Seattle Information Technology

Technology Access and Adoption Study

Qualitative Research Report

July 2023

INCLUSIVE DATA

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Executive Summary

This qualitative research is a component of the 2023 Seattle Technology Access and Adoption Study aimed to understand community needs regarding technology access and adoption among underrepresented communities. The City's overall study includes preliminary design research, a broad population survey, and focus groups. This report covers the results of the preliminary assessment of community priorities and recommendations (Phase 1) and the extensive Phase II results from 40 focus groups conducted with key communities, many of which are covered populations under the federal Digital Equity Act and State legislation defining underserved populations. Both phases were conducted by Inclusive Data, a research and consulting firm contracted by the City of Seattle Department of Information Technology. Funding for this research was provided by the City with additional support for focus groups provided by the Washington Department of Commerce - State Broadband Office.

The preliminary research (Phase 1), conducted in 2022, involved over 200 participants and included questions about outreach priorities, community challenges, priorities for assistance, support needs, Internet and technology usage experience, and demographic information. This research served as a co-design process, engaging community members and gathering valuable insights that informed the general population survey and focus groups conducted in 2023.

To supplement the City's general population survey data, 40 in depth focus groups were conducted with a total of 203 individuals across 10 focus populations representing the diverse population of Seattle. The focus populations included Black/African American, African Diaspora, disability, Khmer-speaking, Spanish-speaking from Mexico, Spanish-speaking from Central or South America, Cantonese-speaking, Vietnamese-speaking, housing insecure, and veterans. The African Diaspora focus groups included one (1) group held in Oromo, one (1) group held in Somali, and two (2) groups held in English for participants from any part of Africa.

Intersectionality and inclusion were prioritized, and four (4) subgroups were represented in each focus population: elders (older adults aged 55+), age mix, housing insecure, and community workers with lived experience. Community workers are service providers who work directly with community members such as school aides and non-profit employees. These service providers have lived experience as members of their communities, offering a unique and important perspective in the research.

Inclusive Data convened a Community Advisory Board (CAB) consisting of six (6) individuals with experience in advocating for digital equity and community-centered work to provide input on research methods, questions, and data analysis. The CAB members represented Spanish, Oromo, and Khmer speakers, as well as the disability and Black/African American communities to ensure diverse perspectives in the design, implementation, and evaluation of the research.

The focus group discussions centered around six (6) major question areas:

1.) Internet type and devices
2.) qualities of adequate Internet
3.) impact of technology access on quality of life
4.) household devices and sharing
5.) digital skills training methods and topics
6.) security, comfort, and privacy online

Prompts and sub-questions facilitate deeper insights. Additional questions were asked to address language barriers and the impact of housing on Internet access for specific focus populations.

Phase II Focus Group Key Results:

- The top three (3) **Internet barriers** were identified as:
  1.) unreliable or inconsistent Internet connection (90 mentions)
  2.) bad connection in certain parts of the house or building (29 mentions)
  3.) expensive Internet service (27 mentions)

- The top three (3) **devices used to access the Internet** were:
  1.) phone (129 mentions)
  2.) laptop (65 mentions)
  3.) tablet (43 mentions)

- The top three (3) **Internet types** were:
  1.) Wi-Fi (132 mentions)
  2.) data plan [Mobile Service Provider] (41 mentions)
  3.) hotspot (29 mentions)

- The top three (3) **qualities of adequate Internet** were:
  1.) Internet that is fast and reliable (90 mentions)
  2.) Internet that is affordable or subsidized (43 mentions)
  3.) reliable Internet that we can use for online communication (34 mentions)

- The top three (3) **preferred Internet and technology skills training methods** were:
  1.) in-person training (59 mentions)
  2.) online training (47 mentions)
  3.) hybrid training (30 mentions)

- The top three (3) **culturally relevant methods for training** were:
  1.) providing the training in the trainee's language (29 mentions)
  2.) multilingual classes (11 mentions)

3.) inclusive or diverse environment (7 mentions)

- The top three (3) **Internet and technology training topics** were:
  1.) Internet basics (52 mentions)
  2.) computer or technology basics (36 mentions)
  3.) protecting yourself and your data online (36 mentions)

- The top three (3) **sentiments about online security and comfort** were:
  1.) fear of hackers or fraudsters (41 mentions)
  2.) I feel safe and comfortable in general online. (32 mentions)
  3.) I feel safe when my privacy and data are protected. (21 mentions)

- There were 35 participants who stated that **language is a barrier to Internet and technology access**, while 20 participants stated that it is not.

- The top four (4) **sentiments about housing insecurity and technology** were:
  1.) Housing insecurity affects access to quality Internet connection. (11 mentions)
  2.) Housing insecurity negatively affects Internet access in general. (8 mentions)
  3.) I have no problems with access. (6 mentions)
  4.) Housing insecurity affects access to Wi-Fi specifically. (6 mentions)

Based on the findings of the qualitative research in both the Phase I survey and Phase II focus groups, several recommendations have been identified and organized according to the Four Pillars of Digital Equity. Recommendations were specifically stated by community members or fill a need reported by community members.

Pillar I Recommendations: Internet (Affordable and Sufficient)

1. Drive free or low-cost Internet access through community programming, discounts to consumers, subsidies for providers, and/or pricing regulation.
2. Simplify sign-up processes for support.
3. Perform outreach to promote existing and future programs that reduce or eliminate Internet costs.
4. Ensure that free or low-cost Internet access is available for mobile devices.
5. Provide free Internet in spaces that are public but also quiet, comfortable, and accessible at all hours.
6. Encourage Internet provider alternatives.
7. Improve infrastructure for consistent connection across the city.
8. Coordinate with apartment complexes to ensure tenants have fast and reliable Internet access in the building.

Pillar II Recommendations: Digital Skills and Tech Support (In Cultural Context)

1. Meet community where they already are in both location and manner of relating.
2. Consider that there are differing needs in subcommunities and solutions may vary. Prioritize design efforts that identify the many diverse groups, connect and engage with them, and enable variations in solutions to assist different communities and members of those communities.
3. Provide technology classes free of charge to the public. This includes classes for elders and non-English speakers, as well as classes on online safety and security.
4. Provide technical and digital navigation support for frequently used applications such as online shopping and medical client portals.
5. Encourage elders to get online.
6. Provide technical and digital navigation support in multiple languages and in simple, understandable terms.
7. Provide training that covers basics which are applicable to daily use.
8. Provide training and technical support both online and in person at centralized locations.

Pillar III Recommendations: Devices (For All Uses)

1. Provide lower-cost or free devices that are accessible (e.g., larger screens for visibility), including mobile phones.
2. Distribute devices year-round in schools or ensure that families utilizing school devices have access during the summer.
3. Distribute devices outside of schools through CBOs and private businesses frequented by community members.

Pillar IV Recommendations: Applications and Services (Accessible)

1. Make privacy setting options clear.
2. Balance attractive, visual content with low-bandwidth content.
3. Ensure that applications work well with assistive technologies.
4. Ensure that applications and websites are translated, especially in languages that are not easily translated through other means such as Google Translate.

The key findings of the focus groups highlight the importance of reliable and affordable Internet, accessible programs, and services in multiple languages. Recommendations include providing free or low-cost Internet access and devices that meet accessibility needs; simplifying sign-up processes; providing public Internet access with comfortable surroundings; improving infrastructure; offering language-specific training and support; and prioritizing safety, data privacy, and security training and assistance. By utilizing these findings and implementing these recommendations, Seattle can promote equitable technology access and adoption for all residents.

Introduction and Methodology

The qualitative research component of the 2023 Seattle Technology Access and Adoption Study was a two-stage process that began in the spring of 2022 with a survey of over 200 participants. This initial design survey included questions regarding outreach priorities, descriptions of community challenges, government priorities, support needs, reflections on experience using the Internet and technology, as well as demographic questions.

The goal of that survey was to reach historically underrepresented communities and learn more about community priorities and recommendations. By engaging communities through a small, preliminary survey in advance of designing the general population survey mailed in 2023 and focus groups, community members were part of a co-design process that informed the questions and methods for data collection.

To supplement the quantitative data gathered from the City's general population survey, the City of Seattle contracted the research and consulting firm Inclusive Data to conduct 40 focus groups with 203 individuals across 10 focus populations to represent segments of the city's diverse population. Focus group populations were selected to provide depth and voice to historically underserved and underrepresented communities, hear from smaller and emerging immigrant and refugee communities, as well as better understand the needs of technologically underserved and covered populations identified in City research, work in community, and as identified by the federal Digital Equity Act. A mix of previously identified technologically underserved, large immigrant and refugee, and smaller communities was chosen. The City's Office of Immigrant and Refugee Affairs and Community Technology Advisory Board was also consulted. It was understood that this was not a complete sample but would provide a diverse snapshot of varying communities and needs who may not otherwise be as well represented. Focus groups were held in English and six (6) other languages: Oromo, Somali, Spanish, Khmer, Vietnamese, and Cantonese.

The ten (10) focus populations were:

- Black/African American
- African Diaspora (including Oromo-speaking and Somali-speaking)
- disability community, individuals reporting disabilities
- Khmer-speaking
- Spanish-speaking from Mexico
- Spanish-speaking from Central or South America
- Cantonese-speaking
- Vietnamese-speaking
- housing insecure
- veteran

With inclusion and intersectionality of high importance, the City of Seattle and Inclusive Data chose to ensure that four (4) subgroups were represented across all 10 focus populations.
The four (4) subgroups were:

- elders (age 55+)
- age mix
- housing insecure
- community workers with lived experience (e.g., non-profit employees, school aides)

To represent older or aging adults, the “elders” subgroup includes individuals who were 55 years of age and older due to the generational differences across technology access and adoption. Individuals of other ages were also represented in the “age mix” subgroup, as well as individuals experiencing housing insecurity across all focus populations. The goal was to ensure that individuals at intersections of experience, such as those speaking a language other than English during housing insecurity, were represented in the qualitative data. One of the focus populations was individuals experiencing housing insecurity; as such, a total of 13 focus groups were conducted with this population across other intersections of experience.

Inclusive Data and the City also ensured that individuals who engage in community work providing services, such as school aides and community health workers, were represented in the qualitative data. While representing their communities themselves, they are also privy to the stories, needs, and barriers of their community members through their jobs. This is a valuable perspective, and they were prompted to share any community-wide trends when possible.

Focus group members were recruited widely through in-person attendance at events and outreach with community based organizations in the select communities. Participants were compensated with $50 each. Many of the focus groups were held in person at locations convenient to community members, such as the Douglass-Truth and Beacon Hill libraries, while the rest were held virtually. If a participant did not attend the focus group as expected, an interview or makeup group was conducted to supplement the data. The focus group conversations and interviews were recorded, transcribed, translated, coded, and analyzed.

Focus groups were typically led by the communities served; facilitators were from the same communities as the focus populations. Eight (8) organizations partnered to host focus groups. Facilitators and outreach coordinators were instrumental in providing feedback about the research process and community needs. To further advocate for the interests and perspectives of the communities engaged, a Community Advisory Board (CAB) was established. Six (6) individuals from Seattle communities with experience in advocating for digital equity, inclusion, and community-centered work served on the CAB, providing input on the research methods, research questions, and data analysis. The CAB included speakers of Spanish, Oromo, and Khmer, as well as members of the Black/African American and disability communities.

For focus populations centered on languages other than English, trained bicultural community members facilitated the focus groups in the language of the focus population, including Oromo, Somali, Khmer, Spanish, Vietnamese, and Cantonese. The facilitator and outreach teams for the focus groups in Vietnamese and Cantonese encountered difficulty finding five (5) participants for each housing insecure focus group. Facilitators and outreach coordinators reported that this was due to culturally specific challenges with shame around housing status and mental health. These two focus groups had fewer than anticipated participants; Inclusive Data spoke with additional English speakers experiencing housing insecurity for a final total of 203 participants.

The focus group discussions centered around six (6) major question areas:

1. Internet type and devices
2. qualities of adequate Internet
3. impact of technology access on quality of life
4. household devices and sharing
5. digital skills training methods and topics
6. security, comfort, and privacy online

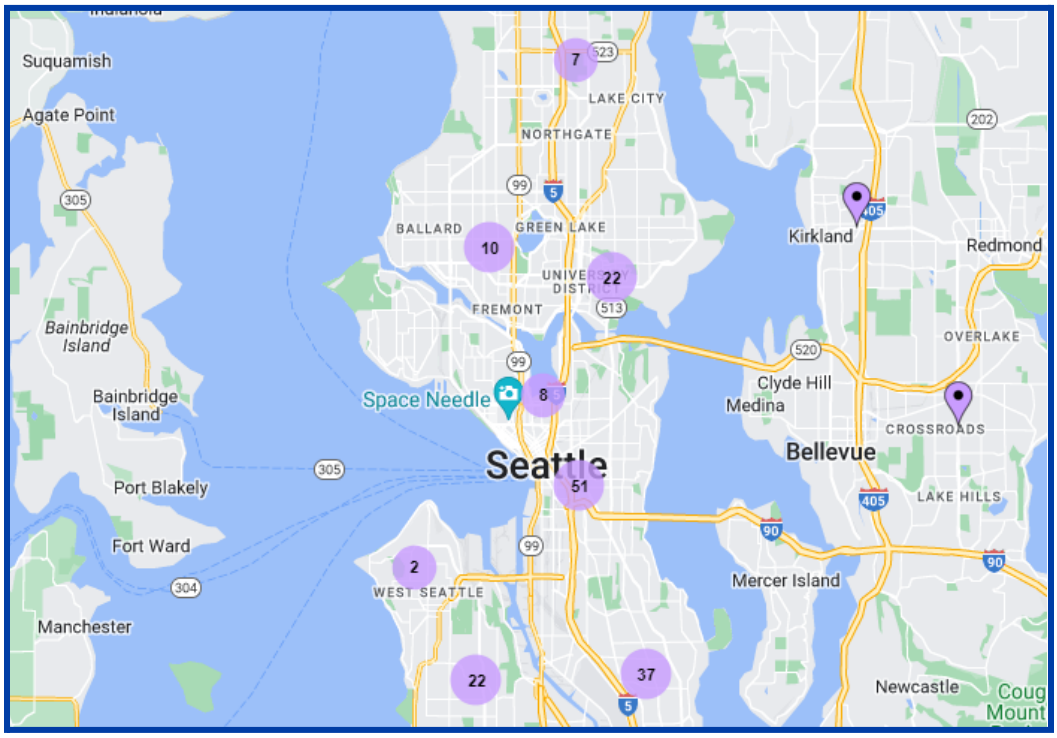
Prompts and sub-questions facilitate deeper insights. Additional questions were asked to address language barriers and the impact of housing on Internet access for specific groups. To ensure that participants were included in the correct focus group, respondents completed a survey as part of the registration process. Registrants self-reported their ethnicity, housing status, disability status, zip code, and more. Most but not all focus group participants completed the registration process. Table 1 shows the distribution of Phase II focus group participants' self-reported age.

Table 1: Focus group registrants' ages for Phase II

Age Range	Count
18-24	13
25-34	46
35-44	25
45-54	25
55-64	33
65-74	23
75 and up	12
N/A - Unknown	26

Upon registering, participants were asked to provide their zip code. The majority of participants listed a Seattle zip code, while some participants lived outside the city but were recruited by outreach coordinators due to a connection to Seattle such as working within city limits. Figure 1 shows a map of the distribution of participants' self-reported zip codes.

Figure 1: Map of focus group registants' zip codes for Phase II



Glossary:

Code: a word, phrase, or sentence that captures what was expressed in a response by a focus group participant. The purpose of the analysis is to examine trends in the codes. For example, if a participant explained that they use Wi-Fi to connect to the Internet, the code used is "Wi-Fi."

Focus populations: the 10 categories of focus group participants that had four (4) focus groups each: Disability, Black/African American, African Diaspora (including Oromo-speaking and Somali-speaking), Khmer-speaking, Spanish-speaking from Mexico, Spanish-speaking from Central or South America, Cantonese-speaking, Vietnamese-speaking, housing insecure, and veteran.

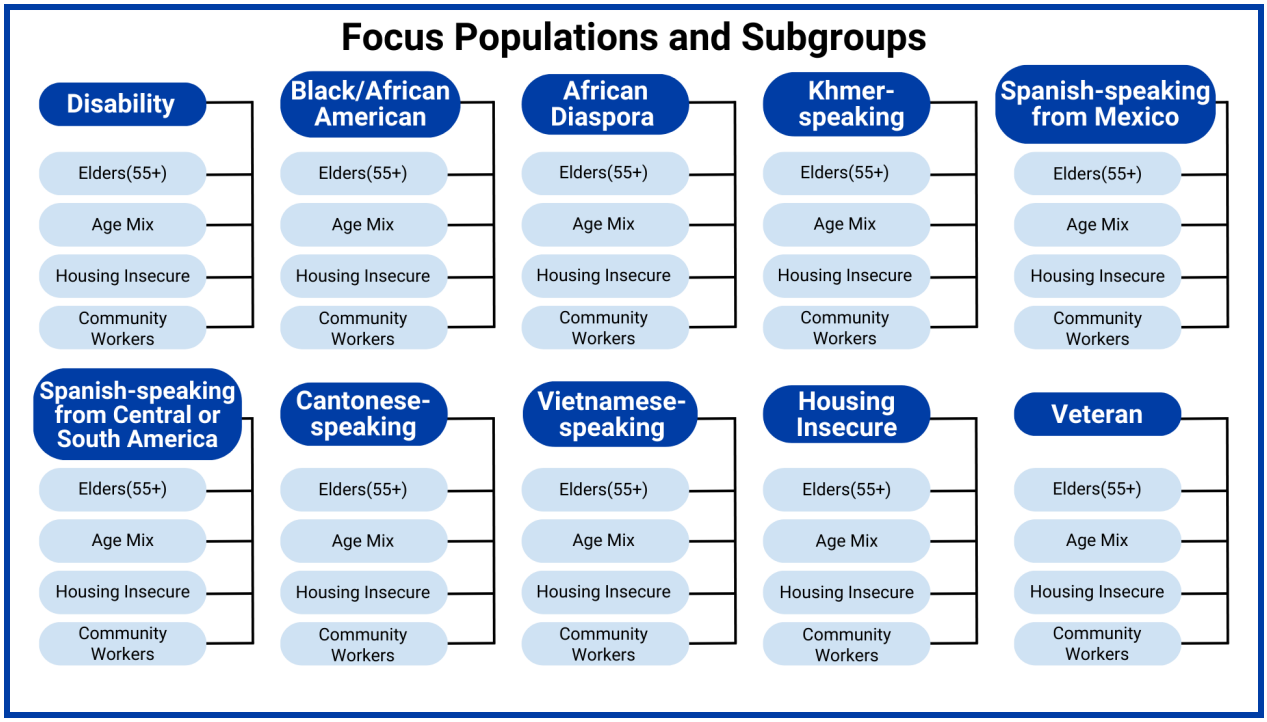
Mentions: the number of times the same code was used. For example, if 30 participants expressed that they use Wi-Fi, the number of mentions would be 30.

Response: any individual's answer to a focus group question. Responses could range in length from one word, such as "no," to a full paragraph of transcribed text, depending on the person's manner of speaking. The average number of responses per participant is 7.4, which is consistent with the number of focus group questions.

Subgroup: the four (4) categories of participants within each of the 10 focus populations: elders (55+), age mix, housing insecure, and community workers. Figure 2 shows the relationship between focus populations and subgroups.

Total Code Mentions: the number of mentions for all codes in response to a given question. If every participant responded to a question, you would expect at least 203 code mentions and likely more if people's responses could be coded in multiple ways.

Figure 2: Relationship between focus populations and subgroups for organizing Phase II focus groups



Data Overview

Facilitators were tasked with asking six (6) major questions for all focus groups. Facilitators were provided with additional prompts and sub-questions for each major question. These prompts were designed to assist participants in answering more deeply and precisely. The focus groups with participants who speak languages other than English were also asked an additional question about the role of language as a barrier to technology access and adoption. Similarly,

the housing insecure focus groups were asked an additional question about how housing insecurity affects Internet access.

Because the number of responses varied per focus population, the number of total code mentions per question also varied per focus population. For example, Focus Population X could have only ten (10) coded mentions based on their responses to the first question while Focus Population Y could have fifteen (15) coded mentions based on their responses to the same question.

