that brings together members of two or more generations to interact and share experiences and knowledge. The sharing of perspectives between elders with refugee experiences and youth who grew up in the United States is one possible focus of intergenerational activities in communities that experience forced migration.

Youth in immigrant and refugee families often are the first to learn English and serve as technology and cultural brokers. These young people act as a bridge between their communities and mainstream society. Intergenerational programs can open a space to renegotiate the role of youth in the family and community, and make visible young people's work of navigating different sets of expectations. A recent workshop paired youth with their parents for lessons on financial literacy and the family budget, and
discussions about the challenges and needs of each generation. Financial and budgeting workshops typically involve learning about banking systems and tools such as spreadsheets and organizing copies of digital files — all inherently technological in contemporary society.

**Building communities**

Programs and services that use technology to build community create spaces for participants to bring with them the whole complexity of their experiences. Sewing and weaving groups, for example, allow women to connect around a shared enjoyment of these culturally relevant activities. The groups relieve stress and fight isolation — a major concern for women who have experienced forced migration. Moreover, service providers may use these social spaces as opportunities to share information, build confidence, and broach difficult topics such as relationship violence.

A number of service providers in King County operate community gardens — social spaces where people grow culturally relevant food, bond with other gardeners around shared migration experiences, and spend time with their families. Participants learn about agricultural technologies to support their gardening work. Programs that center family, community, and well-being highlight and celebrate women’s skills in textiles, crafts, and gardening. Intended outcomes for these programs often include learning new English vocabulary and acquiring work-related skills.

**Physical, mental, and emotional health**

Mental health concerns are top of mind for service providers, who note that depression, anxiety, isolation, and post-traumatic stress disorder are prevalent across age groups among newly arrived refugees and those from refugee backgrounds. The organizations we interviewed largely did not offer care but served as bridges to health care, and some offer programs geared toward improving emotional health.

In some cases, service providers identified that using and learning new systems, including technology, causes community members additional stress or anxiety. Common instances include filling out an online application or advising about an issue resulting from technology use. Service providers facilitate programs that bring together women to support each other and build community. Examples include sewing and weaving groups. In these groups, culturally relevant technology helps create a social space to relieve stress and fight isolation, which is a major concern for refugee women. Similarly, some groups are connected to language learning and employment because they may serve to introduce participants to new skills and English vocabulary, wherein as already noted, technology access and education are intertwined.
Moreover, service providers may use these spaces as opportunities to share information, build confidence and broach difficult topics such as domestic violence and women’s health. The paradox in the time of COVID-19 is, of course, that those without some access to technology and technology literacy face both the stress of having to use exponentially more technology to participate in society and the risk of being excluded. Relatedly, women without technology access and education may be left out of important spaces to address health and safety related to COVID-19 and other types of emergency preparedness related to this and other crises.
Ideas for future programs

Any conversation around new ideas for technology education programs must necessarily start with funding. Despite organizations’ best efforts to serve refugee women and their communities as new needs emerge, their actions are constrained by a scarcity of resources. For example, resettlement agencies and other organizations that receive federal funding earmarked for “refugees” usually have to offer time-limited assistance or restrict services to those federally defined as refugees. Smaller community-based organizations rely primarily on grants that are available inconsistently year to year, and they work with community volunteers, often with limited or no paid staff. Among the organizations we interviewed, only three mentioned financial or in-kind donations from private industry. All types of organizations expressed a need for unrestricted funding that can be used to serve people regardless of legal refugee status or specific programming restrictions.

In light of the central role that technology access and skills play in the changing social and economic dynamics of the COVID-19 pandemic, the conversation around digital exclusion and inclusion for refugee women is critical. Based on interviews and the February 2019 workshop with refugee service providers, we outline two ideas related to funding and programming to support organizations in their work with refugee women and other communities in need.

1. **Access to unrestricted funding**

   Unrestricted funding can support technology training and can also be used for other services that allow women’s participation in technology training programs. For example, sometimes creating access to technology and technology education for women simply requires supporting women’s everyday needs related to their family care and responsibilities in the home. Women often conduct most of the unpaid domestic child care labor for their families — from watching young children to transporting children to and from school and activities. Many interviewees cited the need for child-care and transportation funds to make it feasible for women to attend technology classes. Unrestricted funding could allow classes to take place in locations that are more convenient to where women live.

