UNVEILING THE DIVIDE

Investigating Digital Skills Gaps in Washington State

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WASHINGTON Secretary of State
Washington State Library

Unveiling the Divide: Investigating Digital Skills Gaps in Washington State

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This study was compiled by the Equity in Education Coalition for the Washington Office of the Secretary of State – Washington State Library Division.

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Abstract

This report summarizes WSL's contracted work with the Equity in Education Coalition (EEC) to conduct a statewide assessment of Washingtonians' digital skills using small scale qualitative methods and community-based outreach. We use an original survey of Digital Navigators who are affiliated with the ConnectWA coalition as well as community story collection conducted by embedded community service organizations also affiliated with ConnectWA. We learned that Washingtonians furthest from digital justice use the internet and devices in many of the same ways as those who are fully digitally equipped, but that internet access, device shortages, language barriers, and lack of resources mean that many do not have the digital skillsets they need to thrive in Washington State. We also learned that family and community form the core supports for community members seeking both digital support and other resources and that outside providers are still viewed with varying degrees of trust.

We recommend continued learning about digital skill gaps throughout the state with a focus on centering and elevating the voices and experiences of communities furthest from digital justice.

Introduction

BACKGROUND

As part of the Washington State Library's operations funding, the 2023-24 state budget allocated $100,000 of the general fund for the fiscal year 2023 to the state library to "develop a digital literacy assessment tool and protocol to be used by organizations that provide digital literacy support; conduct a baseline assessment of digital readiness for a representative sample of Washington residents; and publish the assessment tool, protocol, and baseline assessment findings on the state library website for public use by June 1, 2023. The office must also submit a report to the governor and legislature by June 1, 2023, that describes the tool, protocol, and assessment findings." (Washington State Senate Committee Services, 2022, page 574).

Washington State Library then issued a request for proposals (RFP) seeking a vendor to complete the assessment work (State of Washington, 2023). The Equity in Education Coalition (EEC) submitted a response to the RFP and was subsequently awarded the contract beginning on April 7 and ending on May 26, 2023. This report summarizes the scope of the work completed by EEC, the known literature about digital skills and skill assessments, and our methods, key learnings, and recommendations for next steps.

Figure 1. Scope of work for EEC's contract with Washington State Library. *The vendor shall conduct a statewide assessment of Washingtonians' digital skills needs and likely pathways for support, using mostly small-scale, qualitative methods, with emphasis on historically underserved audiences. The purpose of this project is to capture Washingtonians' digital skills needs to work, learn, access services, connect to community and otherwise thrive, and to help support organizations design responsive services and seek funding.*

The vendor shall focus on reaching historically underserved audiences and should identify which of the following underserved audiences (as identified in the U.S. Digital Equity Act, 2021) will be the focus of this assessment.

People who are at 150 percent or below of the U.S. Federal Poverty Line
People with disabilities
Elders
People whose first language is not English
People who are incarcerated or have been incarcerated
Veterans
People without internet service at home
People who are members of racial or ethnic minorities (in Washington, as of July 2021 U.S. Census estimates: Hispanic/Latinx, Asian, two or more races, Black, American Indian, and Alaska Native, Native Hawaiian and Pacific Islander)
People living in rural settings
People living in urban settings
Youth (people under the age of 19)

SCOPE

This report was created in response to the Washington State Library's wish to better understand the state of digital skills among Washingtonians, particularly those who are furthest from digital justice.[1] Figure 1 summarizes the scope of work for this report including the purpose, goals, preferred methodology, and populations of focus. It is worth noting that the populations identified above include an enormous segment of the Washington population and this report was not designed to include all of them. Because relationships and trust are at the core of access, we leveraged relationships our leaders and organizers have built with communities, particularly over the past three years, to ensure that we were approaching potential respondents from a place of trust. The goal, then, was to reach community members whose voices we do not usually hear, listen to, and elevate their stories, and begin the process of learning where Washingtonians stand with regards to digital skills, what the needs are, and where we go next.

While we have faith that the learnings discussed in this report do capture the beliefs and experiences of the individuals we worked with, it is important to note that this group of people who had the opportunity to share their experiences is not a representative sample of Washingtonians. Rather, as noted above, it is a segment of the population that our organization has built trust with over years of deep community work. The findings here should not be taken to represent the experience of all the many residents of our state who are digitally underserved but they should be taken as testimony of the strengths and needs of the communities who are represented, and a starting place toward much broader, and deeper work.

[1] *We use this term as an analogue to the commonly used phrasing "furthest from educational justice."*

Digital Skills in Washington: What We Know

With the increasing shift of daily activities online (Dentzel, 2013; Hoehe & Thibaut, 2020; Cohen, 2021), digital skills are essential for success. In Washington State, the Office of the Superintendent of Public Instruction (OSPI) recognizes this importance and has taken steps to develop K-12 curriculum aligned with digital fluency principles. OSPI defines digital literacy as the responsible, creative, and effective use of technology for communication, information access, problem-solving, knowledge building, and improving learning across all subjects (Small, 2018).

THE DIGITAL DIVIDE AND ITS IMPACTS ON DIGITAL SKILLS

The digital divide persists in Washington, affecting students and families. This term refers to the gap in access to digital technology, hindering the development of digital skills. In Washington State, we know that access to high-speed internet is directly correlated with household income – particularly extremely low-income households; race – particularly indigeneity; and age – with seniors being much more likely to lack access (Washington State Department of Commerce, 2021, p. 11).

ASSESSING AMERICAN'S DIGITAL SKILLS

The National Skills Coalition shows that nearly one-third of American workers lack digital skills, primarily among lower income groups, older individuals, and those with a high school diploma or less (Bergson-Shilcock, 2020). Digital skill gaps predominantly exist in industries such as construction, hospitality, and retail, impeding career advancement and excluding individuals from the workforce as these sectors increasingly adopt digital tools like online scheduling and records.

The Programme for the International Assessment of Adult Competencies (PIAAC) survey conducted by the Organisation for Economic Cooperation and Development (OECD) indicates that digital literacy, like digital access, is correlated with socioeconomic status, race, English proficiency, and education. This means that individuals who struggle with economic security, who are not proficient in English, who have been locked out of our educational systems, and who are BIPOC, are less likely to possess high level of digital skills.

MULTIPLE FRAMEWORKS TO ASSESS DIGITAL SKILLSETS

Individual digital skills are assessed using various digital skills assessments, allowing evaluators to identify areas of deficit to design tailored skills training. These assessments focus on skills such as information searching, source credibility evaluation, and responsible, effective, and safe use of digital tools (Office of Superintendent of Public Instruction, n.d.).

Several digital skill assessments have also emerged in education and workforce development. Wedlake et al. (2019) compared frameworks, curricula, and assessment tools to identify common focus areas, aiding Seattle's Digital Equity Initiative in determining the primary focus for digital skills instructors.

Wedlake et al. identified ten categories of overlapping digital skills:

1. Communication: Collaborating, sharing, and exchanging information on digital platforms.
2. Creation: Engaging in digital spaces to design, create, and revise content online.
3. Device ownership: Practices for device longevity, physical care, protective software, & using technical support.
4. Gateway skills: Foundational skills needed to use devices and participate online.
5. Information skills: Applying, evaluating, and managing information in both digital and physical environments.
6. Lifelong learning: Self-assessment and self-reflection to tailor digital environments and continue learning.
7. Mobile: Understanding basic functions of a mobile device to communicate and access goods and services.
8. Online life: Accessing online resources for digitizing daily tasks and socializing within digital communities.
9. Privacy and Security: Ensuring a secure digital identity, identify threats, and understand safety implications.
10. Workplace: Advancing professionalism and success through online tools and digital systems in the workplace.