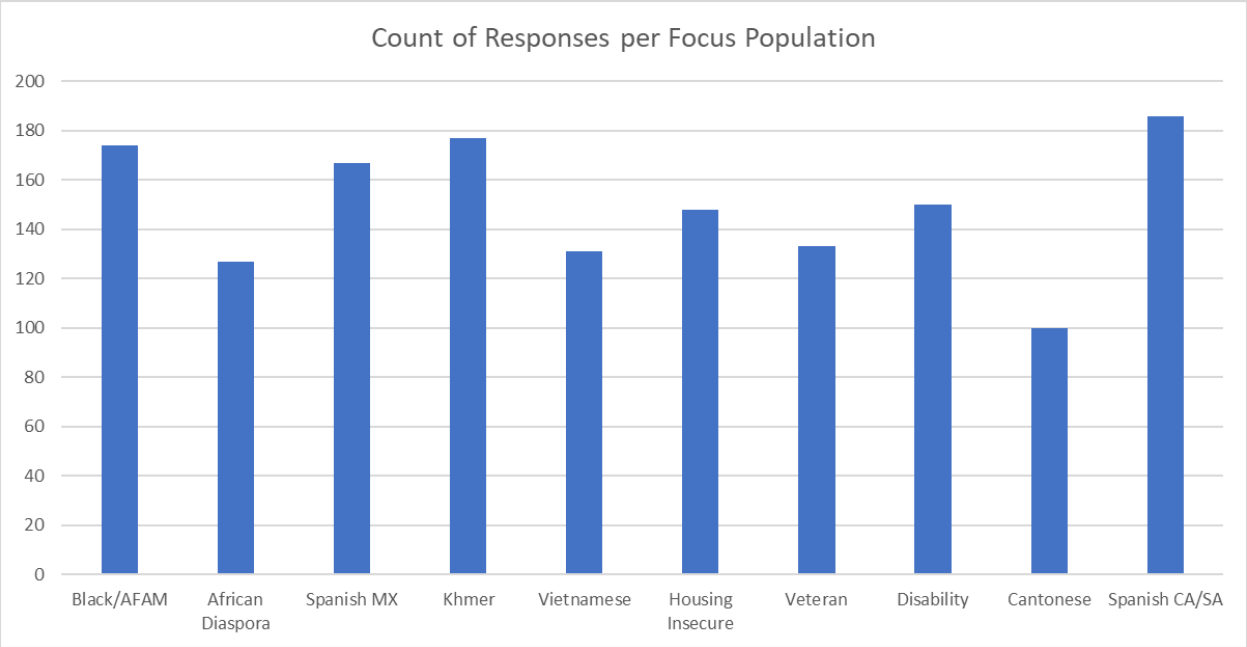
To derive meaningful interpretations from the data, the research team examined both mention counts for codes as well as the percentage of the top three (3) code mentions. This is done in relation to the focus population's total code mentions for each question. This allows the research team to weigh the importance of each code in relation to each focus population's other answers. In reference to the above example, Focus Population X may only have 10 total code mentions in response to the question, "What type of Internet do you have?" If all 10 of those mentions are "hotspot," our analysis by percentage (100%) will demonstrate the prominence of hotspots for Focus Population X.

Table 2: Number of participants per focus group

Focus Population	Elders	Age Mix	Housing Insecure	Community Workers
Black/AFAM	5	5	5	5
African Diaspora	5	5	5	5
Disability	5	5	5	5
Khmer	5	5	5	5
Spanish (Mexico)	5	5	5	5
Spanish (CA/SA)	5	5	5	5
Cantonese	5	5	1	5
Vietnamese	5	5	4	5
Housing Insecure	5	5	13	5
Veterans	5	5	5	5
Total Participants	**50**	**50**	**53**	**50**

Total number of participants: 203
Total number of responses: 1,493

Chart 1: Count of all responses in focus groups, organized by focus population



Internet Barriers

Focus group participants were asked about any barriers to accessing quality Internet and technology across multiple questions during the community conversations. To capture these data, the research team coded barrier mentions separately. There were 266 total code mentions in this data category across all focus populations.

Top Three (3) Internet Barrier Mentions:

1.) unreliable or inconsistent Internet connection (90)
2.) bad connection in certain parts of the house or building (29)
3.) expensive Internet service (27)

Barriers to Internet and Technology

The most frequently mentioned barriers to Internet and technology access were unreliable or inconsistent connections, low quality connections in certain parts of houses or buildings, and expensive Internet service. The participants most likely to mention an unreliable or inconsistent Internet connection were in the Black/African American focus groups. The subgroup most likely to mention an unreliable or inconsistent Internet connection was the elders (55+) focus group participants. These reported barriers inform recommendations such as driving low-cost or free Internet, improving infrastructure across the city, as well as coordinating with apartment complexes to ensure fast and reliable connections for tenants.

The following graph (Chart 2) shows the mention count for codes with more than five (5) mentions across all focus populations.

Chart 2: All Internet barriers with over 5 code mentions, organized by focus population

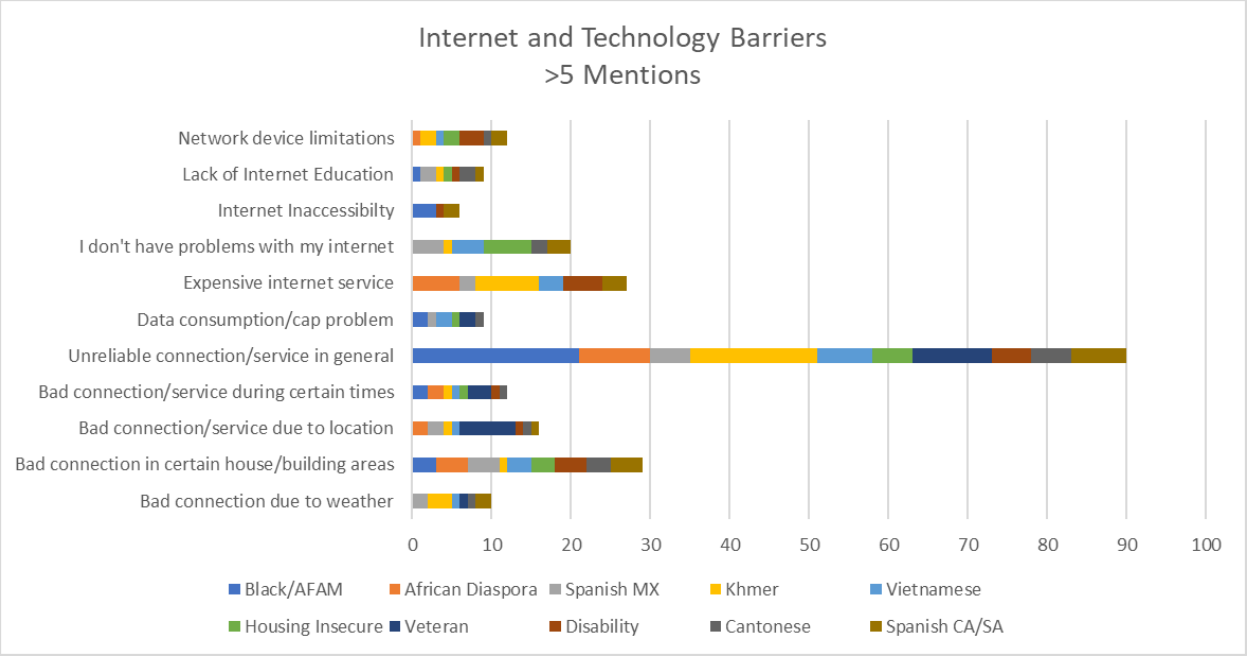


Chart 2 demonstrates the large frequency in which focus group participants mentioned "unreliable or inconsistent connection." This code was created to account for the responses in which participants did not specify if the unreliable connection was due to location in the house, location in the city, time of day, or some other factor. In total, there were over 45 mentions of location based Internet issues. There are other codes that, additionally, capture barriers with inconsistent or unreliable connection. Approximately 10% of the focus group participants reported not having Internet issues.

Other barriers with five (5) or fewer mentions were:

- bad Internet Service Provider customer service (5)
- expensive data plan (5)
- bot tech support (3)
- lack of Internet provider options (2)
- unemployment (2)
- controlling kids using Internet (1)
- English language is a barrier (1)
- expensive courses (1)
- hackers or fraudsters (1)
- housing (1)

- tech support problems (1)
- outdated network devices (1)

Chart 3: Top three (3) Internet barriers by percentage of total code mentions, organized by focus population

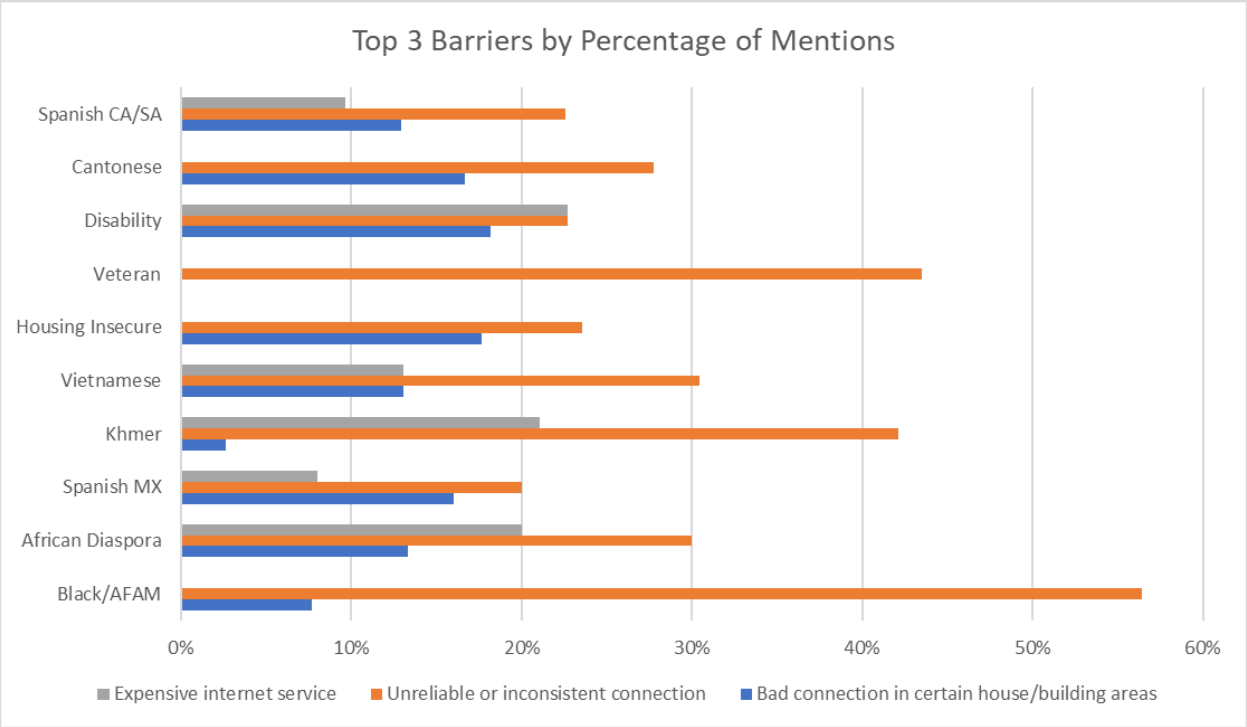
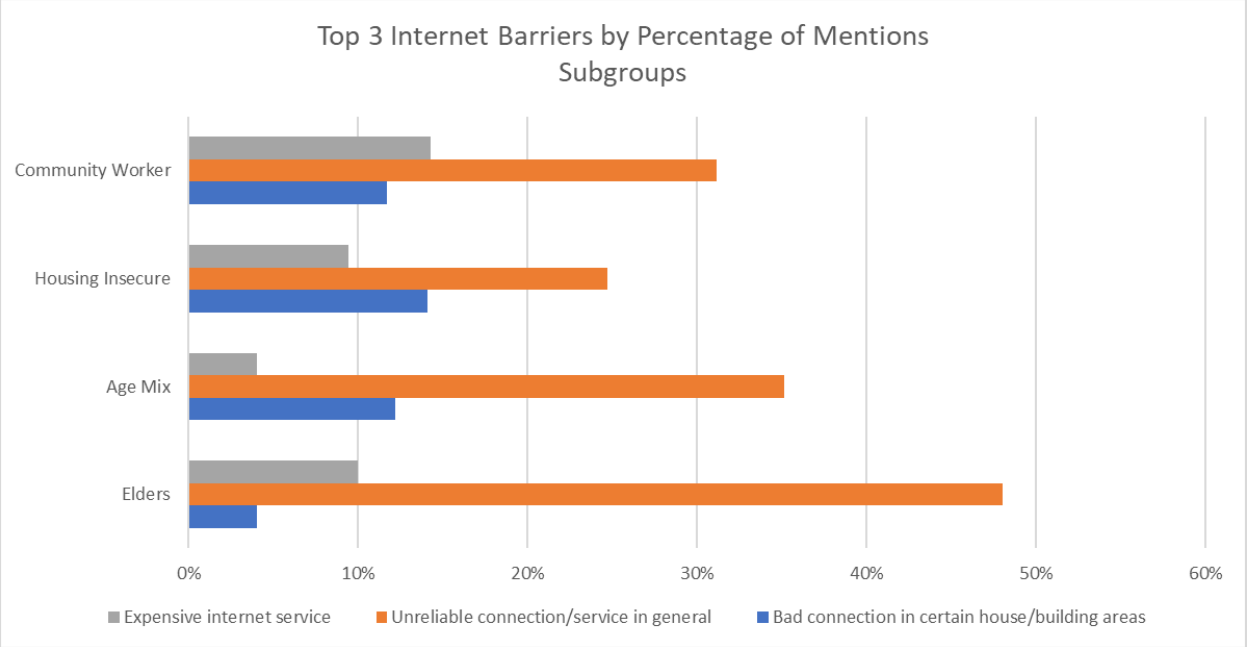


Chart 3 shows the top three (3) barrier codes by the percentage of the number of mentions per focus population. For example, 30% of all the African Diaspora focus groups' code mentions regarding barriers were about unreliable or inconsistent connection in general. More than half of all the Black/African American focus group participants' comments about barriers referred to unreliable or inconsistent connections.

- All 10 focus populations were more likely to mention unreliable or inconsistent connections in general than the other top codes.
- Five (5) focus populations were more likely to mention a bad connection in certain areas of the home/building than expensive Internet service: Spanish-speaking from Central or South America, housing insecure, Spanish-speaking from Mexico, and Black/African American.
- One (1) focus population was equally likely to mention expensive Internet service as a bad connection in certain areas of the home/building: Vietnamese-speaking.
- One (1) focus population was equally likely to mention expensive Internet service as unreliable or inconsistent connection in general: disability.

- Three (3) groups were more likely to mention expensive Internet service than bad connection in certain areas of the home or building: disability, Khmer-speaking, and African Diaspora.

Chart 4: Top three (3) Internet barriers by percentage of total code mentions, organized by subgroup



These data can also be analyzed according to the subgroup of the respondent's focus group: elders (55+), age mix, housing insecure, and community workers. Since one (1) of the 10 focus populations was also housing insecure participants, responses from those focus groups are tagged as both housing insecure and one (1) of the other three (3) subgroups. To compare and contrast results between the four (4) subgroups, Chart 4 shows the top three (3) barriers by the percentage of total code mentions per subgroup. For example, there were 56 total code mentions of any Internet barriers by participants in the elder (55+) focus groups. Of those 56 times an Internet barrier was mentioned by an elder (55+) focus group participant, 11% of them were "expensive Internet service."

- All four (4) subgroups were more likely to mention unreliable connection or service in general than the other two top barriers.
- Two (2) subgroups were more likely to mention a bad connection in certain areas of the house/building than expensive Internet service: housing insecure and age mix.
- Two (2) subgroups were more likely to mention expensive Internet service than a bad connection in certain areas of the house/building: elders (55+) and community workers.

The Phase I survey also asked community members about their barriers to Internet and technology access. In the preliminary survey, the most mentioned concerns were affordability and privacy.

Table 3: Internet and technology challenge mentions from study co-design period

Challenges: Participants could multi-select	Count	Percentage
Not affordable	120	48%
Concerned about privacy	90	36%
Not feeling confident or good at it	78	31%
Too slow	71	29%
Technology or Internet is not available	70	28%
Can't trust information or technology	68	27%
It's not designed for my community	53	21%
Takes over daily life	48	19%

This is not inconsistent with the Phase II focus group data, as Phase I survey respondents were commenting on Internet access in a binary way: access or no access. With more in-depth conversation during these focus groups, participants were able to speak about a spectrum of Internet access that includes speed and reliability.

Question 1: Internet and Devices

The first focus group question asked participants to state as specifically as possible how they access the Internet, including devices and location of Internet access.

Top Three (3) Device Mentions:

1.) phone (129)
2.) laptop (65)
3.) tablet (43)

Of those who provided information on which devices were used, phones were almost twice as frequently mentioned as the next most frequently used devices: laptops, followed by tablets. Desktop computers were fourth on the list of mention frequency. Other devices mentioned include but are not limited to desktop computers, library computers, televisions, smart televisions, and smart watches.

Devices for Accessing Internet

The most frequently mentioned devices used to access the Internet were phones, laptops, and tablets. It is noteworthy that all of these devices are portable. The participants most likely to mention using a phone to access the Internet were participants in the Spanish-speaking from Mexico focus groups. The subgroup most likely to mention using a phone to access the Internet was the housing insecure focus group participants. Such widespread reliance on mobile phones for Internet access, especially among populations such as those experiencing housing insecurity, informs the recommendation that programs for low-cost or free Internet and devices must cover mobile phones. Individuals utilizing the Internet in public also need access to quiet, comfortable spaces for best use.

Chart 5: Devices for Internet access, organized by focus population

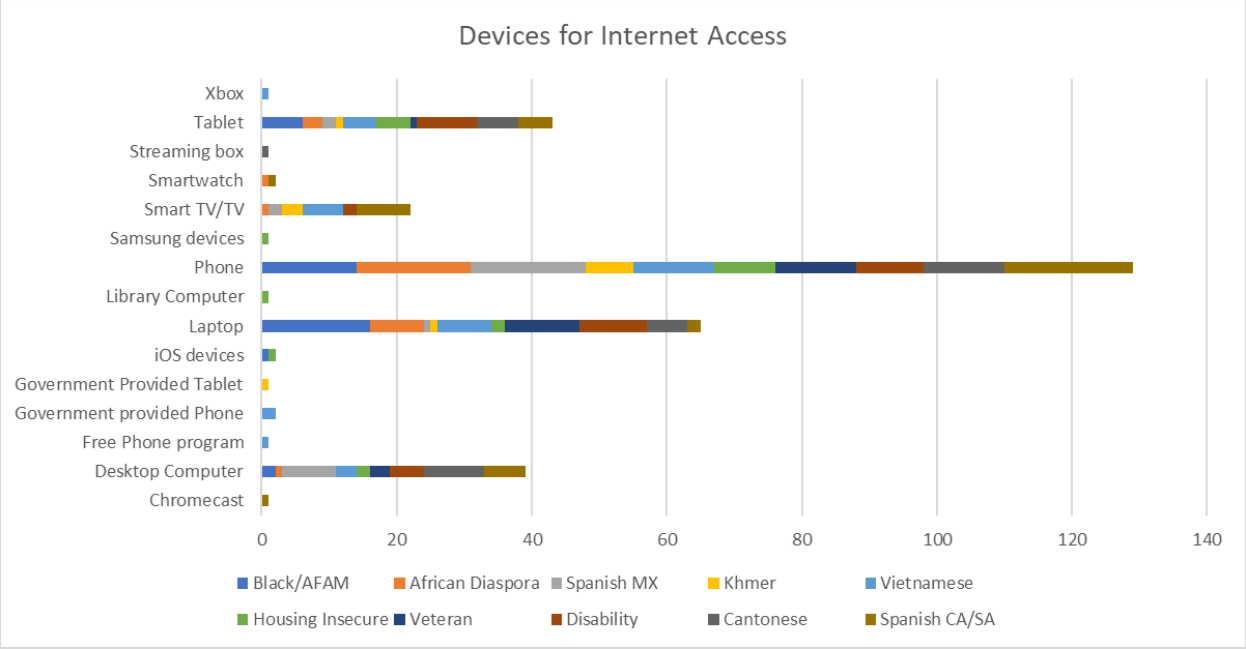


Chart 6: Top three (3) devices for Internet access by percentage of total code mentions, organized by focus population