2. **More prominent role of technology companies in Seattle**

   Technology companies can better support community technology education programs through unrestricted funding, in-kind technology donations, and customized training resources. Interviewees identified limited support coming
from technology companies, and that support mainly included in-kind donations such as training resources and technology. However, some organizations mentioned that often these donations are generally not designed to the specific needs and cultural makeup of refugee women and their communities. For example, readily available digital skills training curricula such as Microsoft Digital Literacy or Google's Applied Digital Skills\textsuperscript{18} are designed to be computer-centric, and the content, examples, and activities included are not culturally relevant to refugee or immigrant communities. To design more effective training curricula tailored to the cultural makeup of these communities, one approach is for technology companies to provide funding for these organizations to carry out pilot testing programs. These assessments can offer valuable information regarding the extent to which the content aligns with the skill levels of the communities and is culturally relevant.

Providing options for reliable, low-cost internet access for refugee communities is also a critical piece. Home internet access is limited in these communities, as many families cannot afford this extra expense and depend on shared access locations such as schools, libraries, and community organizations. Interviewees mentioned programs from ISPs and mobile companies that offered lower-cost internet access ($10 a month) for low-income communities. However, enrollment restrictions and low speed made this option unavailable or inadequate for many refugee households, where multiple members of the family needed to use the internet. Initiatives and programs of this kind need to consider the actual and lived needs of the communities they aim to serve, and offer support to get set up with these programs.

**Mobile, web, and information literacy programs**

Most of the technology education discussed by interviewees focused on laptop or desktop usage. However, for women in refugee communities, the smartphone appears to be their primary device. More digital literacy instruction should build upon women’s existing technology skills and incorporate how to better use mobile phones in addition to laptops or desktops. For example, instructors can show how to do similar tasks on different devices by navigating the same website or application/program through smartphones as they do on desktops or laptops.

\textsuperscript{18} For examples, see https://www.microsoft.com/en-us/digitalliteracy/home or https://applieddigitalskills.withgoogle.com/s/en/home.
In addition to general smartphone training, there’s a need for more digital literacy training that emphasizes smartphone privacy and security threats particular to refugee communities. It’s difficult to tell the difference between legitimate and illegitimate requests for information — especially when people face language barriers and are unfamiliar with U.S. institutions and processes. Digital technologies also have particular capabilities that can be used by the state for surveillance. Immigrants and refugees — including naturalized U.S. citizens — who travel across international borders may have their phones physically confiscated and searched. \(^{19}\) The Department of Homeland Security digitally surveils social media, monitoring travelers and immigrants to evaluate security risks, but the effectiveness of this monitoring lacks empirical evidence. \(^{20}\) Issues of surveillance and control may become even more pertinent in the era of COVID-19 amid the possibility of track-and-trace apps for monitoring the spread of the coronavirus. \(^{21}\) Women may be unfamiliar with the particular threats that may come with use of various applications, and community organizations can assist in educating them about risks and how to address them. \(^{22}\)

However, threats to women’s privacy happen within their households as well. An interviewee described cases when a woman’s husband insists on being the point of contact for the family — receiving a phone on behalf of his wife or refusing to allow her to set up voicemail. Although not mentioned by the interviewees, tracking apps or monitoring of social media and Web use can be tools of domestic violence and often require only basic digital skills. \(^{23}\) Instructors should familiarize themselves with these threats and work with privacy experts on how best to teach the tools and strategies that

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best protect women.\textsuperscript{24} The patriarchal dynamics of the home are difficult to predict for every individual case. However, creating the most opportunities for women to have autonomous and informed access to mobile technology is a worthwhile goal.

**Coordinating and leveraging resources and partnerships**

Leveraging partnerships may allow organizations to combine scarce resources and build on the strengths of different types of agencies. Interviewees did speak of some partnerships; however, our research also surfaced gaps in relation to sharing resources across refugee-serving agencies and other types of nonprofit organizations. For example, refugee resettlement organizations work very closely with newly arrived refugees and often understand their technology education needs. However, these organizations do not have the ability to offer formal technology training (some staff are using very old laptops and lack in-depth technology knowledge themselves). To fill these gaps, other organizations that have more experience teaching technology — but that may or may not have experience working with refugees — could work closely with refugee-serving agencies and their beneficiary communities.