Further analysis showed that curricula associated with the various frameworks cover basic skills areas with varying focuses. However, very few of the frameworks include associated assessments. Those that do are primarily tied to specific curricula meaning that while they certainly may be useful for the students and instructors using that curriculum, they do not lend themselves to any kind of broad analysis of areas of strength and growth amongst populations as they cannot be compared to one another.

MOVING FORWARD

The Seattle Digital Equity Initiative identifies the need for comprehensive assessments to improve individual skills and generate statewide data on digital proficiency in Washington. The Northstar Digital Literacy Assessment addresses this gap by providing practice lessons and verified credentials for users (Northstar, n.d.). As a widely used assessment, it provides valuable information about who is accessing skills training, strengths and growth areas, and factors bolstering (or hindering) learning, aiding Washington's efforts to bridge the digital divide.

Methods

As noted above, this data collection effort was focused on learning more about the digital strengths and needs of Washingtonians who have been historically and currently left out of our state's digital growth. The effort was guided by WSL's desire to learn more about the following key topics regarding Washingtonians furthest from digital justice:

1. Current use of the internet and devices to work, learn, access services, connect to community and otherwise thrive;
2. Challenges using the internet and devices to work, learn, access services, connect to community and otherwise thrive;
3. Goals for working, learning, accessing services, connecting to community, and thriving, and digital skills needed to meet those goals;
4. Activities and successes in learning, finding resources and problem-solving generally, including in non-digital domains;
5. People, networks, institutions, and organizations where Washingtonians seek help.

To gather information on these topics, EEC used a small-scale qualitative approach. This means that rather than attempting to access a random or representative sample of Washingtonians, we focused elevating the voices of community members who are tied to community organizations and/or digital navigators[2] working within the Connect Washington Coalition (ConnectWA).[3] This narrow focus is driven by the desire to ensure that we were reaching people whose voices are typically left out of broader policy conversations, knowing that they are experts in their own experience and know better than anyone what their communities need in order to thrive.

The findings in this report are based on two data sources: A survey of digital navigators and individual stories collected from community members. The

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[2] More about digital navigators here: Digital Navigator Model - National Digital Inclusion Alliance

[3] ConnectWA is a collaborative of digital access stakeholders across the state working to increase digital access for Black, Indigenous, Communities of Color, low-income communities, students, elders, and other marginalized populations (ConnectWA, 2023). See Appendix B for a list of ConnectWA member organizations that received the digital navigator survey.

questions we asked on the two different forms were designed to elevate individual experiences as well as share observations and analyses of successes, barriers, services accessed, and recommended changes by community members serving as digital navigators. Our charge was then to weave what people shared into responses to the larger questions above. More detail about each of these sources is provided below.

DIGITAL NAVIGATOR SURVEY

For the digital navigator survey, we reached out to 51 digital navigators who work within the ConnectWA coalition and asked them to complete an open-ended survey (see Appendix A for survey instrument). We provided a stipend for their time.

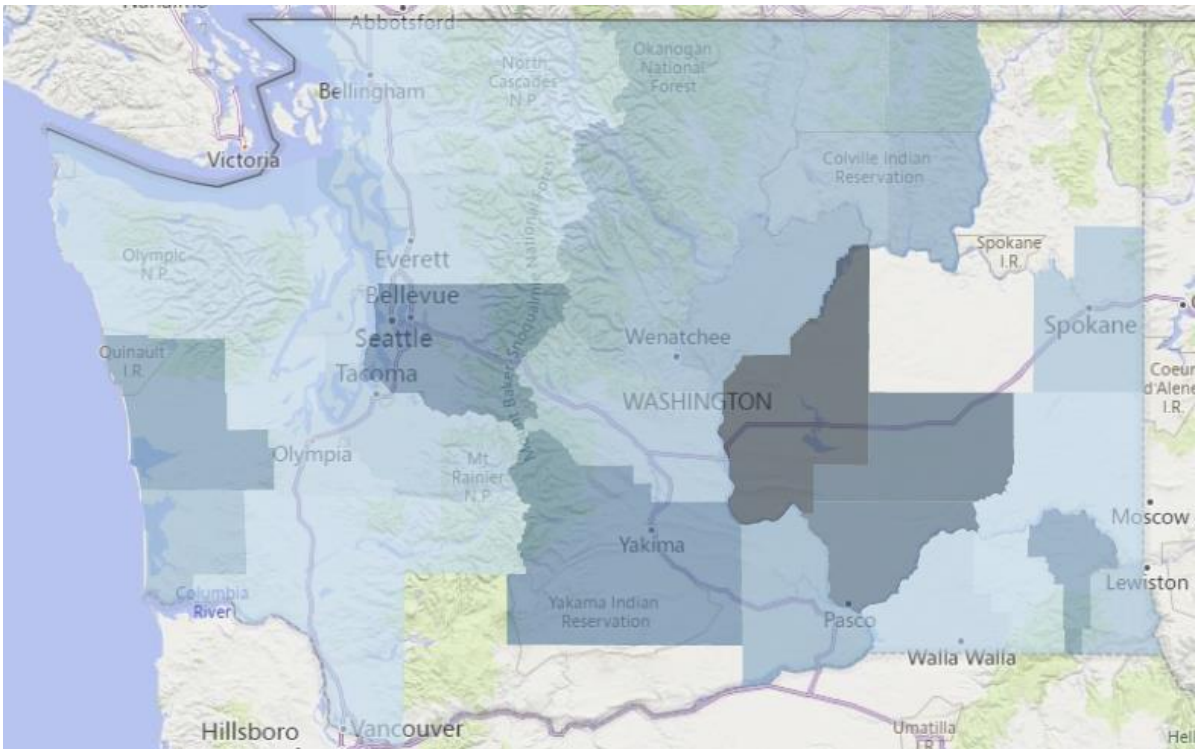
This survey asked primarily open-ended questions about navigators' observations and experiences serving their communities. Nearly all the 51 digital navigators we reached out to complete the survey, for a total of 46 unique responses. Navigators completed the survey in their preferred language; in this sample, all responses were completed in either English or Spanish.

Because the navigator survey was aimed at understanding navigators' experiences in serving their clients, we did not ask navigators themselves to share their demographic information. Instead, we relied on 12 months of intake data that Connect WA's digital navigators have been inputting into a database, where each entry captures the self-identified demographics that align with the target audiences. The figures and tables below summarize the demographic information for all the clients served by Connect WA's digital navigators since June of 2022. We provide these data to give a sense of the communities whose experiences and voices are represented in the navigators' survey of observations and experiences as well as whose voices are not included in those stories and therefore in this report.

Figure 2 below, is a "heat map" of the coverage areas of the digital navigators we surveyed. Notable on the map is that counties are unevenly represented here, with some not included, some with light coverage, and some with darker

coverage.[4] This is the result of differences in the number of community contacts made by different navigators throughout the state.

Figure 2. Washington state heat map of Connect WA Digital Navigator service.