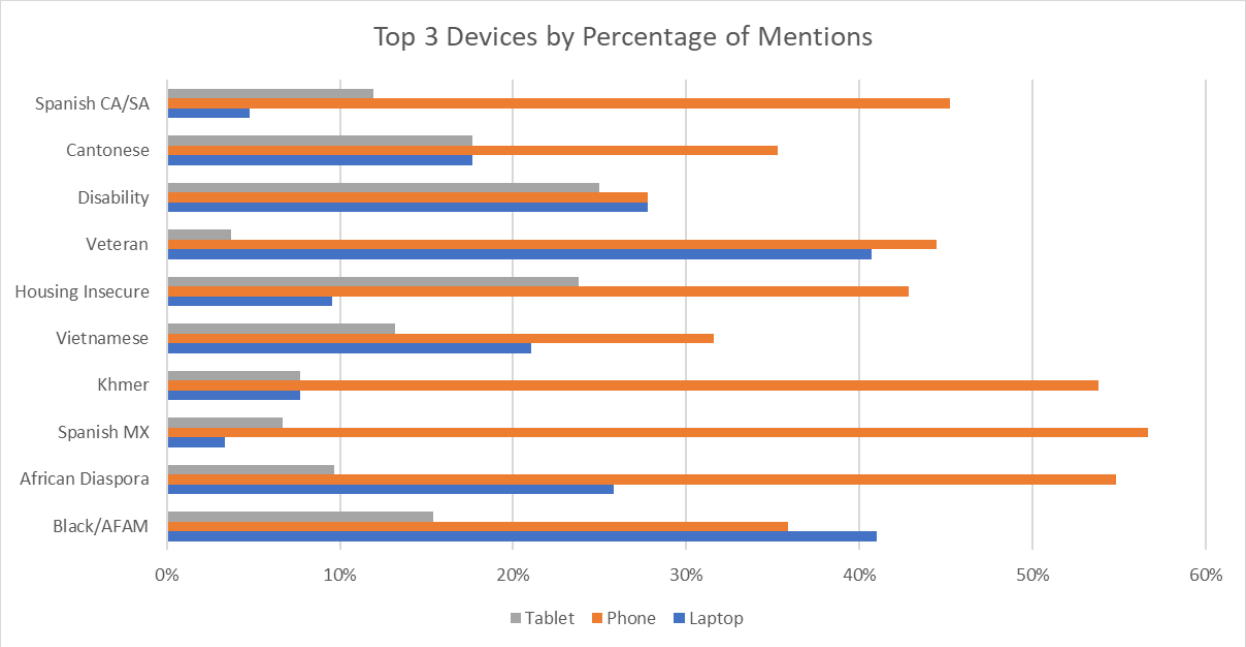
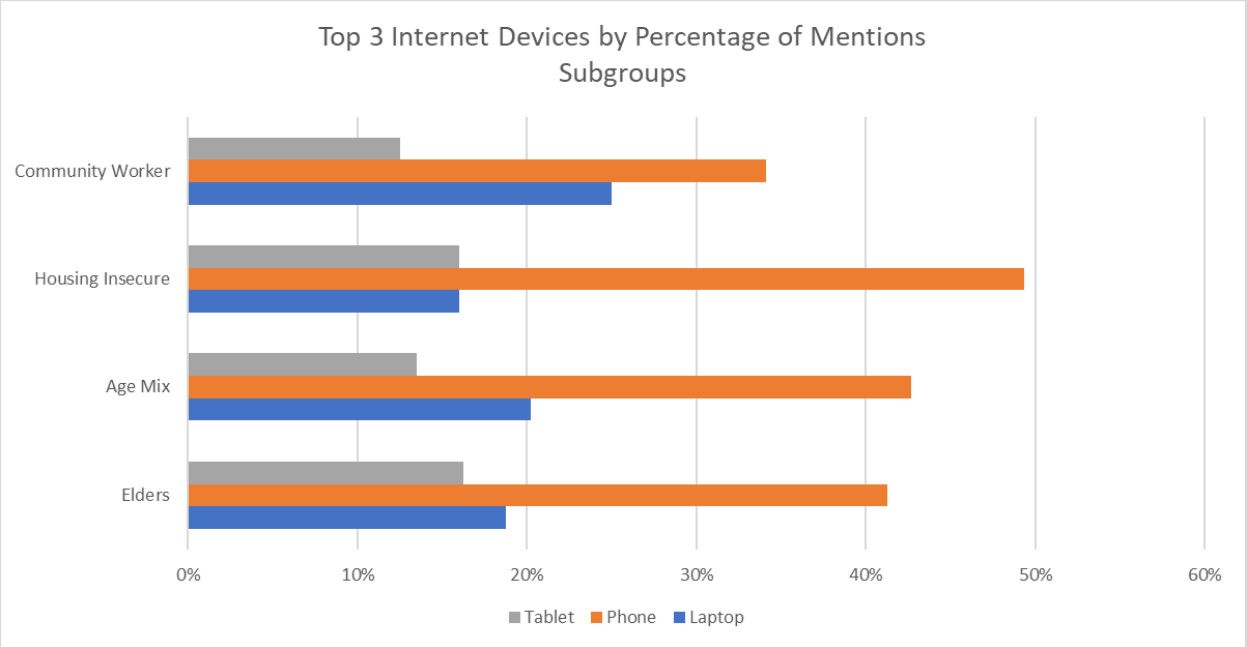


Chart 6 shows the top three (3) mentioned devices by the percentage of total mentions per focus population. This shows that while a certain device may not have been mentioned a large number of times, it may have been the most mentioned device for that focus population. For example, the participants in the Khmer focus groups only mentioned phones seven (7) times in response to this question; however, that was 54% of all their device mentions.

- Eight (8) of the focus populations were more likely to mention a phone than the other two top devices: Spanish-speaking from Central or South America, Vietnamese-speaking, Cantonese-speaking, Spanish-speaking from Mexico, veteran, African Diaspora, housing insecure, and Khmer-speaking.
- None of the focus populations were more likely to mention a tablet over a phone.
- Three (3) focus populations were more likely to mention a tablet over a laptop: Spanish-speaking from Central or South America, Spanish-speaking from Mexico, and housing insecure.
- One (1) focus population was equally likely to mention a tablet or a laptop: Cantonese-speaking.
- One (1) focus population was more likely to mention a laptop over a phone or tablet: Black/African American. It is not clear from the focus group responses why this is the case; however, it could be that some participants more than others associate Internet activity with using a computer rather than their online activities through phones.

Chart 7: Top three (3) devices for Internet access by percentage of total code mentions, organized by subgroup



To compare and contrast results between the four (4) subgroups, Chart 7 shows the top three (3) devices by the percentage of total code mentions per subgroup. For example, there were 80 total code mentions of any device by participants in the elder (55+) focus groups. Of those 80 times an Internet type was mentioned by an elder (55+) focus group participant, 41% of them were “phone.”

- All four (4) subgroups were more likely to name a phone as a device used to access the Internet over the other top devices.
- Three (3) subgroups were more likely to mention a laptop over a tablet: community workers, age mix, elders (55+).
- One (1) subgroup was equally likely to mention a laptop as a tablet: housing insecure.

While desktop computers were not among the top three (3), they were the fourth most frequently mentioned device. Cantonese speakers and Spanish speakers from both Mexico and Central or South America were the focus populations to mention desktop computers most frequently. Community workers were the subgroup to mention them most frequently, perhaps due to their work. The housing insecure subgroup participants mentioned them the least.

In addition to devices, participants were prompted to speak about the type of Internet connection they have.

Top Three (3) Internet Type Mentions:

1.) Wi-Fi (132)
2.) data plan [Mobile Service Provider] (41)
3.) hotspot (29)

Type of Internet
The most frequently mentioned Internet types were Wi-Fi, data plans, and hotspots. The participants most likely to mention using Wi-Fi to access the Internet were in the veteran focus groups. The subgroup most likely to mention using Wi-Fi to access the Internet was the community worker focus group participants. Due to the prevalence of Wi-Fi use, programming that lowers the cost for broadband at home such as the Affordable Connectivity Program could have a much greater uptake with outreach efforts and a simplified sign-up process.

Other Internet types with five (5) or fewer mentions were:

- Verizon (4)
- CenturyLink (3)
- family data plan (3)
- free access (3)
- AT&T (2)
- limited data plan (2)
- shared Wi-Fi (2)
- Metro PCS (2)
- free Internet program (1)
- government data plan (1)
- no Internet (1)
- router (1)
- shared data plan (1)
- Simple Mobile (1)
- Wave Broadband (1)

Note that a number of these mentions were mobile providers. The specific provider names were offered by some participants; this was not collected from all participants with Internet connections. Chart 8 shows that participants from the African Diaspora most frequently stated that a data plan was their Internet type.

Chart 8: Top three (3) Internet types, organized by focus population

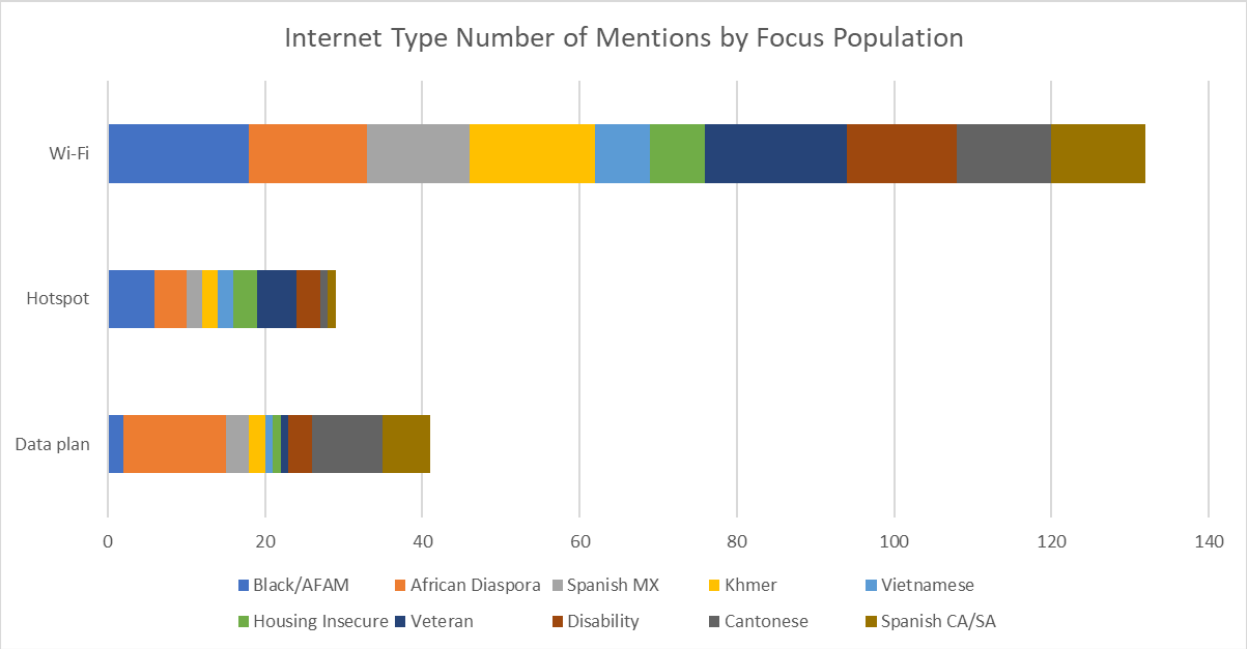


Chart 9: Top three (3) Internet types in by percentage of total code mentions, organized by focus population

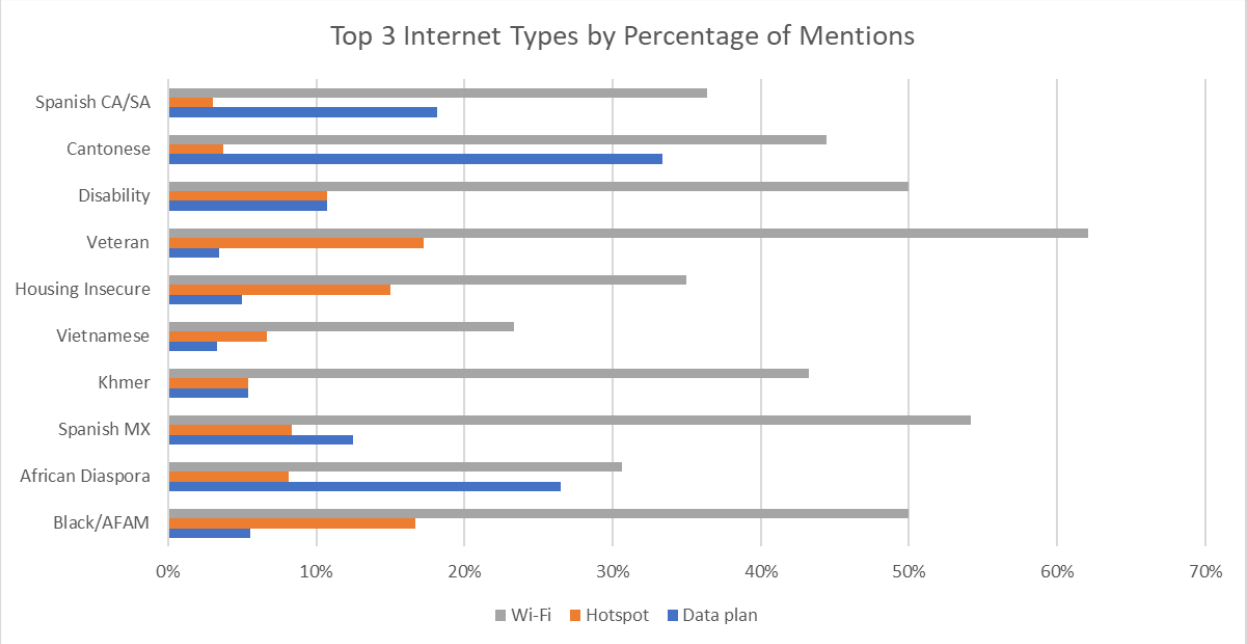


Chart 9 shows the top three (3) Internet types by the percentage of the focus populations' mentions.

- All 10 focus populations were more likely to state that Wi-Fi was their Internet type over a hotspot or data plan.
- Two (2) focus populations were equally likely to mention a hotspot or data plan as their Internet type: disability and Khmer-speaking.
- Four (4) focus populations were more likely to mention a hotspot over a data plan: veteran, housing insecure, Vietnamese-speaking, and Black/African American.
- Four (4) focus populations were more likely to mention a data plan over a hotspot: Spanish-speaking from Central or South America, Cantonese-speaking, Spanish-speaking from Mexico, and African Diaspora.

The frequency of Wi-Fi mentions points to its importance, though the focus groups did not consistently clarify and parse out the source of the Wi-Fi and location of use, which could be connected to fixed broadband at home, provided by a hotspot, or used at other locations.

Chart 10: Top three (3) Internet types by percentage of total code mentions, organized by subgroup

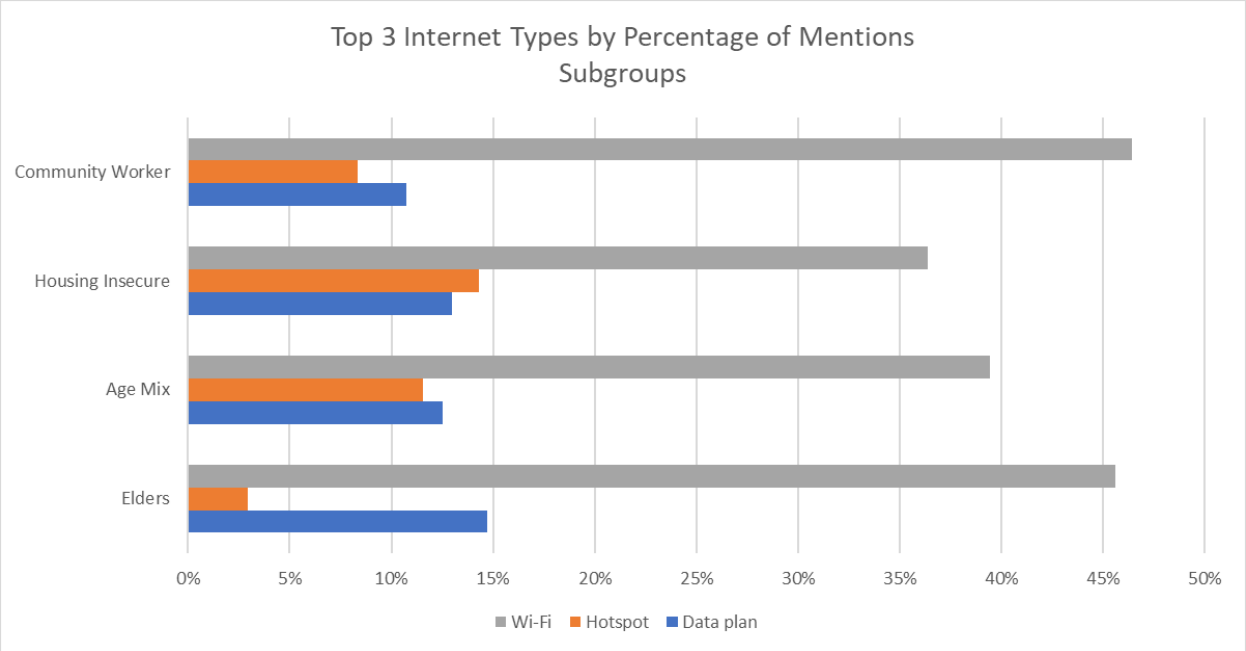


Chart 10 shows the top three (3) Internet types by the percentage of total code mentions per subgroup. For example, there were 68 total code mentions of any Internet type by participants in the elder (55+) focus groups. Of those 68 times an Internet type was mentioned by an elder (55+) focus group participant, 46% of them were Wi-Fi.

- All four (4) subgroups were more likely to state that Wi-Fi was their Internet type over a hotspot or data plan.

- Three (3) subgroups were more likely to mention a data plan over a hotspot: community workers, housing insecure, age mix, and elders (55+). This could be connected to the high use of phones for connecting to the Internet; rather than using the phone as a hotspot to connect other devices such as laptops, many community members are accessing the Internet directly from their mobile phone.

Question 2: Qualities of Adequate Internet

In the second question category, facilitators asked participants what “adequate” or “good enough” Internet is, in their opinion. The following codes were used to group their responses and the number of mentions are in parentheses:

- Internet that is fast and reliable (90)
- Internet that is affordable or subsidized (43)
- reliable Internet that we can use for online communication (34)
- Internet that is accessible (15)
- reliable Internet that we can use for watching videos (13)
- reliable Internet that we can use for work/business (13)
- reliable Internet that can help us with our education/studies (11)
- reliable Internet that we can use for social media (11)
- reliable Internet that we can use for research or to get information (7)
- Internet that is free (7)
- Internet that has no data cap or unlimited (3)
- My current Internet is already adequate for me. (3)
- reliable Internet that we can use for entertainment (2)
- reliable Internet that we can use for file sharing (2)
- reliable Internet that we can use to listen to music (2)
- reliable Internet that we can use to play games (2)
- Internet that is private or safe (2)
- Internet that multiple people could use (2)
- I don’t use the Internet. (2)
- reliable Internet that we can use to check news (1)
- an Internet package with TV service (1)
- Internet that has sufficient data (1)
- Internet that is compatible with latest devices (1)
- I don't know. (1)
- having the right devices (1)

Top Three (3) Adequate Internet Quality Mentions:

1.) Internet that is fast and reliable (90)
2.) Internet that is affordable or subsidized (43)
3.) reliable Internet that we can use for online communication (34)

Qualities of Adequate Internet

The most frequently mentioned qualities of "adequate" Internet were fast and reliable, affordable or subsidized, and reliable enough for online communication. The participants most likely to define adequate Internet as Internet that is fast and reliable were in the housing insecure focus groups. The subgroup most likely to mention needing fast and reliable Internet was in the age mix focus groups. The need for fast, reliable Internet informs the recommendations to improve infrastructure across the city, coordinate with apartment buildings to ensure tenants have adequate service, and drive service pricing that makes high quality Internet accessible to all.

Many respondents spoke more in-depth regarding purposes for using the Internet, rather than speaking generally about the meaning of "adequate" Internet access. The inference is that "adequate" Internet quality may mean that it is sufficient to enable these daily activities. Many of these activities were coded separately and are listed below with the number of mentions in parentheses:

- online communication (43)
- watching videos (39)
- work or business (24)
- social media (22)
- research or information (14)
- education (12)
- news (9)
- listening to music (8)
- playing games (7)
- navigation (6)
- medical related activities (3)
- exercise (3)
- security cameras (2)
- listen/watch the Dhamma (2)
- appointments (2)
- ChatGPT (1)
- content creation (1)
- helping people (1)
- bus schedules (1)

Participant Quotations: Qualities of Adequate Internet

"For me, an adequate Internet, accessible Internet…means being able to make the world a global village." -*Participant in the Black/African American Community Workers Focus Group*

"Affordable, as always, is subjective and so I think that when we look at terms of affordable…we should be looking at what is affordable to those who could pay the very least to make sure that everyone has access and it's equitable." *-Participant in the Disability Community Workers Focus Group*

"Internet, we cannot go without it these days. It's almost everything, especially for those who use it…for work. I'm a gig worker. I use it for my full time job. I cannot go without it." *-Participant in the African Diaspora Age Mix Focus Group*

Top Three (3) Internet Purpose Mentions:

1.) online communication (43)
2.) watching videos (39)
3.) work or business (24)

Online communication is present in the top three (3) mentions for both Internet purpose and definitions of "adequate" Internet, suggesting that many participants found communicating with friends, families, and others to be an important aspect of using the Internet. Chart 11 includes the codes that received more than five (5) mentions in response to the question about what "adequate" or "good enough" Internet means to participants. Participants largely believe that "adequate" Internet is fast and reliable.