**Foster partnerships between larger and smaller community-based organizations**

It may be beneficial for larger community-based organizations (CBOs) to build equitable partnerships with smaller CBOs. Many of the larger organizations that serve refugee communities do not reflect the racial, ethnic, cultural, religious, and linguistic diversity of King County communities. For example, while efforts are ongoing to hire staff with diverse backgrounds, a majority of librarians are white. This is true among library professionals nationwide. Nonprofits may better reflect the populations they serve, yet this diversity often does not extend to the highest organizational levels. When an organization does not have staff with cultural or linguistic knowledge of the local

\textsuperscript{24} Although the following two papers are written for technologists, they offer important insights into digital security threats and potential strategies to combat these threats:


community, it can partner and contract with a CBO to design training that is culturally appropriate and more inclusive. Examples include employing a woman from a similar background as a trainer; using circles of trust; sewing; and weaving. Larger organizations may benefit from smaller CBOs’ expertise and should compensate them through market-rate payments and contracts.25

Compiling resource guides for communities

Information that women need to know is scattered among different websites and organizations and difficult to find — especially without searching and browsing skills. There is a need for a centralized location or app that integrates all the basic information that refugee women need to know: legal information and services, domestic violence resources, health support, etc. King County 21126 has much of this information available in different languages, but it is difficult to use for those with beginner digital skills or who are less familiar with United States systems and organizations.

Partnerships with university research, service learning, and volunteer programs could be another avenue for compiling these important resources and building valuable partnerships to support women in refugee communities. For example, undergraduate and graduate research projects or internship opportunities might work to bring new skills and ideas to these persistent problems with regard to technology access and education for refugee women. To discuss possible directions for university partnerships, please contact any member of the research team that authored this report.


26 See https://www.crisisconnections.org/king-county-2-1-1/ for more information.
Reflections on women, forced migration, and technology

At the time of publication of this report, the COVID-19 pandemic is in its seventh month of spread in the U.S., with devastating effects on the livelihoods of millions of people, particularly low-income families, communities of color, and women. Gender equity, racial justice, and technology are entirely connected factors, magnified in the context of COVID-19 when access to information using digital and social media and networked technology is critical. Compounding these issues is the reality that refugees face an increasingly hostile political environment and unprecedented restrictions on immigration in the U.S. and globally.

For women who have experienced forced migration and already live in precarious contexts, the availability of programs that can help them secure some income, improve their language skills, and support their children’s schooling is a fundamental human right. Technology access and education is intrinsically linked to advancing all of these important social outcomes. Families and communities rely on technology to secure basic needs. A stable internet connection and adequate digital skills are required for access to critical health and safety information, the ability to work remotely, shopping for food and other basic goods, and online schooling for children.

State and local governments’ budgets face extreme shortfalls due to COVID-19 expenses and a decline in local tax revenues. In turn, organizations and libraries have already begun extreme cuts to their budgets that will directly impact programming and services for refugee women and their communities. Refugee-serving organizations have long had inadequate funding structures. The growing xenophobia in the U.S. further exacerbates challenges and risks to refugee-serving organizations now and in the future. Efforts to support and invest in technology access and digital literacy complement these important goals and contribute to other educational values, socially as well as culturally.
Appendix: List of participating organizations

The following organizations participated in the research in the form of pre-research consultations, interviews, and/or workshop attendees.

- City of Redmond
- City of Seattle’s Office of Immigrant and Refugee Affairs
- City of Seattle’s Office of Information and Technology
- Congolese Integration Network
- Department of Social & Health Services (DSHS), Office of Refugee and Immigrant Assistance (ORIA)
- Diocese of Olympia’s Refugee Resettlement Office
- HopeLink
- Horn of Africa Services (HOAS)
- International Rescue Committee (IRC)
- Jewish Family Service
- King County Library System (KCLS)
- Neighborhood House
- OneAmerica
- Refugees Northwest
- Refugee Women’s Alliance (ReWA)
- Seattle Housing Authority
- Seattle Muses
- Seattle Public Library (SPL)
- Somali Family Safety Task Force
- Ukrainian Community Center of Washington
- University of Washington Paul G. Allen School of Computer Science & Engineering
- University of Washington Information School
- World Relief