Tables 1-3 summarize the demographic information of the clients served by surveyed digital navigators since June 2022. Table 1 summarizes clients' self-reported racial identity by county, Table 2 summarizes clients' self-reported age breakdowns by county, and Table 3 summarizes how clients are represented in the targeted audience categories for this assessment by county. It is noteworthy that most clients identified as Hispanic, Latinx, or Spanish; between 25-59 years old; had limited English Proficiency; were Immigrants or Asylum Seekers; and were Rural residing. This pattern is in part driven by heavy digital navigator coverage in Grant, Yakima, and Spokane counties but holds true for most other counties as well. In the recommendations section, we discuss options for further study to ensure that all the targeted audience's stories are robustly represented in future assessments.

[4] Areas with no shading or that appear white are either (a) not currently served by Connect WA's digital navigation program, though they may be served by other digital navigation programs, (b) are missing data, or (c) they are served by Connect WA's digital navigator program but for privacy reasons the CBOs in those areas have elected not to share demographic information about their clients.

Table 1 – Client Race by County

	Alaskan Native/ American Indian	Asian	Black or African American	Hispanic, Latinx, or Spanish	Multiracial	Prefer not to disclose	SE Asian	White	Total
Adams County	4	2	53	8,821	49	16	2	87	**9,034**
Asotin County	-	1	7	1,665	17	-	-	43	**1,733**
Benton County	2	5	15	3,164	35	2	12	76	**3,311**
Chelan County	3	4	8	2,835	23	2	1	75	**2,951**
Clallam County	-	1	2	266	8	-	-	25	**302**
Clark County	2	-	7	13	3	9	1	6	**41**
Douglas County	1	3	66	3,633	26	1	1	57	**3,788**
Ferry County	2	311	112	2,922	24	4	76	109	**3,560**
Franklin County	4	3	24	7,951	34	1	-	131	**8,148**
Garfield County	1	-	2	4,535	13	1	-	12	**4,564**
Grant County	5	4	32	11,653	70	4	2	207	**11,977**
Grays Harbor County	2	2	7	4,612	13	-	3	14	**4,653**
Island County	-	-	2	1,588	5	-	-	7	**1,602**
King County	58	554	837	4,044	97	72	528	208	**6,398**
Kitsap County	2	340	130	85	8	2	89	29	**685**
Kittitas County	2	2	25	1,925	16	-	-	46	**2,016**
Lewis County	-	22	15	4	2	-	49	7	**99**
Okanogan County	8	1	3	2,650	11	-	-	21	**2,694**
Pacific County	1	-	-	2,315	5	-	-	6	**2,327**
Pierce County	52	147	409	225	92	32	333	96	**1,386**
Snohomish County	10	39	488	19	2	9	87	20	**674**
Spokane County	8	96	36	1,261	89	28	39	200	**1,757**
Thurston County	3	129	31	26	26	-	329	25	**569**
Wahkiakum County	-	35	3	8	1	-	137	4	**188**
Walla Walla County	-	-	4	724	2	1	-	3	**734**
Whatcom County	12	-	1	2	-	-	-	1	**16**
Whitman County	-	1	3	223	17	1	1	19	**265**
Yakima County	7	3	13	5,964	42	3	-	108	**6,140**
Total	**140**	**825**	**1,506**	**15,342**	**347**	**136**	**1,008**	**740**	**20,044**

Note: Data for Columbia, Cowlitz, Jefferson, Mason, and Skagit counties were hidden for privacy reasons due to less than 10 client counts.

Table 2 – Client Age by County

	0 - 6 years	7 - 10 years	11 - 17 years	18 - 24 years	25 - 59 years	60+ years	Total
Adams County	175	246	308	1,077	7,113	115	**9,034**
Asotin County	5	19	5	146	1,541	17	**1,733**
Benton County	11	19	31	338	2,853	59	**3,311**
Chelan County	9	17	26	266	2,597	36	**2,951**
Clallam County	3	10	5	42	241	1	**302**
Clark County	2	2	5	4	26	2	**41**
Douglas County	130	153	192	552	2,716	45	**3,788**
Ferry County	16	53	54	307	2,667	463	**3,560**
Franklin County	138	200	231	914	6,562	103	**8,148**
Garfield County	135	185	217	632	3,342	53	**4,564**
Grant County	176	257	329	1,342	9,733	140	**11,977**
Grays Harbor County	160	221	282	665	3,270	55	**4,653**
Island County	12	46	38	156	1,332	18	**1,602**
King County	144	173	243	699	3,983	1,156	**6,398**
Kitsap County	-	5	1	2	207	470	**685**
Kittitas County	3	10	8	198	1,778	19	**2,016**
Lewis County	2	-	6	21	63	7	**99**
Okanogan County	12	47	44	255	2,304	32	**2,694**
Pacific County	123	138	175	387	1,475	29	**2,327**
Pierce County	46	52	81	184	808	215	**1,386**
Snohomish County	27	61	147	170	162	107	**674**
Spokane County	2	1	63	200	1,372	119	**1,757**
Thurston County	5	16	74	133	305	36	**569**
Wahkiakum County	-	5	26	53	94	10	**188**
Walla Walla County	-	1	4	96	626	7	**734**
Whatcom County	-	-	-	-	14	2	**16**
Whitman County	4	7	20	32	194	8	**265**
Yakima County	131	156	216	812	4,729	96	**6,140**
Total	**261**	**403**	**711**	**2,167**	**14,914**	**1,588**	**20,044**

Note: Data for Columbia, Cowlitz, Jefferson, Mason, and Skagit counties were hidden for privacy reasons due to less than 10 client counts.

Table 3 – Target Population by County

	Living with Disabilities	Limited English Proficiency	Deaf or Hard of Hearing	Immigrants/ Refugees/ Asylum Seekers	In a Correctional Setting	Living in Rural Area	Veteran	Medicare/ Medicaid	SNAP or Housing Assistance
Adams County	412	7,942	256	7,950	200	8,636	76	109	584
Asotin County	81	1,413	55	1,376	50	1,593	22	23	171
Benton County	178	2,714	128	2,700	112	3,050	58	45	154
Chelan County	152	2,390	119	2,364	105	2,717	50	41	129
Clallam County	16	169	13	166	26	242	9	5	7
Clark County	11	14	1	13	7	18	1	1	12
Douglas County	169	3,201	84	3,176	89	3,576	43	27	155
Ferry County	189	2,781	189	2,747	54	2,950	35	362	446
Franklin County	364	7,231	240	7,181	160	7,912	99	86	546
Garfield County	199	4,160	122	4,169	87	4,470	42	34	261
Grant County	542	10,397	355	10,355	275	11,495	132	131	696
Grays Harbor County	202	4,212	128	4,245	94	4,577	44	42	208
Island County	46	1,440	53	1,464	28	1,556	18	19	88
King County	540	4,355	351	4,546	233	3,986	78	1,101	1,107
Kitsap County	113	196	109	155	8	58	7	369	204
Kittitas County	120	1,681	91	1,661	78	1,886	50	29	47
Lewis County	60	41	31	49	38	82	1	77	76
Mason County	4	2	3	2	3	6	1	6	6
Okanogan County	83	2,394	67	2,369	37	2,598	32	25	115
Pacific County	134	2,109	61	2,112	54	2,302	22	13	100
Pierce County	404	476	195	506	267	505	60	454	485
Snohomish County	12	110	24	121	20	23	7	91	94
Spokane County	79	1,171	59	983	37	173	25	53	303
Thurston County	372	287	207	270	226	507	13	498	503
Wahkiakum County	138	108	79	96	71	182	7	186	184
Walla Walla County	22	701	14	684	9	711	2	4	76
Whitman County	18	212	5	215	4	260	5	3	3
Yakima County	366	5,235	235	5,215	188	5,861	96	70	265
Total	**1,516**	**14,827**	**965**	**14,690**	**838**	**14,619**	**302**	**1,832**	**2,568**

Note: (1) Data for Columbia, Cowlitz, Jefferson, Skagit, and Whatcom counties were hidden for data privacy reasons due to small sample size.
(2) Clients could have fallen into multiple demographic categories.