Chart 11: "Adequate" Internet quality codes with over five (5) mentions, organized by focus population

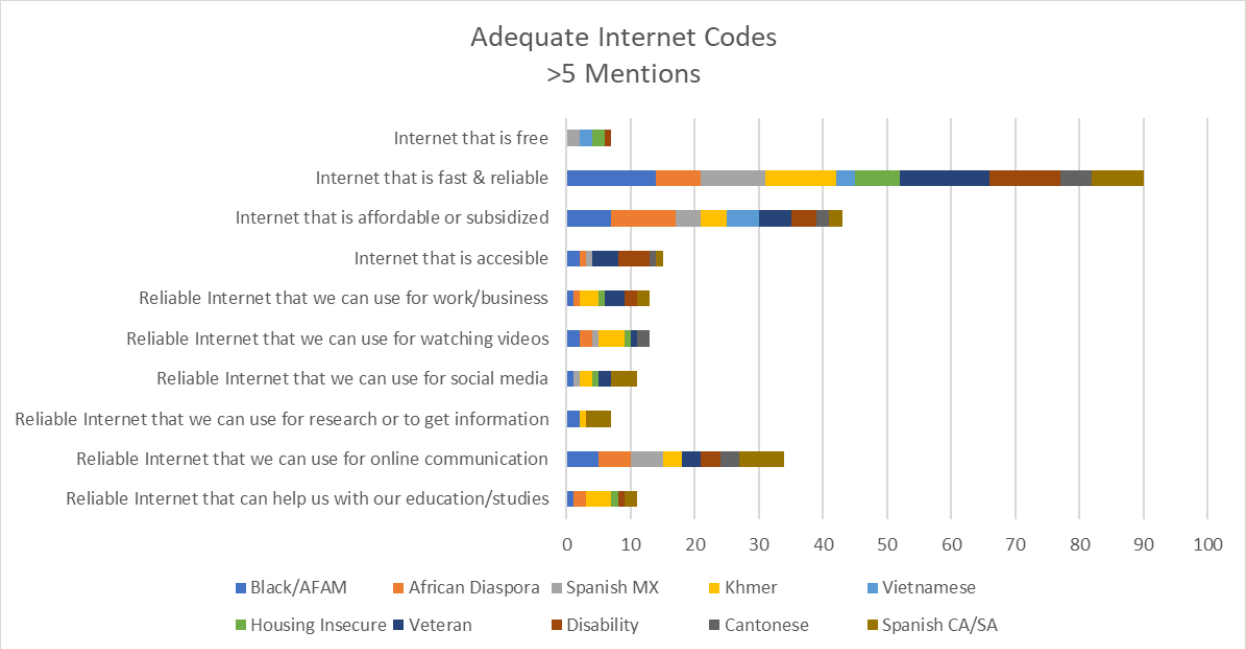
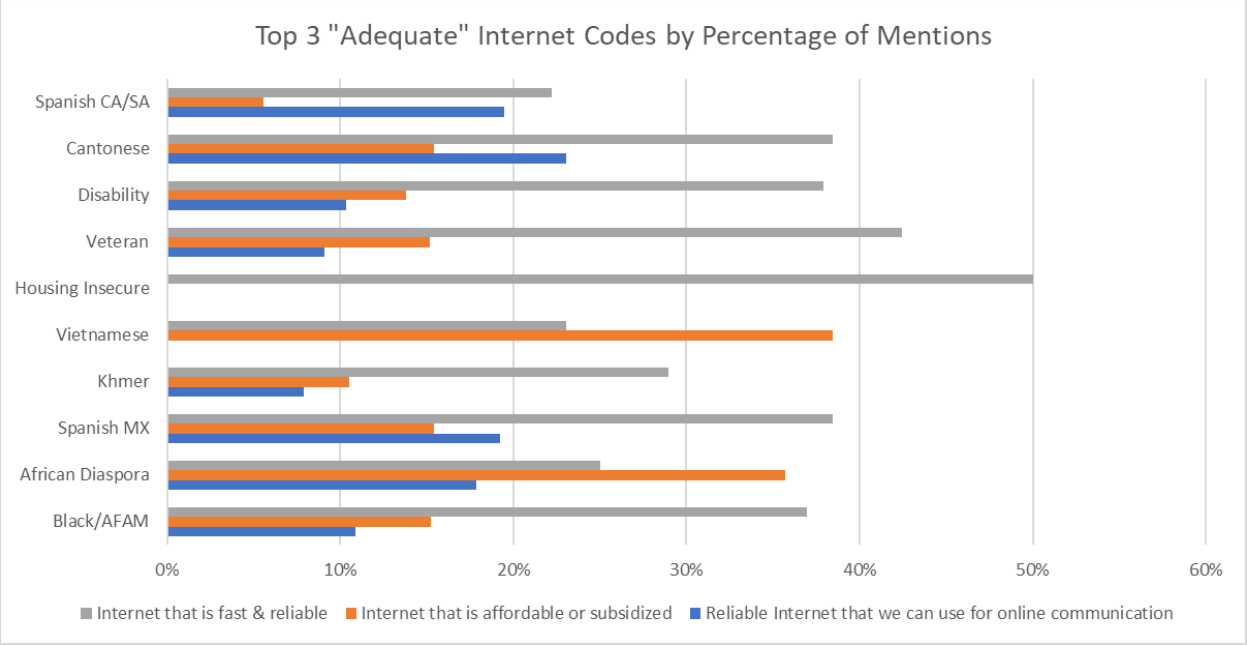


Chart 12 shows the top three (3) codes for qualities of “adequate” Internet access by the percentage of the focus populations’ mentions.

- Eight (8) focus populations were more likely to mention fast/reliable Internet over affordable/subsidized Internet or reliable Internet used for online communication: Spanish-speakers from Central or South America, Cantonese-speakers, disability, veteran, housing insecure, Khmer-speaking, Spanish-speaking from Mexico, and Black/African American.
- Two (2) of the focus populations were more likely to mention affordable/subsidized Internet over fast/reliable Internet or Internet for online communication: Vietnamese-speaking, and African Diaspora.
- Three (3) focus populations were more likely to mention Internet for online communication over affordable/subsidized Internet: Spanish-speakers from Central or South America, Cantonese-speakers, and Spanish-speakers from Mexico.

Chart 12: Top three (3) “adequate” Internet quality codes by percentage of total code mentions, organized by focus population



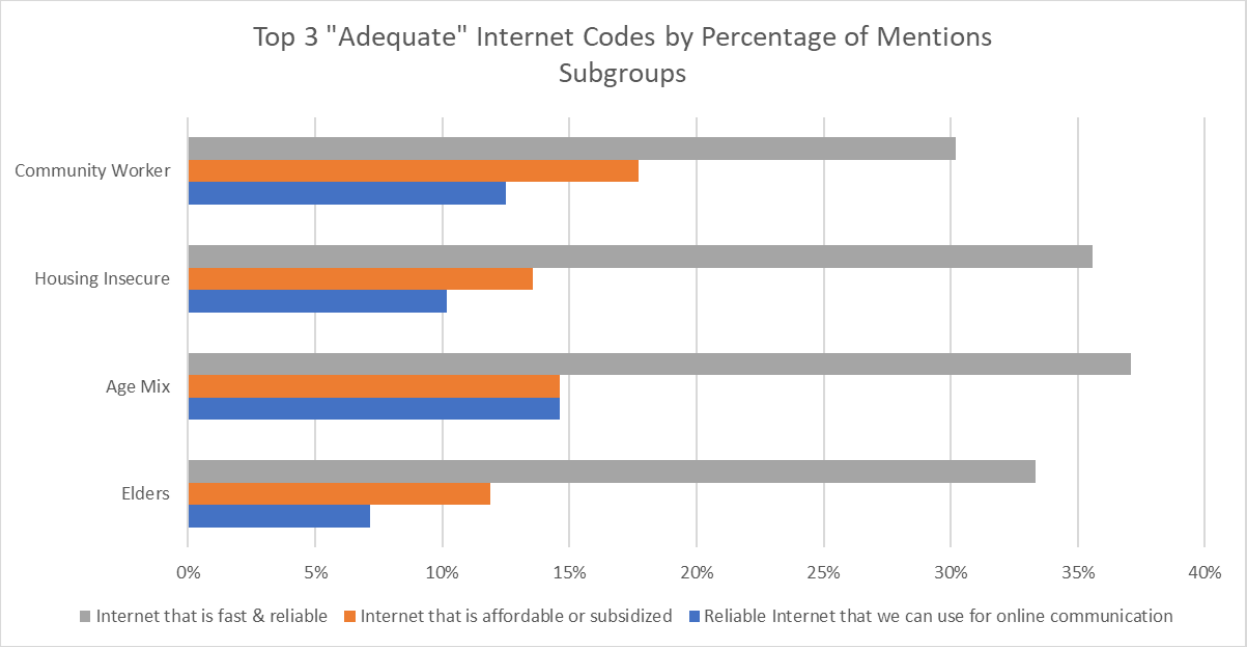
As shown in Chart 12, the housing insecure focus population, more than other groups, prioritized Internet that is fast and reliable. Note that for eight (8) of the 10 population groups, fast and reliable Internet was the quality that was most mentioned. Vietnamese-speaking and African Diaspora community participants were the exception, where affordable or subsidized Internet was most mentioned.

To compare and contrast results between the four (4) subgroups, Chart 13 shows the top three (3) codes expressing “adequate” Internet by percentage of total code mentions per subgroup.

For example, of the 42 times an Internet quality type was mentioned by an elder (55+) focus group participant, 33% of these were “Internet that is fast and reliable.”

- All four (4) of the subgroups were more likely to mention “Internet that is fast and reliable” than the other top “adequate” Internet codes.
- Three (3) of the subgroups were more likely to mention “Internet that is affordable or subsidized” than “reliable Internet that we can use for online communication:” community workers, housing insecure, and elders (55+).
- One (1) of the subgroups was equally likely to mention “Internet that is affordable or subsidized” as “reliable Internet that we can use for online communication:” age mix.

Chart 13: Top three (3) “adequate” Internet codes by percentage of total mentions, organized by subgroup



Affordable Connectivity Program (ACP)

When participants registered for the focus groups, they were asked to comment on their familiarity with the Affordable Connectivity Program (ACP), a federal discount offering that provides up to $30 per month off Internet costs for eligible residents. Of the 203 focus group participants, 177 of them provided a response regarding ACP during registration (multiple choice, multi-select):

- I have never heard of it. (93)
- I have heard of it but don't use it. (53)
- The $30/month subsidy is useful. (29)
- I have heard of it and use it. (25)

- The $30/month subsidy is not useful. (2)

Awareness of the ACP was reported as limited in both the registration questionnaire and during focus groups. One of the prompts or follow-up questions in the focus groups when discussing "adequate" Internet asked participants about the ACP.

Top Three (3) Affordable Connectivity Program Mentions:

1.) It is helpful, useful, or valuable. (26)
2.) I have not heard of it. (24)
3.) I've heard of it. (18)

Other mentions about the ACP included comments about challenges with the program; interest in it; and, for fewer participants, the program working well and its ease of use:

- I have used it. (13)
- It is affordable. (6)
- It is accessible. (5)
- It is slow. (5)
- I'm interested in applying for it. (4)
- It works fine. (4)
- It is not accessible. (3)
- I need more details about it. (3)
- It is not fast and reliable. (3)
- It is not valuable at all. (3)
- I have helped people apply for it. (3)
- It is hard to apply for. (2)
- There is a problem with the data cap. (2)
- There is no help to set it up. (2)
- I got it from an Internet provider. (1)
- It is fast and reliable. (1)
- I needed to pay extra for better access. (1)
- The price is increasing. (1)
- It is easy to apply. (1)

Participant Quotations: Affordable Connectivity Program

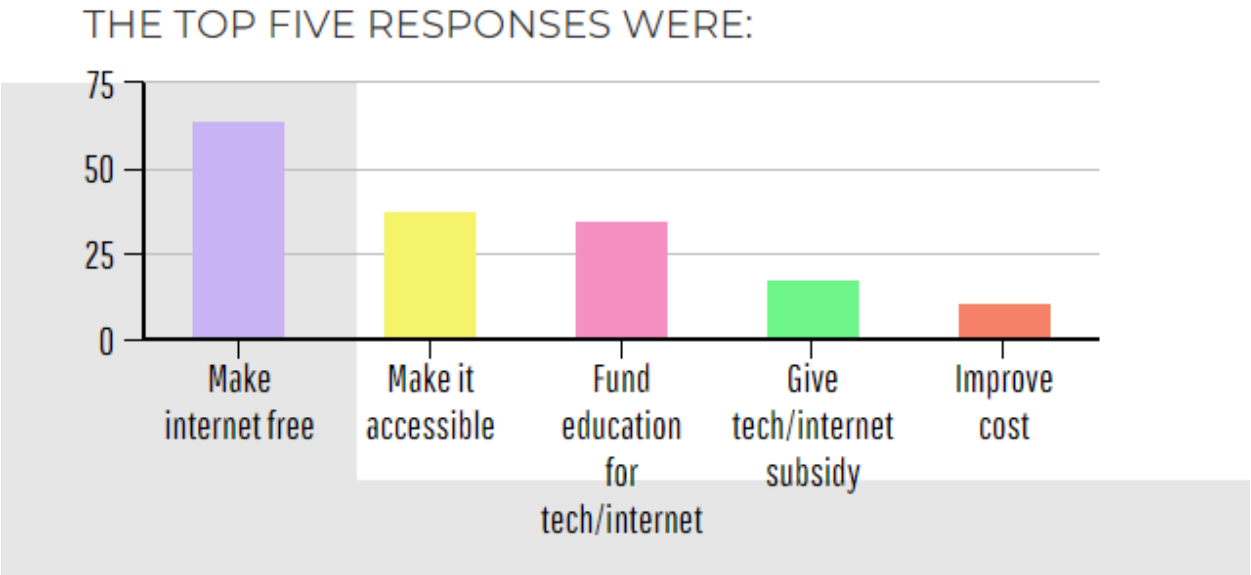
"I have heard of it and I would say it's very helpful because, you know, it lowers Internet service costs from the FCC." -*Participant in the Veteran Community Workers Focus Group*

"It's valuable. I don't know if it's accessible. This idea out there that these programs provide slow Internet regardless." -*Participant in the Black/African American Housing Insecure Focus Group*

> “I'm actually enrolled in it and I would say it's good, but again, speeds are cut way down. ...It gets a little challenging. I can't connect my Ring camera because it's too slow. So I mean, little things like that. But as far as keeping me connected, absolutely wonderful.” -*Participant in the Disability Community Workers Focus Group*

In the Phase I preliminary survey, respondents were asked to specify what government entities could do to support the public with Internet access and digital equity services. The most frequent response with 64 mentions was, “Make the Internet free.” Other responses included Internet subsidies or price control measures. Accessibility and tech education were also frequently mentioned by Phase I participants.

Chart 14: Top five (5) response counts for recommendations to government in Phase I



Question 3: Quality of Life

Participants were asked how Internet access affects their quality of life. Researchers wanted to know if, for example, unreliable Internet connection stops them from attending their telehealth appointments. Many participants interpreted this question as how the Internet has changed society and our daily lives, or they reiterated the ways in which they use the Internet.

Top Three (3) Quality of Life Mentions:

1.) Internet helps me to communicate online. (36)
2.) Internet makes things easy and accessible. (34)
3.) Internet helps me be informed or get information. (27)

Over 26% of the responses to this question referenced the ways in which a bad Internet connection interrupts participants' activities. Communication is the most commonly referenced aspect of life that is interrupted or impacted by a bad Internet connection. This further underscores the importance of communication with friends, family, and others for the participants. General activities/life in general were the second most frequently mentioned theme, and work or business is the third most mentioned theme.

When participants spoke about poor quality Internet connection affecting their general activities or life without more specificity, they spoke about feeling "frustrated" or "disappointed" and bad Internet affecting what they "need to do." The following are example quotations for this code.

Participant Quotations: Impact of Bad Internet on General Activities/Life

"Yes it really affects the quality of my life, in that it is time-taking and if the Internet is slow you feel disappointed and frustrated getting what you want." -*Participant in the Veteran Age Mix Focus Group*

"I think that's why it affects a lot if you don't have good service, you can't do things the way you want, because it's not working well." -*Participant in the Spanish-speaking from Central or South America Community Workers Focus Group*

"If we don't have the Internet service for only one hour, we feel really frustrated." -*Participant in the Khmer-speaking Age Mix Focus Group*

"The effectiveness of what we do is based on how unencumbered the Internet is…5g takes 10 minutes to load something up. It slows us down quite a bit. Whereas a lot of times we like to get anywhere from 80 to 90 megs a second, and data rates for downloads, uploads, and even streaming capability. So it's absolutely necessary that we have fast upload and download times. Absolutely necessary." -*Participant in the Black/African American Elders (55+) Focus Group*

Chart 15: Top three (3) areas impacted by bad Internet, organized by focus population

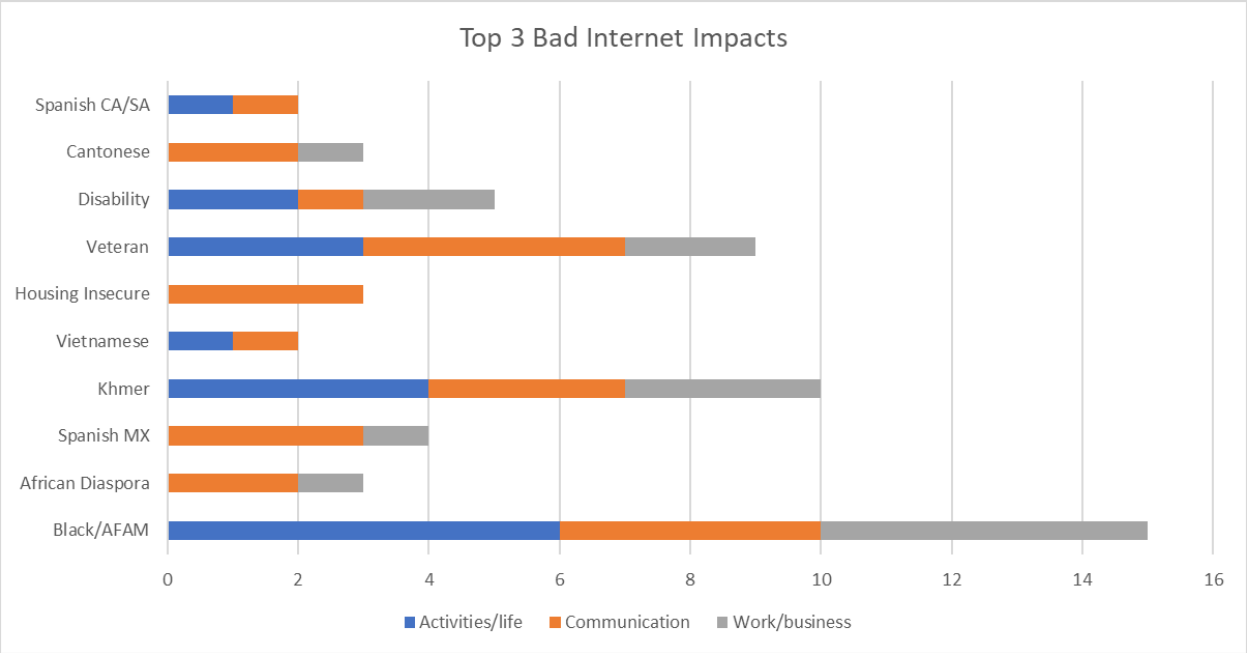


Chart 16: Top three (3) areas affected by bad Internet by percentage of mentions, organized by focus population

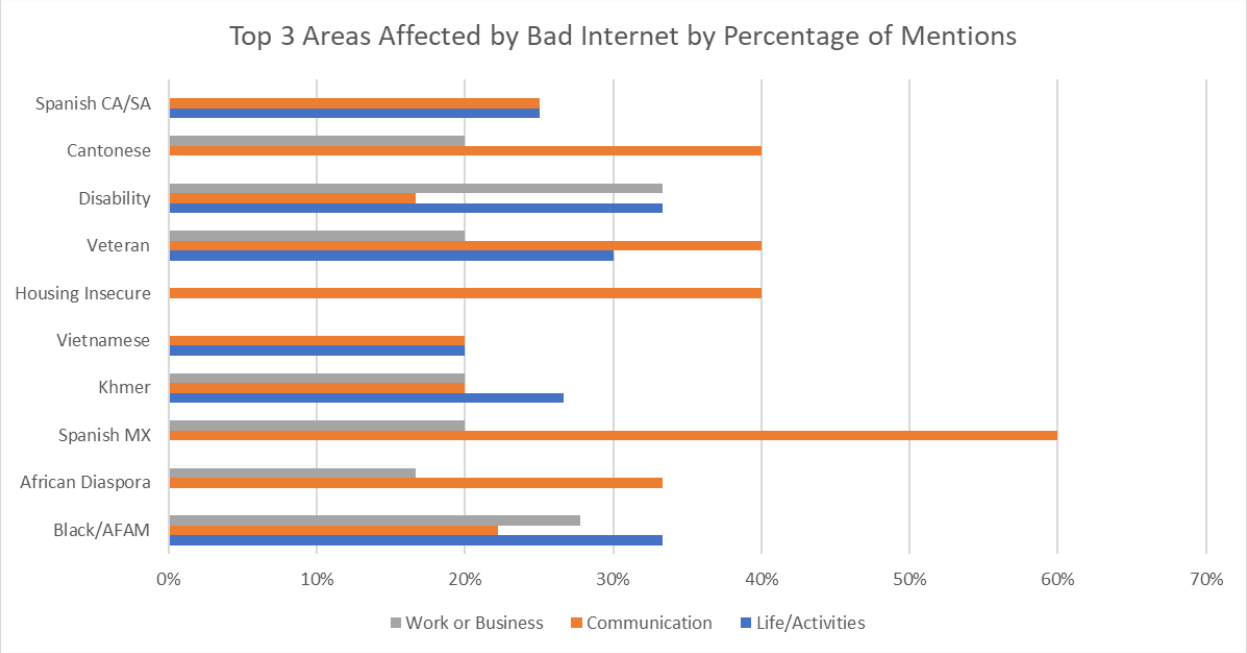


Chart 16 shows the top three (3) areas most commonly mentioned as affected by “bad Internet connection,” organized by percentages of total mentions per focus population. For example, of all mentions of negative impacts from poor Internet connection in the Spanish-speakers from

Mexico focus groups, 60% of them referenced communication. This is consistent with other questions demonstrating that communication is an important aspect of Internet usage for this focus population.