COMMUNITY STORY COLLECTION

To collect community stories, we relied on relationships with four community-based organizations (CBOs) who are members with whom we have formed trusting working relationships through ConnectWA. It is noteworthy that these organizations also had the time and staff capacity to outreach to community in a short timeframe. Understandably, not every organization we asked was able to commit to this initial effort, meaning that some voices were elevated while others were not. One important learning from this work is that effective outreach to underserved communities takes trust, time, and resources to be successful.

The four organizations who conducted community story collection were: Mission Africa; Latinos En Spokane; Comunidades Sin Fronteras Washington; and Unidos Nueva Alianza Foundation. These four organizations each collected 20 community stories from individuals they work with. We, in turn, provided funding of $10,000 to each organization for a total of $40,000. One additional organization, Communities in Schools, shared written stories and photographs that they had collected for another effort. In total, these organizations collected stories from 97 community members.

We asked the four organizations to use the funding to provide stipends of $300 or more to each community member who shared their story and to use the additional funding to cover expenses such as travel, space rental, childcare, food, time, additional stipends for stories, or any other resource that they needed to be successful. We gave them latitude to collect stories in whatever format worked best for their community, either listening sessions, focus groups, or one on one conversations, trusting that they know their communities best.

To make sure we captured the data they collected, we provided the organizations with our digital community story collection form and asked that the navigator or story collector input the information they had collected. A digital image of the story collection form is provided in Appendix A.

As part of the data collection, we asked that the collector have the storyteller self-identify into one or more of the targeted audiences below. Note that individuals can fall into more than one category and that some CBOs serve multiple counties.

Table 4 – Community Survey Participants by County

	Rural	Urban	Elder	Youth	English Not Primary Language	Formerly Incarcerated	Veteran	No Internet Access	Ethnic Minority	Below Federal Poverty Line	Has Disability
Adams County	4	-	3	1	4	-	-	2	-	2	-
Douglas County	-	1	1	-	1	-	-	-	-	1	-
Franklin County	1	-	1	-	1	-	-	1	-	-	-
Grant County	21	1	10	7	18	-	-	9	3	20	6
King County	6	16	7	3	16	-	-	7	15	7	1
Pierce County	-	2	-	-	1	-	-	-	2	2	1
Spokane County	4	19	6	8	27	2	-	6	21	16	2
Whitman County	1	1	-	-	-	-	-	-	-	-	-
Yakima County	1	-	-	-	1	-	-	-	1	1	-
Total	**38**	**40**	**28**	**19**	**69**	**2**	**-**	**25**	**42**	**49**	**10**

Note: Respondents could choose multiple demographic identities.

KEYWORD ANALYSIS

To identify patterns in the qualitative data from the digital navigator survey and the community stories form, we used a keyword analysis. For each open-ended question, we first used an artificial intelligence (AI) program to determine if the text needed to be translated and then, if so, translate the text to English.

We then evaluated the collection of responses to assign keywords for common themes and concepts. Next, we tagged responses with these keywords to represent the nature or theme of the response. It is worth noting that keyword analysis on the rich and varied responses we received is an interpretive and fundamentally human exercise. For readers who are interested, we provide the keywords assigned to responses in the datasets provided with this report.

Following this process, we gathered the aggregate keywords into a word cloud[5] to visualize the responses, with the prominence of the words being representative of the frequency of the keyword or theme (i.e., bigger = more frequent). A tabulation of the identified keywords for each question - including those presented in the word clouds – asked in the digital navigator survey and community survey is provided in Appendices D and E, respectively. In addition, we drew from the collective responses to present excerpts that represented the prominent themes that emerged in that concept.

Below we summarize the patterns of experience we wove together from the stories shared with us.

[5] A word cloud is a visual representation of text data where words are displayed in varying sizes based on their frequency or importance within a given context. The more frequently a word appears in the data, the larger and bolder it appears in the word cloud. This graphical representation helps to visually summarize and highlight the most prominent terms, themes, or patterns in text, enabling viewers to grasp the overall message or focus of the text at a glance.

Patterns of Experience ('Findings')

1. *HOW WASHINGTONIANS USE THE INTERNET AND DEVICES TO WORK, LEARN, ACCESS SERVICES, CONNECT TO COMMUNITY OR OTHERWISE THRIVE*

Before delving into digital skill needs and challenges, we explored how digital navigator and community member audiences currently use the internet and devices. We asked community members directly to tell us how they currently use the internet and what devices they have access to. Not surprisingly, Washingtonians in our target audience use the internet much like the readers and writers of this report: To connect with friends and family, to do homework, to find new school and work opportunities, to unwind, to run business, to take care of expenses and other obligations, and to access healthcare.

> *"I use the internet on my phone. I use it to search for religious things and information. I have relatives outside the country, and I talk to them by message and make video calls to see them. I listen to music on the Internet at my job."*

> *"I use the internet for entertainment, I do not have cable, so I just use streaming services such as Netflix, Amazon prime, HBO, and Apple TV. I also use the internet for work, as I advertise my business on Facebook and Instagram, I also have a website and do a lot of online sales. I also use internet for socializing with friends. I also occasionally shop online, use internet for music, communication with my children's teachers, pay bills etc."*

> *"I make payments through my computer in which internet is needed, all my payments from Wi-Fi, electricity, credit cards, health insurance, it's all done online. setting up appointments for clinics like planned parenthood, is also done online."*

However, a significant portion of storytellers self-identified as not having internet access (Table 4) and some of the story responses illuminated more how some people are still unable to use the internet or devices they have:

"I don't really use the internet because I spend my time cleaning. I also don't know how to use the internet... not even to put in the password. My children use the internet for school and to entertain themselves."

"I have a tablet, but I have never used it because I don't know how to connect it to the internet and my internet is very decadent because if I watch the TV, I cannot connect another device because it is very slow, or the internet is cut."

Figure 3. Word cloud "how do you use the internet?"

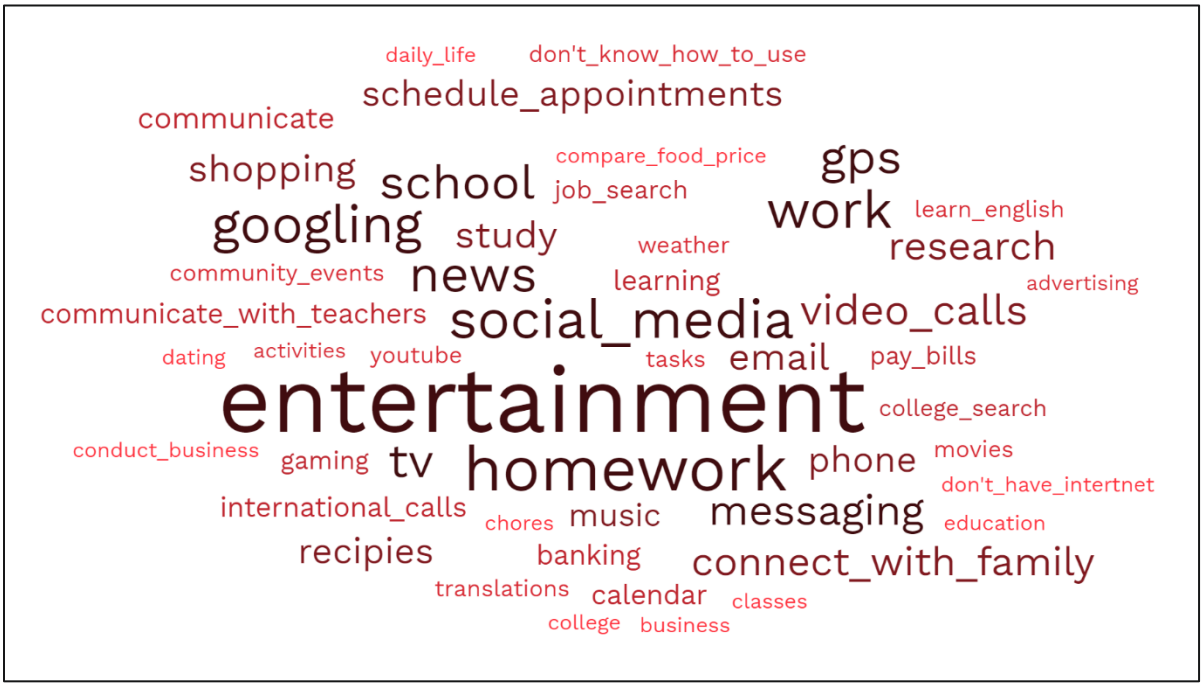


Figure 3 is a word cloud of keyword responses to this question. This image highlights the importance of digital access both for life essentials, such as accessing healthcare and education, but also for living a rich, full, thriving, and connected life.

It is worth noting that very few storytellers reported using the internet to access social services, housing support, health care, or other benefits. It is not clear if this is because they do not in fact access community or government support services online, or whether the phrasing of this question failed to elicit these responses. It is possible that people just listed the most obvious ways they use the internet, and that further probing would have revealed more detail. It is also

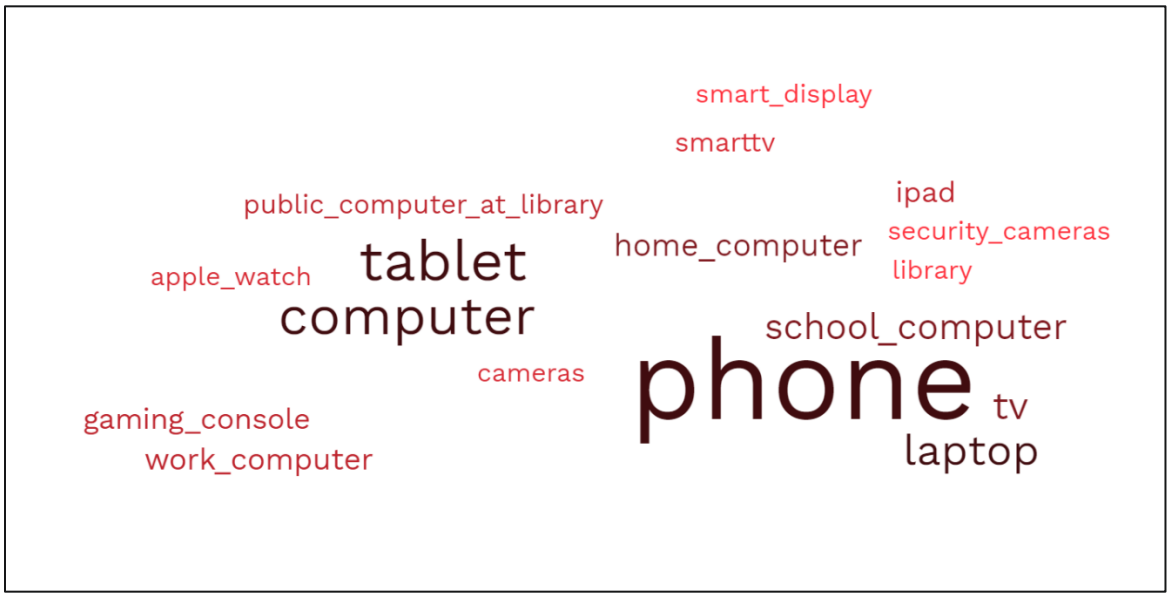
possible that device capability limits the ways individuals use the internet. This is potentially an area for further exploration.

Despite most community storytellers and all our digital navigators reporting that they use the internet, many reported that they used phones and tablets for access, and at least 10% indicated that the devices they had in the house were not sufficient for their needs. In other words, while most people are using the internet in some capacity, they are not necessarily using devices that meet their needs.

> *"I use my phone since I don't have a computer at home, which makes it very difficult for me to help the girls with their homework."*
>
> *"Yes, there are enough devices in my home. In my house we are my wife and two children. Between all of us we use cell phones and tablets. The tablets are used for entertainment and the same for my children's homework. Cell phones for personal or work calls."*
>
> *"We use mobile. And a computer borrowed from the child's school to do their homework AND a tablet so they can have free time. And a TV."*
>
> *"I use a computer at home and a Chromebook at school. I do not have a cellphone or tablet. I think we need more devices."*

Figure 4 shows in word cloud form how common different device types are in the homes of community storytellers.

Figure 4. Word Cloud "what devices do you use?



2. *CHALLENGES WASHINGTONIANS FACE IN USING THE INTERNET AND DEVICES TO WORK, LEARN, ACCESS SERVICES, CONNECT TO COMMUNITY, OR OTHERWISE THRIVE;*

Both the digital navigator survey and community story collection form asked respondents to identify areas of challenge and need. The following were the major themes that surfaced in their responses.

Connectivity

Despite efforts over the past three years to get more Washingtonians connected to the internet, access to fast, affordable, and reliable internet remains a key barrier to Washingtonians being able to use the full power of connectivity and even to use the devices they already possess. Some respondents are relying on cellular connections for their connectivity, many have internet at home that is not fast enough for their needs, and for some, cost is the principal barrier. About half of our community respondents identified the lack of a strong signal, either cellular or internet, as the primary thing they need to have a better digital experience.

We also noted that throughout the digital navigator survey it became clear that some digital navigators spend a significant amount of time helping clients gain access to the internet in addition to using devices or building skills.

"I believe that for me to have a better digital experience I need newer and more updated devices. For example, my wife's device and mine are already a little old. Also, a very important part for me to have a better digital experience would be to have a better internet signal, because the service I have right now is very slow and when my whole family is connected the internet gets too slow and cannot be used like that. I live in a rural area and that's why the internet service here is of very low quality."

"I do not have internet signal I do not have enough to pay the internet is expensive also I only have the phone device do not use other things."

"For me to have a digital experience would be that the Internet signal in my house was stable and did not have problems but when there is very strong air the signal goes and does not work, and we have to turn off and turn on all the devices to reconnect."

"The internet is at a very high cost; I'm paying $95 dollars per month and the quality is not excellent for that price."