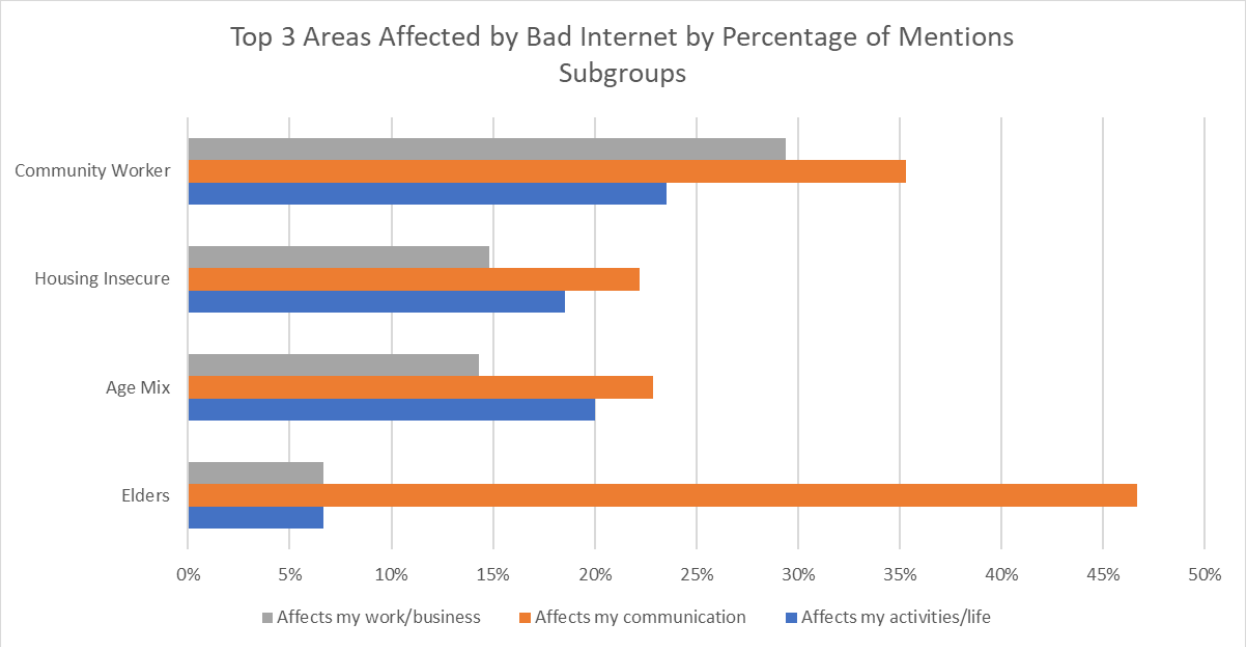
- Five (5) focus populations were more likely to mention communication over work/business or general life/activities: Cantonese-speaking, veteran, housing insecure, Spanish-speaking from Mexico, and African Diaspora.
- Two (2) focus populations were equally likely to mention communication and general life/activities: Spanish-speaking from Central or South America and Vietnamese-speaking.
- One (1) focus population was equally likely to mention work/business as communication: Khmer-speaking.
- One (1) focus population was more likely to mention work/business over communication: disability.
- One (1) focus population was equally likely to mention work/business and general life/activities: disability.
- Three (3) focus populations were more likely to mention general life/activities over work/business: veteran, Khmer-speaking, and Black/African American.

Not all of the top three (3) areas of bad Internet connection impacts are represented in the data for every focus population. This is because not all responses to the focus group questions about quality of life referenced the impacts of a bad connection. Some participants chose to describe how they use the Internet or how the Internet affects society as a whole. A number of participants mentioned that the Internet was so ubiquitous today that it has become a necessity (14) and that everything now revolves around the Internet (5).

To compare and contrast results between the four (4) subgroups, Chart 17 shows the top three (3) areas impacted by bad Internet connection according to percentage of total code mentions per subgroup. For example, there were 15 total code mentions of any area impacted by bad Internet connection by participants in the elder (55+) focus groups. Of those 15 times an area of impact was mentioned by an elder (55+) focus group participant, 47% of them were related to communication.

- Three (3) of the subgroups were more likely to mention communication than the other two top areas of impact by bad Internet connection: elders (55+), age mix, and housing insecure.
- One (1) of the subgroups was equally likely to mention communication as work/business: community workers.
- Two (2) of the subgroups were more likely to mention bad Internet impacting their life or activities in general than work/business: housing insecure and age mix.
- One (1) of the subgroups was equally likely to mention bad Internet impacting work/business as their life or activities in general: elders (55+).

Chart 17: Top three (3) areas affected by bad Internet by percentage of mentions, organized by subgroup



Participant Quotations: Impact of Bad Internet

"Mines are affected occasionally. It makes it very difficult for me hence I stay off most virtual meetings." *-Participant in the Black/African American Age Mix Focus Group*

"Personally, as I work with Uber Eats, it does take a lot of good connection, and in some parts, there is no good- Well, I use MetroPCS, and it's not the best, it's like the lowest there is." *-Participant in the Spanish-speaking from Mexico Age Mix Focus Group*

"So for me… two weeks ago, I just didn't know how to use my phone, something happened to it and I couldn't use it. Usually, I have to send papers, and because I don't know English, so I have to take a picture and send it away. But for two weeks, I couldn't do anything at all. I had to run around [the city] so much, hand off this document, send this document. I'm using my money on gas and losing a lot of money. So it made my life hard over two weeks, but my child fixed it so I can send things along. On my phone I also go to ESL class, and the teacher sends the assignments along, and without Internet it is extremely difficult. It's essential to have Internet, and it makes my life a lot easier." *-Participant in the Vietnamese-speaking Housing Insecure Focus Group*

In the Phase I preliminary survey, respondents were asked how they feel about technology in a general sense. Respondents had mixed feelings about technology. While most respondents cited generally positive feelings about technology, there were substantive critiques. One of the

most common critiques is that using technology takes a lot of time, and can be difficult. While a few people did state they did not like technology, there were participants who described technology as being a necessary evil.

Question 4: Household Devices

Facilitators asked participants to discuss their household devices with more depth and note if they share devices with other people. There were 67 responses that addressed whether or not household devices were shared.

Top Three (3) Device Sharing Mentions:

1.) I don't share. (38)
2.) Yes, we share devices. (12)
3.) We only share the smart TV. (9)

Device Sharing Practices
The most frequently mentioned device sharing practices were not sharing at all, sharing devices, and only sharing a smart television. The participants most likely to mention not sharing devices were in the Cantonese, Vietnamese, and Spanish from Mexico focus groups. The subgroup most likely to mention not sharing devices was the housing insecure focus group participants. Largely, participants did not share devices with other people in the household. This finding can help to illuminate the need for each individual in the household to have sufficient devices. It could also indicate that there are enough devices in the households who participated. For those who do share, the reliance on that shared device may underscore how critical it is without any back-up devices.

Chart 18: Device sharing practices mentioned, organized by focus population

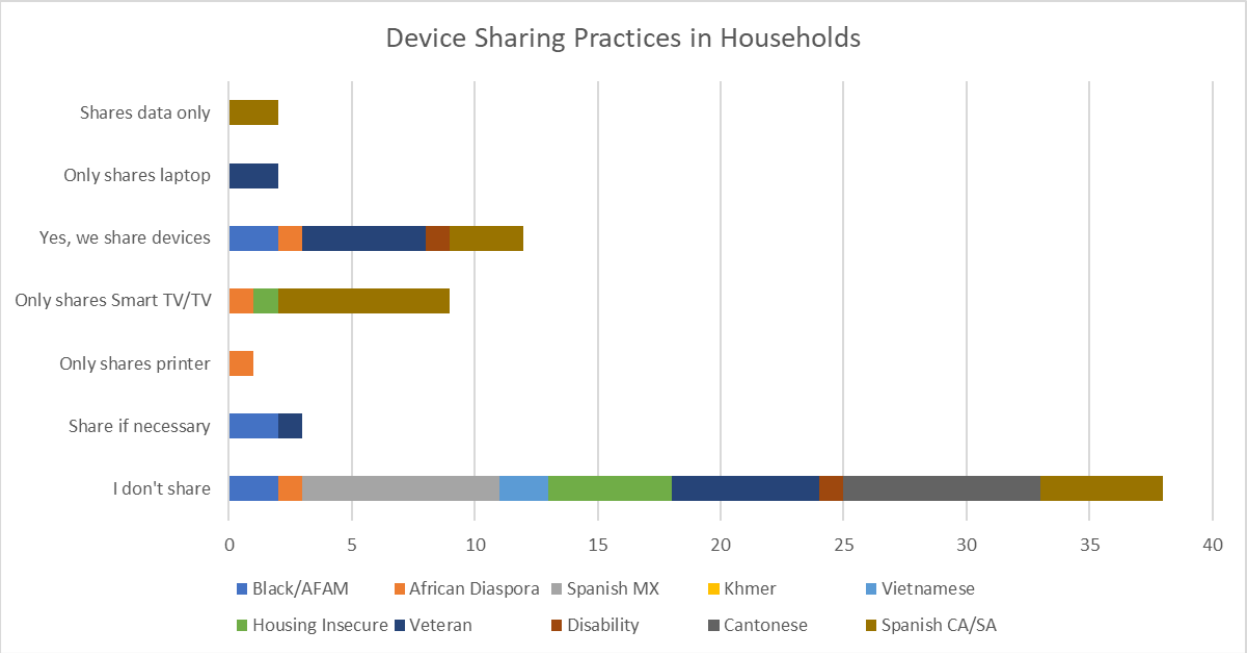
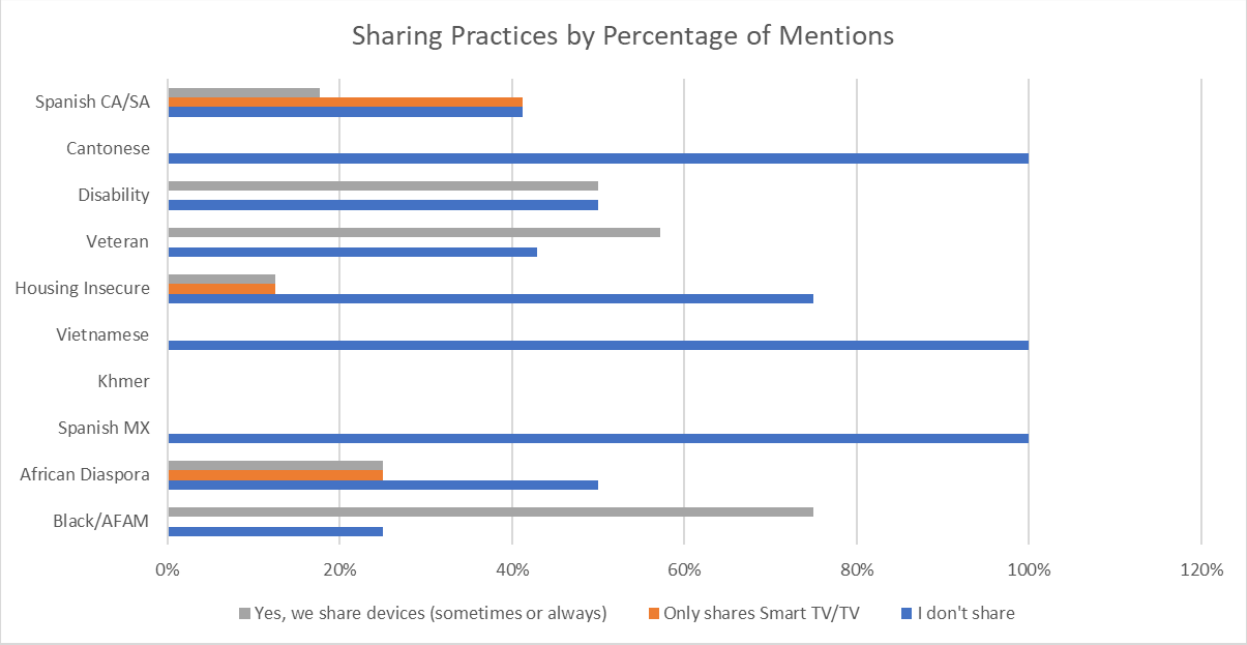


Chart 19: Sharing practices by percentage of total code mentions, organized by focus population



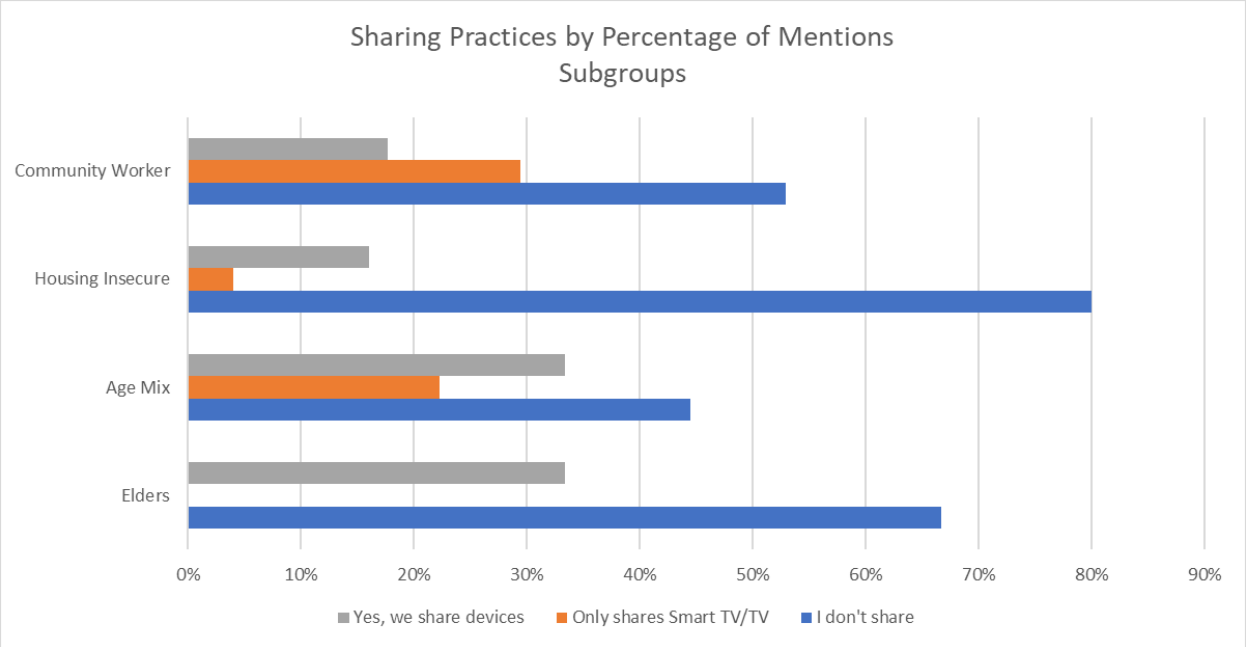
- Some focus populations, when responding to whether or not they share household devices, stated 100% that they do not share: Cantonese-speakers,

Vietnamese-speakers, and Spanish-speakers from Mexico. Khmer-speaking participants did not speak to this question.

- Five (5) focus populations were more likely to report not sharing than sharing: Cantonese-speaking, veteran, housing insecure, Vietnamese-speaking, and Spanish-speaking from Mexico.
- Three (3) focus populations were equally likely to report not sharing at all and sharing only a smart TV: Spanish-speaking for Central or South America, housing insecure, and African Diaspora.
- One (1) focus population was more likely to report sharing than not sharing: Black/African American.

Spanish-speaking participants from Central or South America were more likely to state that they shared a smart TV with their household but not other devices. Televisions are more traditionally communal devices. A member of the Community Advisory Board from South America stated that this trend in the data could likely be a cultural phenomenon with respect to the way that smart TVs are viewed as a luxurious item. It is possibly the case for other focus populations that they share smart TVs in their households, though it was not mentioned by participants in most other groups.

Chart 20: Device sharing practices by percentage of total code mentions, organized by subgroups



To compare and contrast results between the four (4) subgroups, Chart 20 shows sharing practices by the percentage of total code mentions per subgroup. For example, there were 15 total code mentions of any sharing practice by participants in the elder (55+) focus groups. Of

those 15 times a sharing practice was mentioned by an elder (55+) focus group participant, 67% of them were “I don’t share devices.”

- All subgroups were most likely to state “I don’t share.”
- Two (2) subgroups were more likely to share devices over only sharing a smart TV: housing insecure and age mix.

Participant Quotations: Household Devices

“I use mostly my Android phone and it's kind of old now, and it's beginning to get slower accessing the Internet. I also have my personal laptop which most times it's been connected to a Wi-Fi which also can make the Internet not accessible. Yeah, I share my devices most times with my family.” *-Participant in the Veteran Age Mix Focus Group*

“I don’t need to share my cell phone with others. The screen size of my cell phone is good enough for me.” *-Participant in the Cantonese-speaking Housing Insecure Focus Group*

“I use an iPhone too, all Internet, everything is fine, but no calls. They don’t work. I haven't paid for the service, maybe that's why, but I do have high speed Internet. I used to share with my brother, yes.” *-Participant in the Spanish-speaking from Central and South America Housing Insecure Focus Group*

Question 5: Internet and Technology Skills Training

Because digital skills and digital literacy are important aspects of digital equity, facilitators asked participants to describe how they would like to receive Internet or technology training, if at all. Participants were prompted to think about whether they would like to attend sessions online or in person, as well as what other aspects would make the class accessible for them.

Top Three (3) Preferred Training Mentions, all related to delivery of services:

1.) in-person (59)
2.) online (47)
3.) hybrid (30)

Digital Skills Training

The most frequently mentioned preferred training delivery methods were in-person, online, and hybrid. The participants most likely to mention wanting in-person training were in the Khmer focus groups. The most frequently mentioned methods to deliver culturally relevant digital skills training were providing the training in the person’s language, multilingual classes, and offering an inclusive or diverse environment.