Device Shortages

As discussed above, while most community members indicated that they possess a device of some kind, at least 10% of our respondents said that they did not have enough devices or the devices they have are outdated or insufficient for the tasks they would like to complete. Since many people are relying on cellular phones as their primary device, they find that these devices age and are not compatible with updated software.

"They are old computers that schools lent us for children's homework."

"So far the devices are enough but in the future I would like all my children to each have their devices. The devices that I currently have there are some that are broken from the screen and will have to be replaced."

"I do not have computer, only the ones from school."

Language Barriers

In our digital navigator survey, many navigators explained that language access was a major barrier to communities accessing digital support, particularly technical support. Some families rely on children to translate or to fix technical issues. Others felt that there was not enough support available for them to access in their first language.

> *"Language access for indigenous folxs in Adams County is a huge need. As many speak the language, but don't read or write. These are the people that we reach and are the most affected by connectivity issues."*

> *"It would be great if there were a simple toolkit available in key languages (Chinese, Vietnamese, Filipino, Spanish, Somali) that we could push out to community members with limited English but with an interest in accessing digital navigator services."*

> *"Provide literacy courses, share community resources and raise awareness in the community language because language is the biggest barrier in our community."*

> *"Utilizing immigrant children to teach their parents and elders how to use computers in their native language is helpful but the children's knowledge or patience is limited. Next stage is to extend the training with Northstar to those who have gained enough proficiency and desire to learn more."*

Lack of Digital Navigators and resources to support them

Digital navigators working within the community identified a shortage of digital navigation and other support programs. They also identified the lack of additional resources to support the programs already working well in communities as a significant barrier. The sentiment among digital navigators is that while they are seeing a great deal of success, they are challenged by funding and capacity. The need to provide services in multiple languages, to help people gain access to affordable internet, and to be able to access remote communities makes it particularly difficult for them to serve all communities.

"Training is right on, we just don't have the capacity. We have an enormous surface area to cover, and we did well. But, the lessons are to have more organizational capacity, and administrative support staff. Our program and delivery is stellar, and proof of concept is right on, but need more programs to serve more people and more manpower."

"Finding and maintain trained Digital Navigators; however, due to lack of stable funding these roles become vacant. The digital equity needs are still there."

"There needs to be a long-term solution in place, rather than a quick fix; the Digital Divide will continue to grow as long as there is a need, which requires stability and security. We are seeing many organizations and communities who are overloaded while trying to fill this gap, however, this is causing burnout, thus, another cause for the divide to grow even larger."

"We need to be able to provide more. For example, hot spots, devices, or stipends to help cover some technological fees."

"What isn't working are all the limitations and restrictions on what funding is being made available. Especially to Tribal and undeserved Communities of Color. There are too many restrictions. These continue to cause further delays in deliverables and desired outcomes. Community members continue to suffer and are left behind."

"Suggestion: limit the types and number of restrictions and stop the bureaucratic language that we all know is set up to make us fail. Allow the People who are working directly with communities to do said work ... Statistics are one thing, but having to spend most of the time filling our reports is not helping."

3. WASHINGTONIANS' GOALS FOR WORKING, LEARNING, ACCESSING SERVICES, CONNECTING TO COMMUNITY, AND THRIVING, AND THE DIGITAL SKILLS NEEDED TO MEET THOSE GOALS;

In our community story form, we asked people to tell us if there was anything missing from their digital skillset that they needed to know or learn. Our research team was struck by the candor and vulnerability that people shared when spelling

out their goals. One of the most common answers for Spanish speaking respondents (about 20%) was that they would like to learn to speak English and/or to use a computer in English. Basic computer classes (using a laptop, how to type), how to find things online, how to shop online, how to communicate with children's schools, how to fill out forms, and more advanced skills such as Excel and web design were also mentioned as goals.

> *"Yes, I want to learn how to use a computer or laptop, the basics. Another thing is how to make video calls with various people. How to order things via applications, for example, Walmart. This way I don't have to wait in line to pay when I can order online."*

> *"Yes. I have many things I want to learn. I want to learn bookkeeping and get a certification, and I'd like to do bill coding for hospitals. I also love learning about human anatomy, but I cannot afford training."*

> *"I am always learning! I only finished high school, so I could definitely benefit from going to college. I do like the idea of getting more of an education. There is always a lot to learn in all these aspects of life."*

> *"Further studies to be able to earn more money at work."*

> *"I need to learn about new technology I'm older and there are things I don't understand."*

> *"What I need to learn is the language of English I would like to learn how to use the system that my daughters' school have because I do not understand and I would like to learn. Also know how to use a computer and also how to send an email."*

Our team applied the Seattle Digital Equity Initiative's Skillset Area framework (Figure 5) to the skills that respondents said they would like to learn and inserted them into a word cloud (Figure 6), below.

Figure 5. Seattle Digital Equity Initiative's Ten Skillset Areas

Communication: Exchanging information with others on digital platforms using various strategies to collaborate, share, and communicate.

Creation: Engaging in digital spaces to design, create, and revise content online.

Device ownership: Practices that support device longevity, including physical care, protective software, and using technical support.

Gateway skills: Foundational skills required to use a device and participate online.

Information skills: Skills to apply, evaluate, and manage information across digital and physical environments.

Lifelong learning: Engagement in self-assessment of digital skills. Using self-reflection to tailor accessible digital environments and continue digital skills learning.

Mobile: Understanding basic functions of a mobile device to communicate and access goods and services.

Online life: Access to online resources that support digitalization of daily tasks and socialization within a broader digital community.

Privacy and Security: Maintenance of practices to secure digital identity, recognize threats, and understand the broader safety implications of working in a digital environment.

Workplace: Advancing workplace success and professionalism through engagement with an organization's online tools and other supportive digital systems.

Figure 6. Word cloud of Desired Skills Areas

The word cloud highlights that gateway skills – the foundational skills required to use a device and participate online – were by far the most often skillsets mentioned. After that were online life skills – the ability to access resources that support the digitization of daily skills – and mobile – understanding the basic functions of mobile devices.

We also asked people to self-rate their digital skills with the question: *"How would you rate your ability to use devices and the internet?"* Their responses mirrored the skillset areas most requested in that about 52% of respondents rated their skills as either weak or fair, with about 20% rating them as strong (Table 5). This points to the need for robust, basic digital skills training in communities, with language skills included for individuals who also wish to improve their English. However, it also points to the need for tailored and more advanced training for individuals who wish to further their digital skills.

Table 5. Community Members' Self-rating of their Digital Skillsets

Skill Level	Percentage Reporting
Weak	25%
Fair	27%
Good	29%
Strong	20%

When we further broke down how different categories of respondents answered this question, we learned that elders, non-English speakers, and those without access to internet reported the lowest digital skill levels while urban residents, youth, and racial and ethnic minorities reported the highest.

- 79% of elders, 64% of respondents without access to internet, and 62% of respondents who did not speak English as a primary language self-reported as having weak or fair digital skills.
- In contrast, 55% of urban, 58% youth, and 62% of respondents self-identifying as being part of an ethnic minority self-reported as having good or strong digital skills.

4. WASHINGTONIAN'S ACTIVITIES AND SUCCESSES IN LEARNING, FINDING RESOURCES AND PROBLEM-SOLVING:

In our digital navigator survey, we asked navigators to share with us their success stories, both within their organizations and what they observe within their communities. One area of success that several navigators observed is in being able to work directly with community members in person, since the pandemic has wound down (this was also cited as a challenge during the pandemic). Other

successes related to building up support programs such as digital navigation, helping families connect to free or low-cost internet, or watching them gain new skills and put them into practice.

> *"We find working directly with community members is the best practice/is working for us. For example, when we first started doing digital navigator service, we did not know demographics of our community who need digital literacy. So, we began by going to meet them where they are located, mainly at their social gathering spaces such as temples, community centers and events, and senior housings. By meeting them face-to-face, our team were able to listen to what community members want out of this project. We were able to listen to their special needs and circumstances. And in turn, we were able to create a curriculum that is uniquely suited for our community. We strongly believe in working directly with our elders and community members because only through this human touch would we be able to determine best way to serve our communities and I find equity way to support them."*

> *"The idea of collaboration with grassroots organizations that have been front and center within their communities and building that trust. [My Organization] is coming up on two years as an organization but has been in community for at least a decade prior to forming an organization. Our connections and trust have made it possible to reach marginalized communities within our county. Going to them and meeting their needs instead of waiting for people to come to us has always been our outreach method and that also bridged the gap in trust within new counties that we entered in the past year."*

> *"Having community events have worked best for us, we feel that the community responds better when we talk to them in person, we get a better understanding of the program."*

> *"Providing laptops to community centers, small businesses where BIPOC/Immigrant communities meet. We also provided laptops to a senior activity center that wanted to create a computer center. This allows easier access to the internet where they are more comfortable at vs a public space such as a library."*

"We have found that individual hand-in-hand outreach is the most effective. When we have tried to organize larger events with multiple interpreters, broader or less narrowly defined audiences, etc. we have found that there is less uptake. Since we have focused much of our engagement on small business owners, they have limited time to be away from their business, so we have to catch them during slower hours within their work week."

Others identified ways that the pandemic forced many families to use digital tools in ways they never had before. This sudden need both posed a tremendous challenge and created a new emphasis on digital access and skills for some. Many of the community storytellers said that they use the internet more now, that they have better access, and that they have more skills than prior to the pandemic.

"Bringing broadband access points to Central WA has been a game changer for many families that we serve and for free was the cherry on top. These families are now able to have their children do homework at home and have access to TechConnect[6] if any issues arise with their connection or they have technical questions."

"Before the pandemic, we parents looked at the fact that their children were on the computer. During the pandemic, with the help of WIRF I bought a computer to be able to work. I asked my son how to save a document and a colleague told me that it is saved automatically. Over time, everything changes. After the pandemic, I've seen people become a little more alert to technology."

"In reality, technology is something you can't avoid. What I saw with Covid is that all the programs, services, boards, etc... They moved to digital form. Then I had to get used to using my phone for everything. It was sad to see that many families who did not know how to use the Internet struggled. But the good thing was that there were organizations that supported people in order to survive."

"Now that Covid has occurred, a lot of things have changed. Now, I use the internet more than I had used it before. Even at work, they have given us an application where we can see the hours that we worked on the daily. I

[6] *TechConnect Washington is a free, multilingual help desk run by EEC.*

have learned how to place orders via the phone. This has greatly changed my life because I had to do a lot of my shopping in person and now, I can do them online to save time since I don't have to go to the stores in person."

However, a smaller number of respondents indicated that their skills and/or internet usage had not changed at all during the pandemic. As digital life continues to expand, there is a significant risk that some individuals and communities will be further left behind, with few opportunities to access services, information, and communication.

5. PEOPLE, NETWORKS, INSTITUTIONS, AND ORGANIZATIONS WHERE WASHINGTONIANS SEEK HELP.

We asked community storytellers to tell us *"What you do when you need help using your phone or doing something online."* By far the most common response was that they seek help from a family member, usually a child or adult child. Many people said that they try to solve the problem themselves by looking online. Friends, neighbors, digital navigators, school personnel, and social workers were also mentioned as sources of help. Very few community members said they go to a community center, library, or other organization for this kind of help.

Given that these stories were collected by digital navigators and other CBO staff, it is possible that the wording of this question was confusing, given that digital navigators are also neighbors, friends, or family and are being identified that way, that these resources are limited enough that even with the support available, most people are still relying on family for their immediate skills needs, or some other reason. This is an area that is worth further exploration.

We also asked digital navigators where they saw their clients going to find resources (see Table 6) (note that this is not necessarily the same as where they get technical help/support). Not surprisingly, navigators identified their own organizations along with other community centers and community hubs such as churches as common sources of information. Some navigators also mentioned libraries (which is discussed in more detail below), Zoom, NorthStar training centers, and word-of-mouth as sources of information and support. By far the

most accessed resource was community support of some type – be it internet support, support from family, or housing and financial assistance.

Table 6. Digital Navigators' Insights on Client Resource Access

Destination	Frequency
Community support *(e.g., families, schools, churches, housing & food assistance, internet support, TechConnect WA)*	16
Libraries	12
Non-profit organizations *(e.g., Mission Africa)*	9
Referrals *(e.g., NorthStar modules)*	7
Word-of-mouth	6
Resource Fairs	3
Social Media *(e.g., Facebook, YouTube)*	2
IT Departments	2

We specifically asked on our digital navigator survey and our community story form whether they use their local libraries for digital support. Because this is one of the few questions with quantitative answers, we were able to run an analysis to better understand more about who found libraries to be supportive and who did not. We provide details of this analysis in Appendix C.

When asked whether they use the local library for support, most respondents said no.

- 59 out of 97 respondents (61%) reported that they did not use libraries for support while only 38 (39%) reported that they did.
- Among those who did not seek support from libraries, the majority did not speak English as their primary language (46), came from rural communities (29), were part of an ethnic minority (20), and were elders (19).
- Almost all respondents from Grant County and over half from King County reported that they did not use libraries for support.

Table 7. Cross-tabulation of library reliance by County

	Do You Use the Local Library for Support?	
County	No	Yes
Adams County	3	1
Douglas County	1	0
Franklin	1	0
Grant	21	2
King	14	12
Pierce	0	2
Spokane	18	20
Whitman	0	1
Yakima	1	0
Total	**59**	**38**

A few of our navigators offered the following insights into their reluctance to seek support from libraries.

> *"Before COVID, there was little to no outreach to BIPOC/Immigrant communities to utilize public libraries for computer and internet access. Since COVID and Black Lives Matters there is more emphasis to provide outreach to BIPOC/Immigrant communities, but the city and libraries have not gained the trust from those communities."*

> *"Suggesting to the BIPOC/Immigrant communities to use the public libraries to access the internet or a computer if they do not have one. Libraries are seen as a place for the white community. A change would be for the libraries to do outreach events for the BIPOC/Immigrant communities, so they know computers and internet are available and they are welcomed there."*

At the same time, 12 of our 46 digital navigators (primarily English speakers) specifically named libraries as the best places for their clients to go to find resources.

> *"We have found out our clients find their best resources when they go inside a library, and we can also give them referrals to other organizations for resources as well."*

“Best resources will be found at our public libraries.”

These findings suggest strong regional, cultural, and individual differences in how libraries are viewed by community and a need for libraries to better understand how they are perceived in communities, and to continue efforts to build trust and relationships.