The most frequently mentioned digital skills training topics were Internet basics, computer or technology basics, and protecting yourself and your data online. More populations preferred in-person training, but the mix of preferred delivery methods shows comfort for some with online training and the need to offer options, communicate with people about preferences, and offer assistance if only online training is available.

These results help inform recommendations such as providing training, support, and outreach in multiple languages; offering services at convenient locations where community members already frequent; and developing basic digital skills that can be readily applied to daily life, including online safety. Service providers and community members alike would also benefit from increased skills in assistive technologies and digital accessibility.

Chart 21: Top three (3) preferred training methods by percentage of total code mentions, organized by focus population

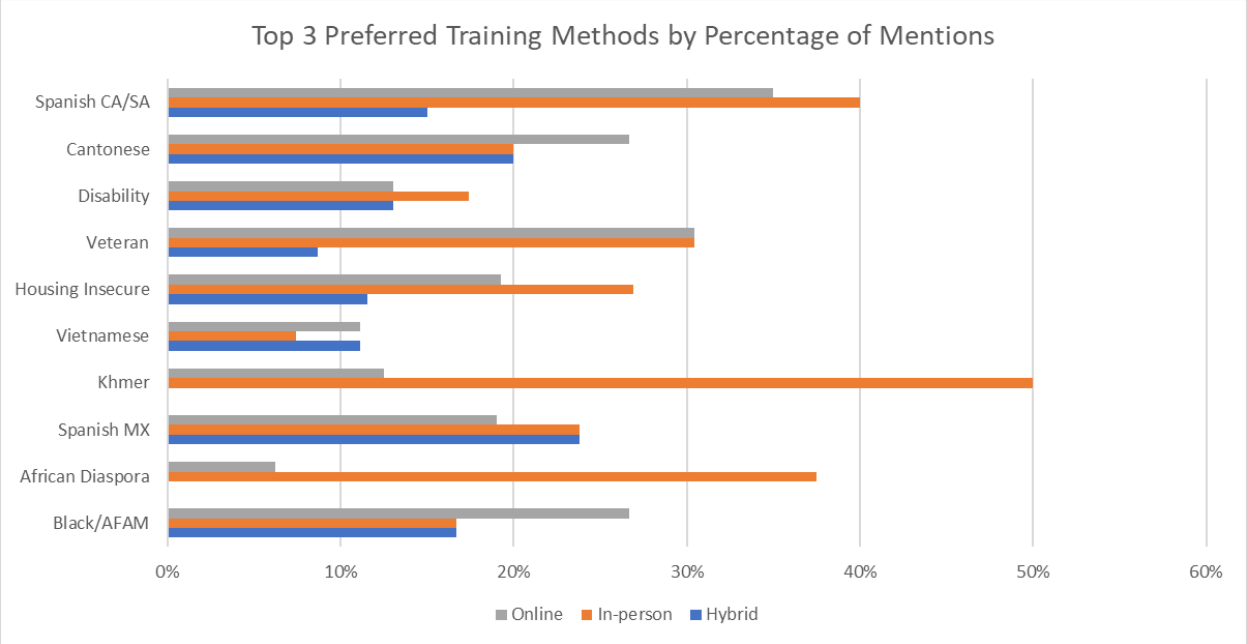


Chart 21 shows that Khmer-speaking focus group participants were significantly more likely to mention a preference for in-person training and did not mention hybrid training at all.

- One (1) focus population was more likely to mention online over in-person or hybrid: Cantonese-speaking.
- Five (5) focus populations were more likely to mention in-person over online or hybrid: Spanish-speaking from Central or South America, disability, housing insecure, Khmer-speaking, and African Diaspora.
- One (1) focus population was more likely to mention hybrid over online: Spanish-speaking from Mexico.

- Three (3) focus populations were equally likely to mention in-person as hybrid: Cantonese-speaking, Spanish-speaking from Mexico, and Black/African American.
- Two (2) focus populations were equally likely to mention online as hybrid options: disability and Vietnamese-speaking.

Other comments mentioned for Internet and technology training were:

- would be interested (13)
- in the library (10)
- age groups (7)
- in community centers (7)
- easy to understand (6)
- community learning sessions (6)
- video format (6)
- flexible hours (5)
- close to home (4)
- flyers (4)
- group meetings (3)
- one-on-one trainer (3)
- grouped by skill level (3)
- in schools or colleges (3)
- cannot attend (3)
- classroom setting (2)
- in computer labs (2)
- need written material (2)
- through community and support groups (2)
- transportation for elders (2)
- in English (2)
- in day centers (1)
- in the park (1)
- IT trainer (1)
- morning class (1)
- needs follow-up process (1)
- open forum (1)
- accessible for disabilities (1)
- open but quiet environment (1)

Participants were also prompted to consider cultural relevance for digital skills training.

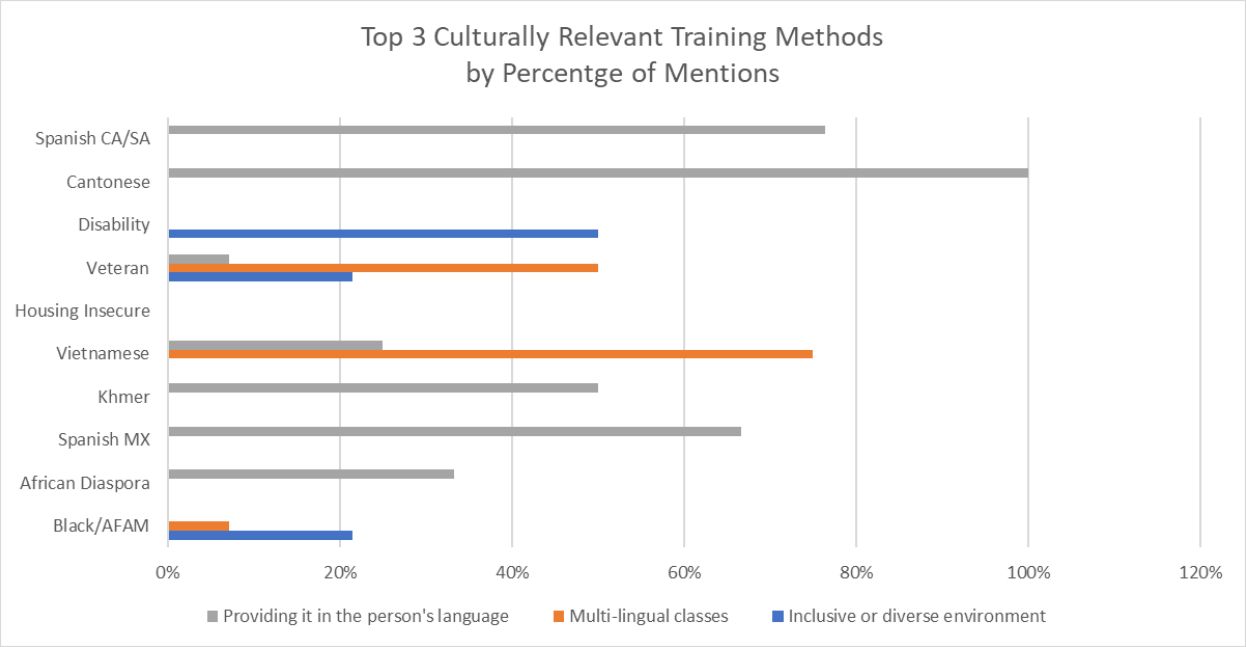
Top Three Culturally Relevant Training Mentions:

1.) providing the training in the person's language (29)
2.) multilingual classes (11)
3.) inclusive or diverse environment (7)

Chart 22 shows that only one focus population mentioned all of the top three (3) culturally relevant training methods within their groups: veterans.

- Three (3) focus populations had over 60% of their responses mention the importance of providing the training in the trainee's language: Spanish-speaking from Central or South America, Cantonese-speaking, and Spanish-speaking from Mexico. Vietnamese-speaking participants were more likely to mention multilingual classes.
- Two (2) focus populations were more likely to mention multilingual classes than classes in one language tailored for a particular group: Vietnamese-speaking and veteran.
- Two (2) focus populations were more likely to mention a diverse, inclusive environment over multilingual classes or training in the trainee's language: disability and Black/African American.

Chart 22: Top three (3) culturally relevant training methods by percentage of total code mentions, organized by focus population



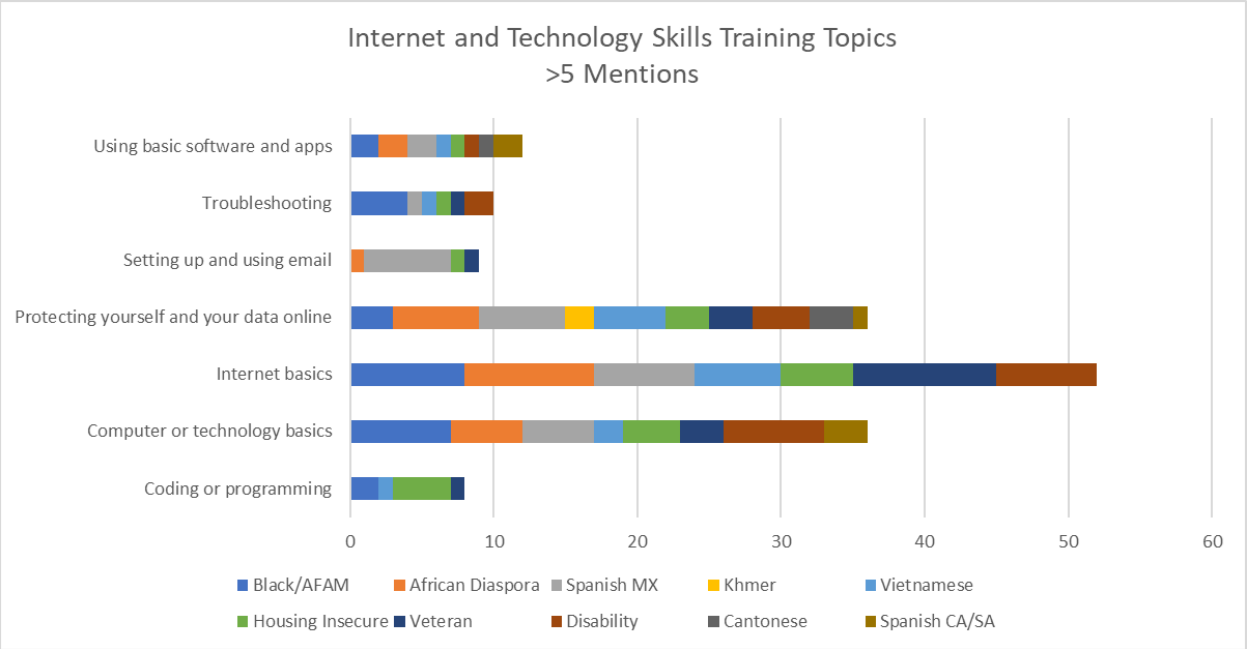
During this question regarding technology and Internet training, facilitators prompted participants to mention which topics should be covered during classes or training sessions, either for themselves or the public at large. There were 211 responses to this aspect of the question.

Top Three (3) Internet and Technology Skills Training Topics:

1.) Internet basics (52)
2.) computer or tech basics (36)
3.) protecting yourself and your data online (36)

There were numerous other topics mentioned; however, Chart 23 features only the topics that had more than five (5) mentions across focus populations.

Chart 23: Internet and technology skills training topics of interest with over five (5) code mentions, organized by focus population



Other skills training topics of interest mentioned included:

- online communication tools (5)
- artificial Intelligence (e.g., ChatGPT, Photosonic) (4)
- graphic design and arts (3)
- online business (3)
- job searching and online job applications (3)
- create websites (2)
- advanced tech training (2)
- English (2)
- medicine (2)
- how to do updates (2)
- nothing/not interested (2)
- everything (2)
- health and wellness (2)
- cloud storage (1)
- accessibility features (1)
- social media marketing (1)
- SEO (1)
- science (1)

- robotics (1)
- research (1)
- protection of consumer rights (1)
- photography (1)
- computer maintenance (1)
- new language (1)
- handling Internet addiction (1)
- hacking, scams, and fraud (1)
- creating, organizing, and searching for files (1)

Chart 24: Top three (3) Internet and technology training topics by percentage of total code mentions, organized by focus population

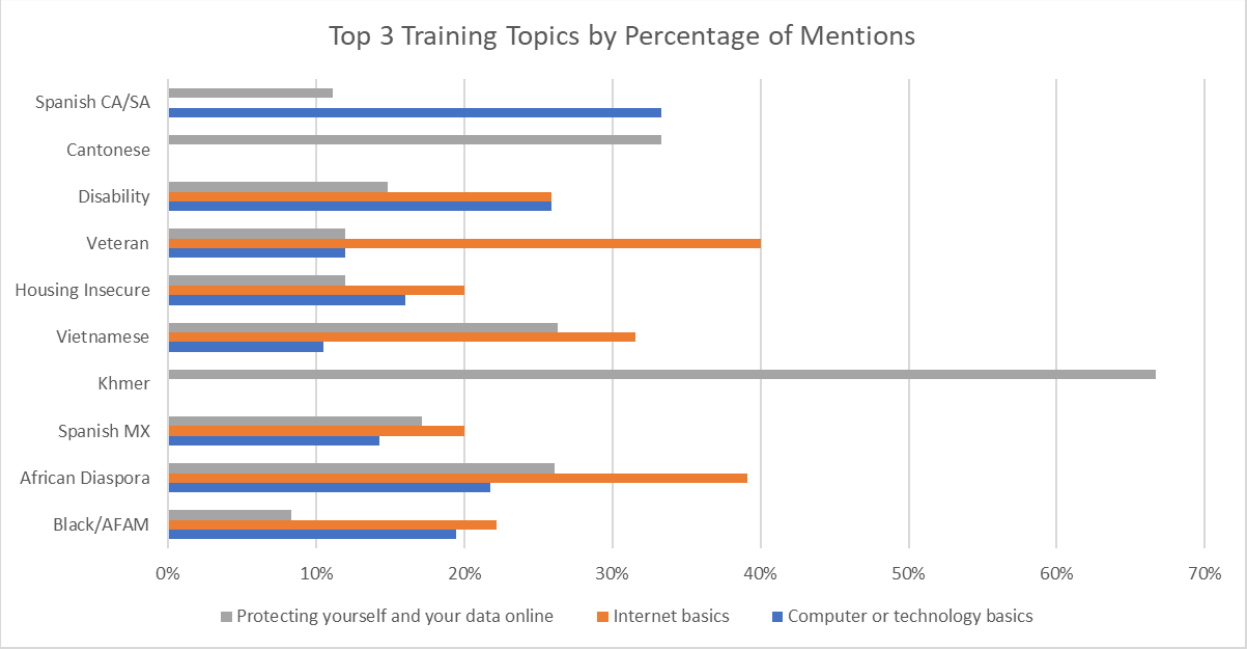


Chart 24 above shows that the Khmer-speaking participants were most likely to mention the topic of protecting yourself and your data online. Three (3) focus populations did not have mentions in one (1) or more of the top three (3) categories: Spanish-speaking from Central or South America, Cantonese-speaking, and Khmer-speaking. This is due to these focus populations providing far fewer responses to this follow-up prompt within their focus groups.

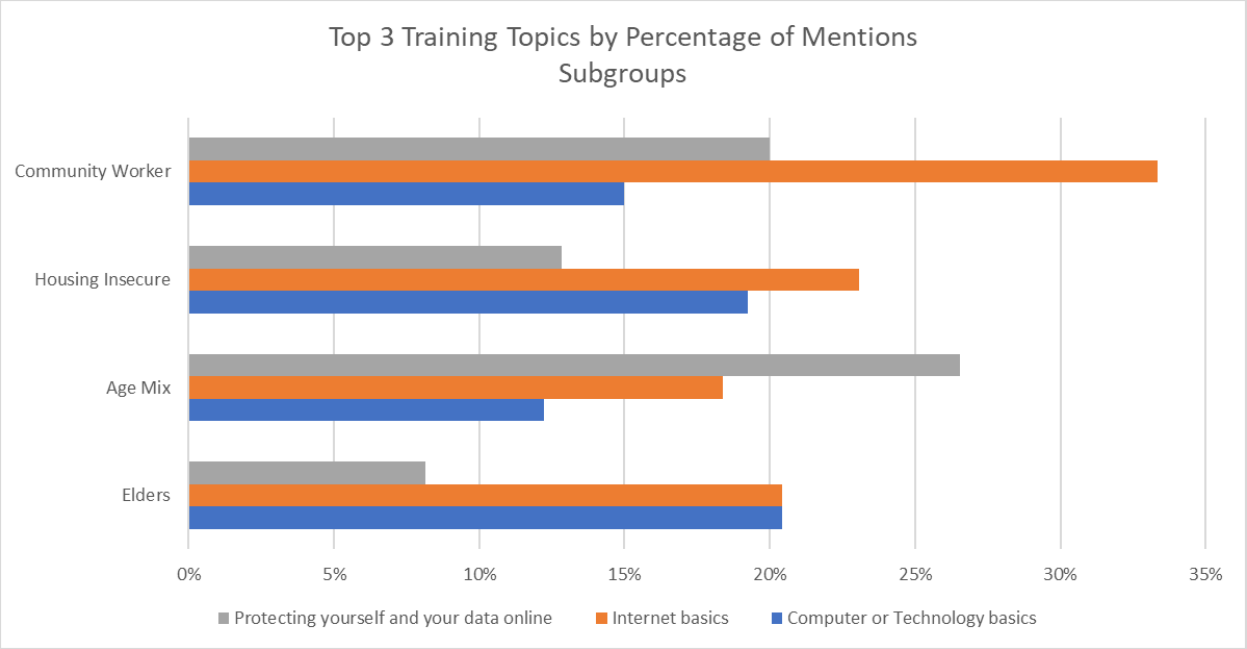
- Two (2) focus populations were more likely to mention data protection over Internet basics or computer/technology basics: Cantonese-speaking and Khmer-speaking.
- Five (5) focus populations were more likely to mention Internet basics over data protection or computer/technology basics: veteran, housing insecure, Vietnamese-speaking, Spanish-speaking from Mexico, and African Diaspora.
- One (1) focus population was equally likely to mention data protection as computer/technology basics: veteran.

- Two (2) focus populations were equally likely to mention Internet basics as computer/technology basics: disability and Black/African American.

To compare and contrast results between the four (4) subgroups, Chart 25 shows the top three (3) training topics by the percentage of total code mentions per subgroup. For example, there were 49 total code mentions of any training topic by participants in the elder (55+) focus groups. Of those 49 times a training topic was mentioned by an elder (55+) focus group participant, 20% of them were computer or technology basics.

- Two (2) subgroups were more likely to mention Internet basics over the other top training topics: community workers and housing insecure.
- One (1) subgroup was more likely to mention protecting yourself and your data online than the other top training topics: age mix.
- One (1) subgroup was equally likely to mention Internet basics as computer or technology basics: elders.

Chart 25: Top three (3) Internet and technology training topics by percentage of total code mentions, organized by subgroup



Participant Quotations: Internet and Technology Training

"Our company has IT, so we basically don't need to worry about any problems. If we encounter some special difficulties or problems, we can go to IT for remote control. Our training is mostly online and well designed. My first choice is face-to-face training, and some

training that cannot be done face-to-face can be recorded as videos for us to watch on our own." -*Participant in the Cantonese-speaking Community Workers Focus Group*

"I would like to but I have problems with retention, with memory. I understand things in the moment but then I don't remember anything. I would prefer classes in person, in Spanish." -*Participant in the Spanish-speaking from Central and South America Elders (55+) Focus Group*

"If, in society, there was a program created to give training on the Internet, I think that they should have one for each language, of different levels, for different skill sets, and it can be both online and in-person. For example, for some people who have the ability to do so, they can attend in person to the classroom. But there are a number of people who don't have that access and so, having online classes would be good too." -*Participant in the Vietnamese-speaking Community Workers Focus Group*

Question 6: Security and Comfort Online

The sixth major category of questions asked participants to reflect on their sense of security and comfort while using the Internet and technology, as well as what makes them feel more or less secure.

Top Three (3) Security and Comfort Mentions:

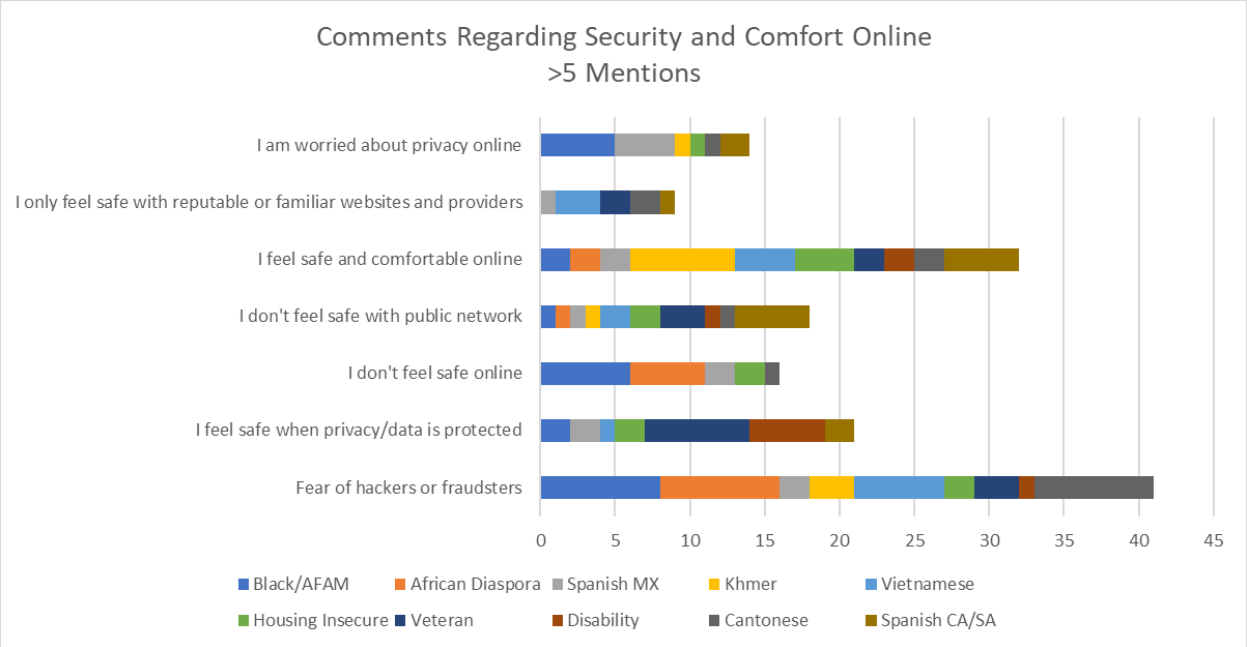
1.) fear of hackers or fraudsters (41)
2.) I feel safe and comfortable online. (32)
3.) I feel safe when my privacy and data are protected. (21)

Security and Comfort Online

The most frequently mentioned comments related to security and comfort were fear of hackers or fraudsters, feeling safe and comfortable online, and only feeling safe when privacy and data are protected. The participants most likely to mention a fear of hackers or fraudsters were in the Cantonese and Black/African American focus groups. The subgroup most likely to mention a fear of hackers or fraudsters was the age mix focus group participants. The subgroup most likely to report feeling safe and comfortable online were the elders (55+). It is not clear why this is the case and could be a topic of further research in the future. This general concern for security and privacy informs the recommendations to provide digital skills training that includes online safety, as well as applications that make privacy settings easy to understand and use.

Chart 26 shows codes that received more than five (5) mentions across the focus populations.

Chart 26: Comments regarding security and comfort online with over five (5) code mentions, organized by focus population

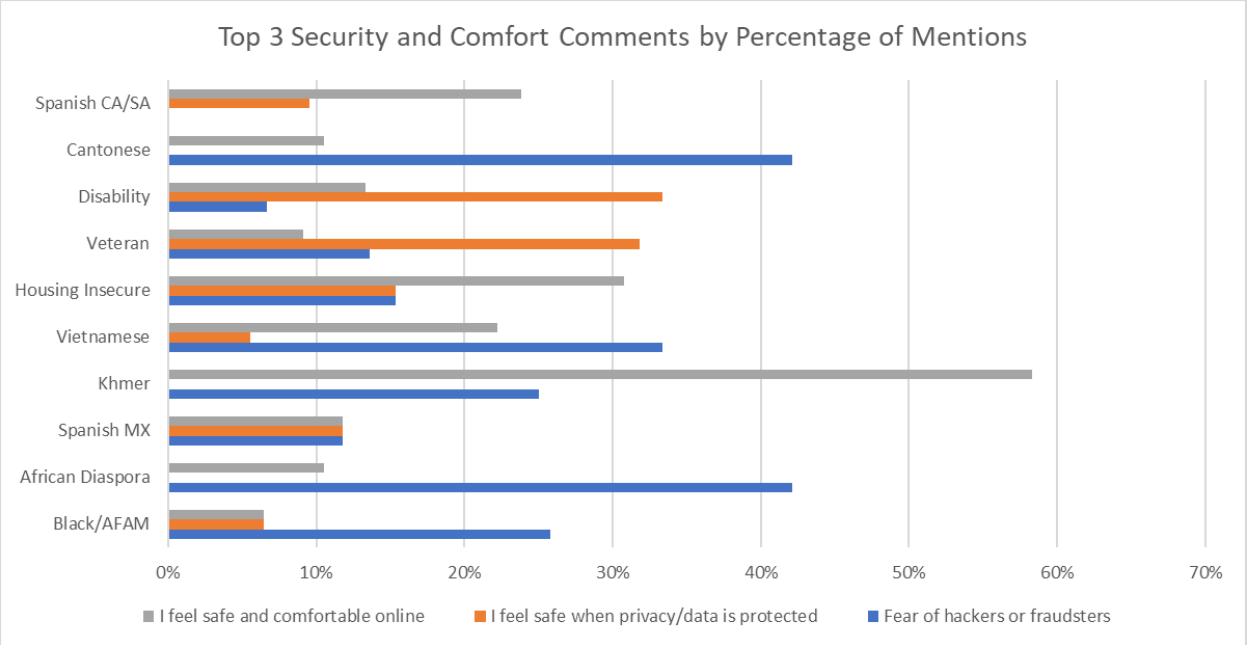


Other comfort and safety comments with five (5) or fewer mentions are:

- I don't feel safe doing financial transactions online. (5)
- I feel safe when using a VPN. (5)
- I don't feel comfortable with the Internet or website security process (e.g.,two-factor authentication). (4)
- I prioritize personal safety or privacy settings. (4)
- I feel comfortable if the network is secured. (4)
- I feel safe sometimes or somewhat. (4)
- I feel safe when a family member helps me online. (3)
- I don't use the Internet. (2)
- I don't feel safe if privacy is breached. (1)
- I don't feel safe with fake news. (1)
- I feel safe when the connection is not interrupted. (1)
- I feel safe when there is free speech. (1)
- I don't know. (1)

Because not all focus populations shared the same number of responses, Chart 27 shows the top three (3) codes mentioned according to percentages of total mentions per focus population.

Chart 27: Top three (3) codes regarding security and comfort online by percentage of mentions, organized by focus population



- The Khmer-speaking group participants were the most likely to report feeling safe and comfortable online.
- Three (3) focus populations were more likely to report feeling safe/comfortable than the other top codes: Spanish-speaking from Central or South America, housing insecure, and Khmer-speaking.
- Two (2) focus populations were more likely to report feeling safe when their privacy/data is protected over the other top codes: disability and veteran.
- Four (4) focus populations were more likely to report a fear of hackers/fraudsters over the other top codes: Cantonese-speaking, Vietnamese-speaking, African Diaspora, and Black/African American.

Not all focus populations made comments represented in the top three (3). Top comments are listed by focus population below:

- The top three (3) comments for the African Diaspora focus population were:
  1.) fear of hackers or fraudsters
  2.) I don't feel safe online.
  3.) I feel safe and comfortable online.

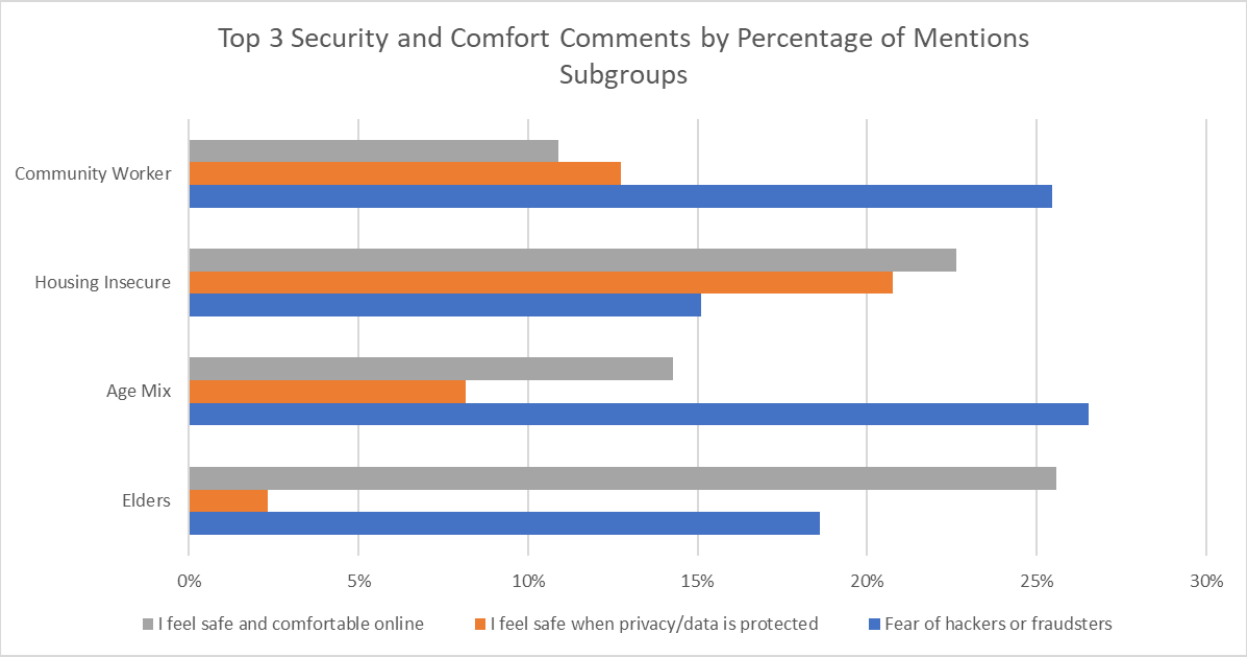
- The top two (2) comments for the Khmer-speaking focus population were:
  1.) I feel safe and comfortable online.
  2.) fear of hackers or fraudsters
  Other comments had only one (1) mention.

- The top two (2) comments for the Cantonese-speaking focus population were:
  1.) fear of hackers or fraudsters
  2.) I feel comfortable if the network is secured.
  Other comments had only one (1) or two (2) mentions.

- The top two (2) comments for the Spanish-speaking from Central or South America focus population were:
  1.) I don't feel safe with a public network.
  2.) I feel safe and comfortable online.
  Other comments had only one (1) or two (2) mentions.

To compare and contrast results between the four (4) subgroups, Chart 28 shows the top three (3) security and comfort codes by the percentage of total code mentions per subgroup. For example, there were 43 total code mentions about online security and comfort by participants in the elder (55+) focus groups. Of those 43 times a security and comfort code was mentioned by an elder (55+) focus group participant, 26% of them expressed fear of hackers or fraudsters.

Chart 28: Top three (3) codes regarding security and comfort online by percentage of mentions, organized by subgroup



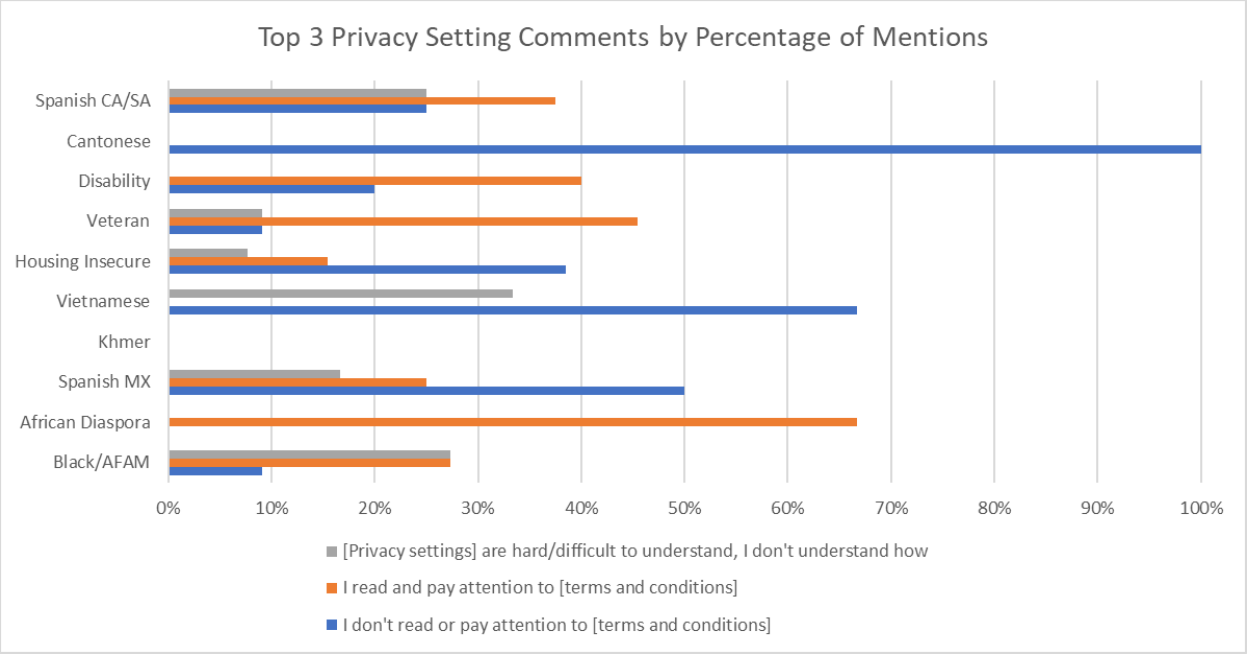
- Two (2) of the subgroups were more likely to mention a fear of hackers or fraudsters than the other top security and comfort codes: community workers and age mix.
- Two (2) of the subgroups were more likely to mention feeling safe and comfortable online than the other top security and comfort codes: housing insecure and elders (55+).

- Three (3) of the subgroups were more likely to mention feeling safe and comfortable online than feeling safe when privacy/data is protected: housing insecure, age mix, and elders.
- One (1) subgroup was least likely to state they felt safe and comfortable online: community workers.

As part of the overall line of inquiry regarding security and comfort, participants were prompted by facilitators to reflect on privacy settings. There were 69 total responses about privacy settings. Participants frequently mentioned terms and conditions in response to this prompt. There was a similar number of comments stating that participants read terms and conditions as comments stating participants did not read them. There were, however, different responses from different focus populations. The codes and mentions in response to this question are:

- I read and pay attention to [terms and conditions]. (20)
- I don't read or pay attention to [terms and conditions]. (19)
- It's difficult to understand or I don't understand how [to use privacy settings]. (10)
- Privacy settings are important. (8)
- I am not worried about it. (5)
- [Privacy settings] are presented well and understandable. (5)
- I don't trust [privacy settings]. (2)

Chart 29: Top three (3) comments regarding privacy settings by percentage of mentions, organized by focus population



Note that there were large differences in who reads and pays attention to privacy terms and conditions. The focus groups were not able to isolate why participants read them or not. Chart 29 shows the top three (3) codes about privacy settings by percentages of total mentions per focus population.

- One (1) focus population was equally likely to mention that they read and pay attention to terms and conditions as privacy settings were difficult to understand: Black/African American.
- Four (4) focus populations were more likely to mention that they read and pay attention to terms and conditions than the other two top codes: Spanish-speaking from Central or South America, disability, veteran, and African Diaspora.
- Four (4) focus populations were more likely to mention that they do not read or pay attention to terms and conditions than the other two top codes: Cantonese-speaking, housing insecure, Vietnamese-speaking, and Spanish-speaking from Mexico.

Participant Quotations: Online Security and Comfort

"Public Wi-Fi can be a two edged sword, doing this password protected. But even then, and I've always wanted to create a device to intercept hackers and send a virus into their computer." -*Participant in the Housing Insecure Elders (55+) Focus Group*

"My privacy is very important for me because I feel safe and comfortable using the Internet in my own space. When I don't feel safe…I don't browse at all until when I get home. Privacy settings is very important and should be considered important ranging from security passwords, and the things you post online too." -*Participant in the Veteran Age Mix Focus Group*

"I feel safe online. It is safer when I use Internet at home. No one will bother me at home. I never heard of cyber safety before. I have heard of identity theft. Someone in Guangzhou had stolen my identity before but I am not afraid of these thefts." -*Participant in the Cantonese-speaking Housing Insecure Focus Group*

Focused Community Question: Language and Technology

Participants in the focus groups held in languages other than English were asked if language is a barrier to Internet and technology access. There were 61 coded mentions from 55 participants in response to this question. Responses were coded with a binary of whether language is or is not a barrier to accessing the Internet and technology. Some of the responses stating that language is a barrier were also coded to note *why* it is a barrier:

- It is a barrier because there are no customer representatives for some languages. (2)
- It is a barrier because we are not familiar with Internet/technology languages. (2)

- It is a barrier because not everything can be translated. (1)
- It is a barrier because there are many dialects. (1)

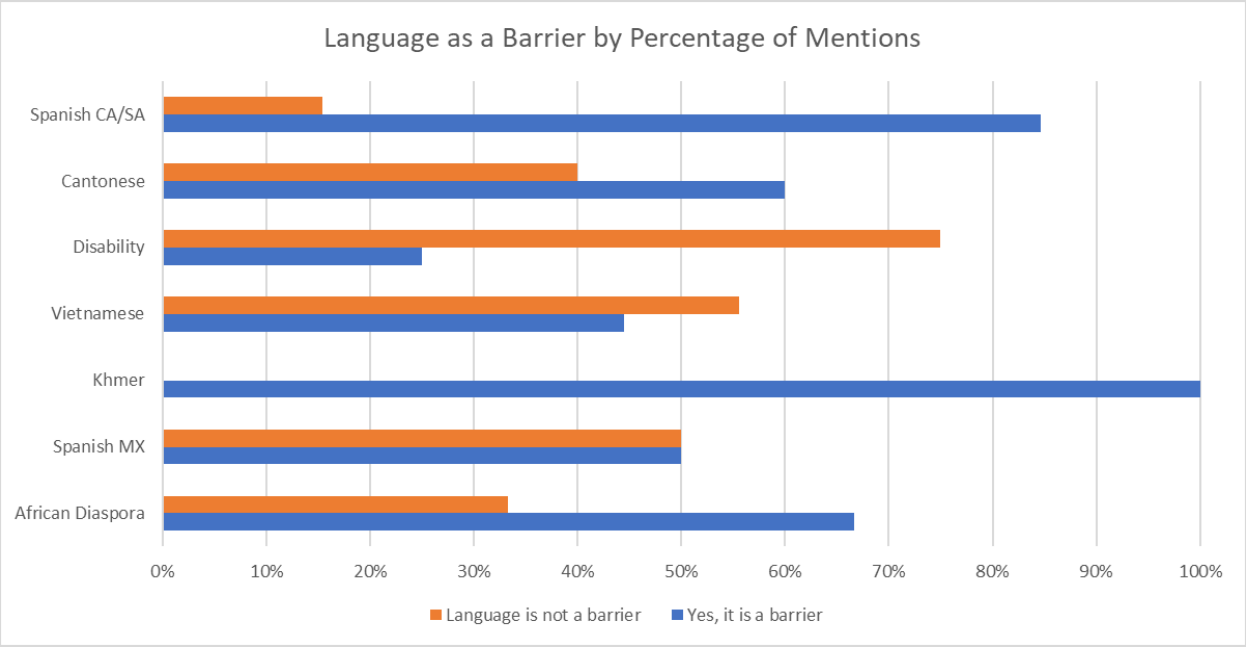
Language as a Barrier to Internet and Technology Access

More than 60% of the comments from the focus groups held in languages other than English stated that language is a barrier to using the Internet and technology. There were 35 participants who stated that language is a barrier to Internet and technology access, while 20 participants stated that it is not. The participants most likely to state that language is a barrier to Internet and technology access were in the Khmer focus groups. The subgroup most likely to state that language is a barrier was the elders (55+) focus group participants.

These findings inform recommendations such as ensuring that customer and tech support services are provided in multiple languages; websites and applications are translated, especially for languages that are not automatically translated well through means such as Google Translate; digital skills training is offered in multiple languages; and outreach efforts for reduced cost or free Internet service or devices are conducted in multiple languages.

Chart 30 shows the percentage of mentions on the binary scale (yes or no) per focus population, excluding the additional and more specific codes to avoid participant duplication.

Chart 30: Language as a barrier by percentage of total code mentions, organized by focus population

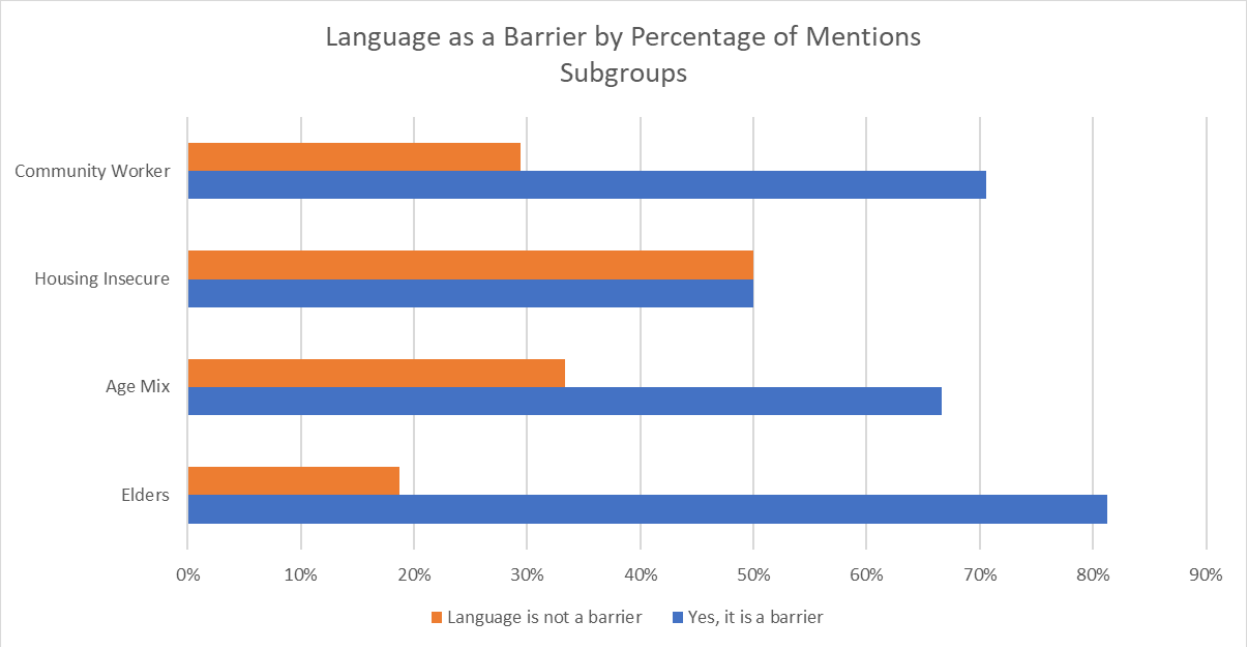


- Four (4) focus populations were more likely to say that language was a barrier than not: Spanish-speaking from Central and South America, Cantonese-speaking, Khmer-speaking, and African Diaspora.
- Two (2) focus populations were more likely to state that language is not a barrier: disability and Vietnamese-speaking.
- One (1) focus population was equally likely to state that it is and is not a barrier: Spanish-speaking from Mexico.

To compare and contrast results between the four (4) subgroups, Chart 31 shows whether or not language is a barrier by the percentage of total code mentions per subgroup. For example, there were 16 total code mentions about language as a barrier by participants in the elder (55+) focus groups. Of those 16 times, 81% of them stated that language was a barrier.

- Three (3) of the subgroups were more likely to mention that language was a barrier than not a barrier: community worker, age mix, and elders (55+).
- One (1) of the subgroups was equally likely to mention that language was a barrier and not a barrier: housing insecure.
- Community workers and elders (55+) were most likely to state that it is a barrier.

Chart 31: Language as a barrier by percentage of total code mentions, organized by subgroup



Participant Quotations: Language as a Barrier

"Yeah [language is a barrier], because not everyone, even though we're all Latinos, we don't speak that same Spanish. There are many kinds of Spanish, different words, dialects, native languages. Maybe people can't acquire all that, they can't explain themselves completely well, because no matter how much they think something is in Spanish, there is no complete translation for everything from English to Spanish. Sometimes the translation is a little different, or it is not totally what you mean, because it is not said as you say it in your language that one is accustomed to." -*Participant in the Spanish-speaking from Central or South America Age Mix Focus Group*

"No, it's not a challenge for me. The tool I use does a translation for me but it's not accurate. It is difficult to find classes in your language, but you can get 20 percent. I have no one to ask for help." -*Participant in the Somali-speaking African Diaspora Housing Insecure Focus Group*
"Of course, it's hard because we don't know the language. But in my phone, it shows all information in Khmer such as news in Khmer." -*Participant in the Khmer-speaking Elders (55+) Focus Group*

The second participant quotation above demonstrates a phenomenon of some participants stating that something such as language is not a barrier or a difficulty, then proceeding to list barriers and difficulties. This phenomenon of initially reacting with positivity or negation of difficulties could be accounted for in future qualitative research. When accounted for, the number of participants stating that language or another factor is a barrier could be higher.

Focused Community Question: Housing and Technology

There was an additional prompt for the housing insecure focus population asking if and how housing insecurity affects access to the Internet and technology.

There were 41 total code mentions for responses to this question:

- Housing insecurity affects access to good [high quality] Internet connection. (11)
- Housing insecurity negatively affects [any] access to the Internet. (8)
- I have no problems. (6)
- Housing insecurity affects access to Wi-Fi. (6)
- Housing insecurity affects access to power/electricity. (3)
- I don't know. (2)
- No money to pay for a data plan. (2)
- Housing insecurity affects access to a choice of providers. (1)
- Housing insecurity affects device security. (1)
- Housing insecurity affects finding places to use the Internet. (1)

Top Four (4) Housing Insecurity and Technology Code Mentions:

1.) Housing insecurity affects access to good [high quality] Internet connection. (11)
2.) Housing insecurity negatively affects access to [any] Internet. (8)
3.) I have no problems. (6)
4.) Housing insecurity affects access to Wi-Fi. (6)

Housing Insecurity as a Barrier to Internet and Technology Access

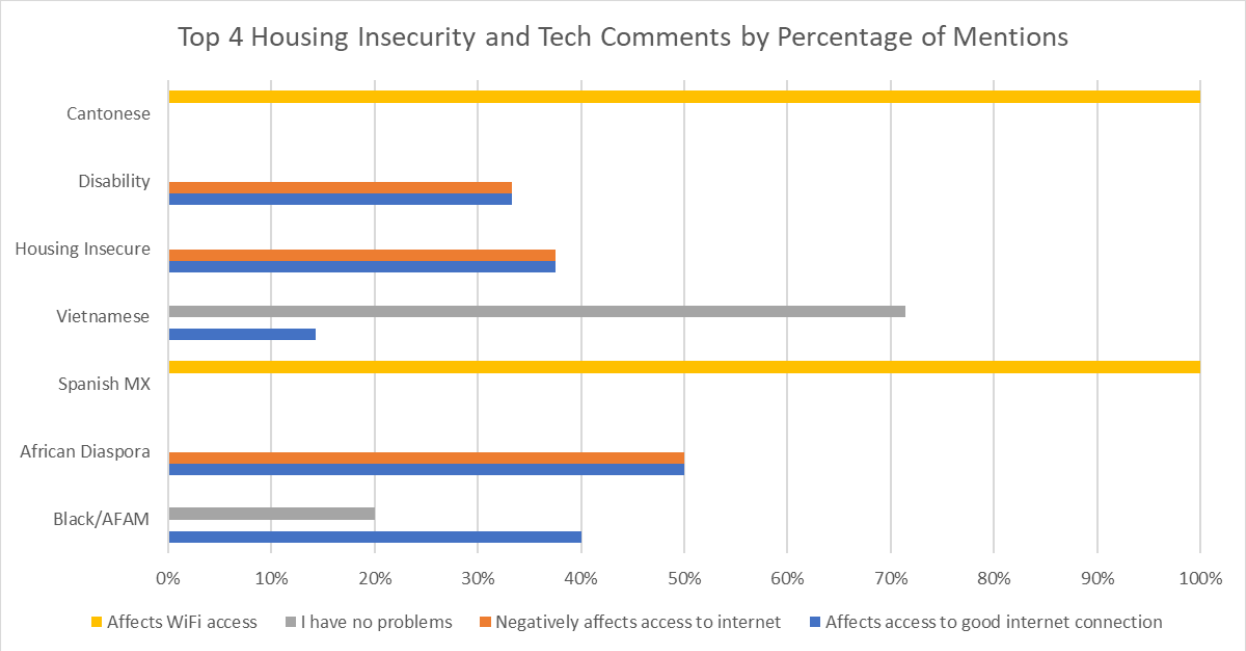
The most mentioned comments regarding housing insecurity as a barrier to Internet and technology access stated that it affects access to a good or high quality Internet connection, it negatively affects access to any Internet connection, it has no impact (I have no problems), and it affects access to Wi-Fi specifically. The participants most likely to mention that housing insecurity affects access to a good or high quality Internet connection were in the African Diaspora focus groups.

These findings support recommendations such as ensuring high quality data service across the city through improved infrastructure, offering public spaces that are comfortable and accessible for Internet use during a wider range of hours, and applying lower-cost or free Internet service programs to mobile devices.

While one of the 10 focus populations for this research was individuals experiencing housing insecurity, housing insecurity was also a subgroup across all 10 of the focus populations.

Chart 32 shows the top four (4) housing insecurity and technology codes by the percentage of total mentions per focus population. There were no data points for the Khmer-speaking and veteran focus groups. There were data points for the Spanish-speaking from Central or South America groups; however, none of them were in the top four (4) codes.

Chart 32: Housing insecurity and technology comments by percentage of total code mentions, organized by focus population



- Two (2) focus populations had 100% of their housing insecurity code mentions in the "affects Wi-Fi access" category: Cantonese-speaking and Spanish-speaking from Mexico.
- Three (3) focus populations were equally likely to mention that housing insecurity "affects access to good Internet connection" and "negatively affects access to Internet:" disability, African Diaspora, and housing insecure.
- The Black/African American groups also mentioned "I have no problems."
- The Vietnamese-speaking focus groups were most likely to mention "I have no problems" as compared to their total number of responses.

Due to the limited number of responses to this question, as well as the crossover of the housing insecure focus population and housing insecure subgroup, responses between subgroups will not be compared and contrasted.

Some participants also referred to the ways that a lack of Internet and technology access affects the ability to obtain housing. There were only four (4) coded mentions, which are listed below:

- affects making housing payments (1)
- affects access to services (1)
- affects job search or applications (1)
- affects processing documents (1)

Participant Quotations: Housing Insecurity and Technology

"You never know what's going to happen with your items, right? So you may lose your phone or you may lose your laptop, tablet, things of that nature. And then also finding places where it's safe to sit. Or, you know, a place where you're not being discriminated against but for your displacement and finding a place where you're allowed to use the Internet is a big issue as well." -*Participant in the Disability Housing Insecure Focus Group*

"You know, being homeless, and on the street, that becomes priorities. …Priority becomes shelter, food, water. …Electricity is dead last, in order to get on Internet you gotta have electricity, not everybody has a phone, or they get a free phone. But it's not something that you focus on, even though you do need it, you think it's a big priority. There's just so much going on. How many of us can call a homeless friend right up [and] they will answer right away?" -*Participant in the Black/African American Housing Insecure Focus Group*

"Housing instability = network instability" -*Participant in the Housing Insecure Community Workers Focus Group*

Key Findings and Recommendations

Due to the sample size limitations of this qualitative research, it is important to situate these findings within the context of ongoing community feedback and research without overstating or overgeneralizing in reference to any given focus population. This research was focused sampling and is not a representative, statistically-valid sample of Seattle; however, it is a valuable, informative snapshot. The goal was to ensure due representation of both commonly underrepresented and key focus populations. The following recommendations are derived from both the Phase I preliminary survey and the Phase II focus groups. The recommendations are organized by the Four Pillars of Digital Equity for ease of application to community programming and policy.

Digital Equity Pillar I: Affordable and Sufficient Internet

Key Findings from Phase I Preliminary Survey:

- Internet that is “not affordable” is the most mentioned complaint, with 120 mentions.
- Multiple respondents mentioned (anecdotally) that certain areas of Seattle have limited Internet choices and access, such as North Beacon Hill, South Beacon Hill, and South Park.

Key Findings from Phase II Focus Groups:

- Focus group participants most frequently mentioned the barriers of unreliable or inconsistent Internet connection in general, bad connection in certain parts of their homes or buildings, and expensive Internet service.
- Participants in the Black/African American focus groups were the most likely to mention unreliable Internet service in general as a barrier over other focus populations.
- Participants in the elder (55+) subgroup were the most likely to mention unreliable Internet service in general as a barrier over other subgroups.
- Focus group participants were most likely to mention their phones, by a large margin, when asked what devices they use to access the Internet.
- Participants in the Khmer focus groups were the most likely to mention a phone over other focus populations.
- Participants in the housing insecure subgroup were the most likely to mention a phone over other subgroups.
- For many participants, access to the Internet is vital for communication.
- There were mixed results with regard to whether or not focus group participants who primarily speak languages other than English view language as a barrier to Internet and technology access. Participants in the Khmer-speaking focus groups were the most likely to state that language is a barrier.

Recommendations:

1. Drive free or low-cost Internet access through community programming, discounts to consumers, subsidies for providers, and/or pricing regulation.
2. Simplify sign-up processes for support.
3. Perform outreach to promote existing and future programs that reduce or eliminate Internet costs.
4. Ensure that free or low-cost Internet access is available for mobile devices.
5. Provide free Internet in spaces that are public but also quiet, comfortable, and accessible at all hours.
6. Encourage Internet provider alternatives.
7. Improve infrastructure for consistent connection across the city.
8. Coordinate with apartment complexes to ensure tenants have fast and reliable Internet access in the building.

Digital Equity Pillar II: Digital Skills and Tech Support

Key Findings from Phase I Preliminary Survey:

- "Not feeling good or confident at [technology]" was the third most mentioned complaint with 78 mentions.

Key Findings from Phase II Focus Groups:

- Focus group participants were most likely to state a preference for in-person Internet and technology training.
- Participants in the Khmer focus groups were the most likely to state a preference for in-person training.
- Online training is still desirable for focus group participants though it was not mentioned the most frequently.
- When designing training programs and classes, it is key to provide the lessons in languages other than English.
- The three (3) topics of greatest interest to participants are Internet basics, computer or technology basics, and protecting yourself and your data online.

Recommendations:

1. Meet community where they already are, in both location and manner of relating.
2. Consider that there are differing needs in subcommunities and solutions may vary. Prioritize design efforts that identify the many diverse groups, connect and engage with them, and enable variations in solutions to assist different communities and members of those communities.
3. Provide technology classes free of charge to the public. This includes classes for elders and non-English speakers, as well as classes on online safety and security.
4. Provide technical and digital navigation support for frequently used applications such as online shopping and medical client portals.
5. Encourage elders to get online.

6. Provide technical and digital navigation support in multiple languages and in simple, understandable terms.
7. Provide training that covers basics which are applicable to daily use.
8. Provide training and technical support both online and in person at centralized locations.

Digital Equity Pillar III: Devices for all Uses

Key Findings from Phase I Preliminary Survey:

- Some families rely on the devices distributed by their child's school.
- Several participants (N=20) wanted free devices to help them get online.

Key Findings from Phase II Focus Groups:

- The devices most commonly mentioned by focus group participants were portable: phone, laptop, and tablet.
- A phone was by far the most mentioned device for accessing the Internet.
- Participants in the Khmer focus groups were the most likely to mention having a phone compared to other focus populations.
- Participants in the housing insecure subgroup were the most likely to mention using a phone to access the Internet compared to other subgroups.
- Largely, focus group participants were not sharing their devices with other people, so each household member may need sufficient devices.
- Participants in the housing insecure subgroup were the most likely to report sharing their devices compared to other subgroups.

Recommendations:

1. Provide lower-cost or free devices that are accessible (e.g., larger screens for visibility), including mobile phones.
2. Distribute devices year-round in schools or ensure that families utilizing school devices have access during the summer.

3. Distribute devices outside of schools through community based organizations and private businesses frequented by community members.

Digital Equity Pillar IV: Applications and Services

Key Findings from Phase I Preliminary Survey:

- "Privacy" was the second most mentioned complaint with 90 mentions.
- Respondents want applications and services that secure their data.
- Respondents want stable and accessible tech.

Key Findings from Phase II Focus Groups:

- Four (4) focus populations were more likely to say that language was a barrier to using the Internet than not: Spanish-speaking from Central and South America, Cantonese-speaking, Khmer-speaking, and African Diaspora.
- Community workers were the subgroup most likely to report that language was a barrier to using the Internet when compared to other subgroups.
- Fear of hackers or fraudsters was the most mentioned sentiment regarding security and comfort when using online applications.
- Participants in the Cantonese and African Diaspora focus groups were the most likely to report a fear of fraudsters or hackers when compared to other focus populations.
- Elders (55+) were the subgroup most likely to report feeling safe and comfortable online.

Recommendations:

1. Make privacy setting options clear.
2. Balance attractive, visual content with low-bandwidth content.
3. Ensure that applications work well with assistive technologies.
4. Ensure that applications and websites are translated, especially in languages that are not easily translated through other means such as Google Translate.

The qualitative research conducted as part of the 2023 Seattle Technology Access and Adoption Study aimed to understand the technology needs of underrepresented communities. The in-depth discussions with community members addressed Internet barriers, device usage, Internet types, Internet adequacy, quality of life, training methods, security, language barriers, and barriers due to housing insecurity.

The key findings of the focus groups highlight the importance of reliable and affordable Internet, accessible programs, and services in multiple languages. Recommendations include providing free or low-cost Internet access and devices that meet accessibility needs; simplifying sign-up processes; providing public Internet access with comfortable surroundings; improving infrastructure; offering language-specific training and support; and prioritizing safety, data privacy, and security training and assistance. By utilizing these findings and implementing these recommendations, Seattle can promote equitable technology access and adoption for all residents.

Appendix A: Focus Group Questions and Prompts

Question 1 – Intros: Please share your name, what part of Seattle you live in, and answer this question: How do you access the Internet and what devices do you use to access the Internet? For example, do you use wifi or do you plug in a cable for the Internet? Do you use a hotspot? Some people use a new tablet or a borrowed laptop. What do you use (if anything) to get online? Please be as descriptive as you can.

- Prompts and Follow-Ups:
    - Do you use Wi-Fi with a modem, a hotspot, a data plan, DSL?
    - Do you use the Internet at home or go somewhere else like a library or community space?

Question 2: Some people only use the Internet for sending emails, some people use it for watching videos, some people use it for Zoom calls. What does Internet that is “good enough” look like to you? What does “adequate” Internet access mean to you? What does affordable access mean to you?

- Prompts and Follow-Ups:
    - We want to understand the different ways people understand Internet speed and Internet access.
    - Do you think the Affordable Connectivity Program is valuable and accessible?

Question 3: How does your Internet access affect the quality of your life?

- Prompts and Follow-Ups:
    - Does it stop you from doing anything like telehealth appointments or online classes?
    - Do you have unreliable Internet at home or where you stay? Is it not usable during certain times of the day? In certain rooms?
    - What are your barriers?

Question 4: What devices do you and your household use to get on the Internet? What do you find challenging about them?

- Prompts and Follow-Ups:
    - What are your barriers to getting the devices you want?
    - Do you share devices with other people?
    - What are the sizes of your screens?

Question 5: How would you like to receive technology training and Internet education, if at all?

- Prompts and Follow-Ups:

    - For example, if an organization started a new program giving community members tech training, how would you like the program to be if you were a participant?
    - Where would it be given? How should it be given? Online or in person?
    - How would you make it culturally specific or relevant?
    - When you need help now, where do you get it?
    - What topics?

Question 6: When do you feel safe and comfortable using technology, if at all? When you don't feel safe and comfortable, what would help? What about privacy?

- Prompts and Follow-Ups:
    - Do you feel safe online? Comfortable?
    - What specific topics would you like training on?
    - Do you pay attention to privacy settings and feel like they're presented in a way you can understand what to do?
    - Do you pay attention to privacy settings and feel like they're presented in a way where you can understand what to do?

Focused Community Question (for non-English groups): Is language a barrier for accessing the Internet?

- Prompts and Follow-Ups:
    - Does your device automatically translate websites and apps for you? Does it do a good job of translating?
    - Can you get tech support and classes in your language?
    - Who do you ask for help?

Focused Community Question (for housing insecure groups): How does housing instability affect access to the Internet and devices in Seattle?

- Prompts and Follow-Ups:
    - Can you be specific about a time you couldn't access housing or a story you've heard from a community member?