Learnings, Recommendations, and Next Steps

This report makes use of rich qualitative data shared with us by community via digital navigation programs affiliated with ConnectWA. We were honored that digital navigators took the time to complete the survey and that our partner organizations worked, with very little time, to gather stories from the community members who they serve. We have found that when working with communities that are often left out of conversations about their own well-being, the foundation of trust is vital to gaining access to information, and that the information gathered must be viewed as belonging to the community that is sharing it.

Our job in creating this report was to weave together the nuance that was shared with us into a narrative that identifies patterns, amplifies voices, and bolsters calls to action. These patterns are called “findings” in research but, we did not, in fact, find or discover anything new. Instead, we have tried to identify commonalities in experiences that ultimately lend truth to power.

To that end, we identify here that access to digital tools and skills is a vital part of the modern human experience – to connect, to learn, to access basic, and not so basic needs, to be entertained, and to thrive - and that some Washingtonians are not being granted full access to all the richness that is available in the digital world. As we talk about digital skills – critical to a full digital experience – many Washingtonians still lack even basic online access, whether because of internet, devices, or both, making it that much harder to build digital skillsets.

The gaps in access are driven by factors that are predictable. Families with lower incomes, who live in rural communities, who do not speak English as a first language, and who are immigrants and refugees and members of the global majority are more likely to lack reliable internet access, effective digital tools, and the skills to use those tools to reach their goals.

Given the stories shared here, we make the following recommendations:

1) CONTINUE LEARNING FROM WASHINGTONIANS ABOUT THEIR DIGITAL SKILLS NEEDS AND STRENGTHS.

The outcomes of this small-scale data gathering activity point to the need for a much broader assessment. This does not mean a large-scale, quantitative, representative study, but rather an expanded version of the work done here. Time and funding for this project were limited and, understandably, the need for new knowledge was pressing. While we have developed relationships with organizations across Washington, there are many organizations doing community work within other networks and therefore not included in this effort.

We know now that there are large swaths of our state that do not have the digital access they need, and we also know that there are many voices who were not captured here. The findings presented here make the case for a longer term, larger-scale data collection effort that continues to rely on local relationships and is led by individuals with lived experience in digital inequity.

We also recommend working with a national skills assessment provider, such as NorthStar Digital Literacy, to develop and deploy an assessment tool that can be used by local providers statewide and provide a comprehensive picture of who is being served and where.

2) PAY PARTICULAR ATTENTION TO UNREACHED POPULATIONS.

The individuals we collected stories from are all unique, but they have at least one commonality – they have been reached in some way by a digital navigator or community organization working in the digital equity space. We know that there are many digital navigators who are not affiliated with ConnectWA who are working with communities whom we did not hear from in this small-scale collection effort. We also believe that there are many communities that are not receiving support from digital navigators. Reaching these communities will require working closely with organizations, service providers, and community hubs. Building trust will take time. Learning about the strengths and needs of these communities will need to be part of any broader effort to learn about and bolster digital skills for their residents.

3) CREATE AND ELEVATE UNDERSERVED COMMUNITIES – WHILE LETTING THEM LEAD.

The stories in this report come together to tell a powerful story. We learned that in some Washington communities, a persistent lack of internet access, a shortage of affordable devices, language barriers, and resource shortages mean that some Washingtonians do not have the digital skillsets they want or that they want to meet their goals for living and thriving. While some of the individuals we spoke with are actively building advanced skillsets, the majority seek foundational skills – the ability to effectively access the internet and use the devices they do have.

We also learned that community digital navigation and technical support efforts seem to be effective methods of both building technical skills and sharing community success stories and frustrations. Digital navigators are members of their communities primarily and are a potential bridge between community and the NGOs and agencies that have identified an area of need but are not sure how to address it. Key to developing a trusting relationship with community organizations is providing ample resources, trusting that they know their communities, and amplifying the voices of those who are already leading.

Community voice should also be at the center of any new practices developed from this pilot report, or from further analysis of the stories that form its foundation. In response to feedback from the organizations that participated in this study, our next steps include producing a slideshow of learnings and a recorded community event that can be shared so that participants and others have an opportunity to interact with the learnings presented here.

We submit this report in the hope that the learnings and recommendations help build understanding and momentum toward a more digitally just Washington State.

References

Bergson-Shilcock, A. (2020). The New Landscape of Digital Literacy: How workers' uneven digital skills affect economic mobility and business competitiveness, and what policymakers can do about it. National Skills Coalition. https://nationalskillscoalition.org/wp-content/uploads/2020/12/05-20-2020-NSC-New-Landscape-of-Digital-Literacy.pdf

City of Seattle (2019). "Digital Equity," http://www.seattle.gov/tech/initiatives/digital-equity

Cohen, S. (2021). The Technology Sector's Role in Washington's Economy and Economic Recovery. Washington Technology Industry Association. https://www.coeforict.org/wp-content/uploads/2022/09/2021-WTIA-Technology-Sector-Role-in-Economic-Recovery-web.pdf

Connect Washington (2023) Accessed 5/19/23. Connect Washington – Washington States Digital Connectivity (connect-wa.org)
Dentzel, Z. (2013). How the Internet Has Changed Everyday Life. 19 Key Essays on How the Internet Is Changing Our Lives. https://www.bbvaopenmind.com/en/articles/internet-changed-everyday-life/

Hoehe, M. R., & Thibaut, F. (2020). Going digital: How technology use may influence human brains and behavior. Dialogues in Clinical Neuroscience, 22(2), 93–97. https://doi.org/10.31887

Northstar. (n.d.). Northstar Digital Literacy. Retrieved April 3, 2023, from https://www.digitalliteracyassessment.org/about

Office of Superintendent of Public Instruction. (n.d.). Media Literacy & Digital Citizenship. Retrieved April 3, 2023, from https://www.k12.wa.us/policy-funding/school-technology/media-literacy-digital-citizenship

Small, D. (2018). K-12 Educational Technology Learning Standards (No. 18-0015). Washington Office of Superintendent of Public Instruction. https://www.k12.wa.us/sites/default/files/public/edtech/standards/pubdocs/k-12-edtech-standards-complete-2018.pdf

Washington State Engrossed Substitute Senate Bill 5187. (2023). Accessed 5/19/23. 5187-S.PL.pdf (wa.gov)

Washington State Department of Commerce. (2021). State Broadband Office 2020 Report. https://www.commerce.wa.gov/wp-content/uploads/2021/04/032921-2020-WA-State-Broadband-Report-FINAL.pdf?emci=6d3fa0ac-c7b2-ed11-a8e0-00224832e811&emdi=f1b60afa-c8b2-ed11-a8e0-00224832e811&ceid=10774414

Washington State Office of the Secretary of State. (2023). Request for Proposals: Digital Literacy Assessment. Accessed 5/19/23. rfp23-03_digitalliteracyassessment_final.pdf (wa.gov)

Wedlake, S., Lothian, K., Keyes, D., & Coward, C. (2019). Digital skill sets for diverse users: A comparison framework for curriculum and competencies. Seattle: Technology & Social Change Group, University of Washington Information School

Appendices

APPENDIX A: DATA COLLECTION FORMS

The following was used for Digital Navigators to reflect on the needs and experiences of the communities that they support:

Select Language

Powered by Google Translate

"*" indicates required fields

Digital Navigator

Enter Navigator First Name

Enter Navigator Last Name

Digital Navigator Email *

Please enter your email address so we can send you a gift card to compensate you for your efforts

How would you rate your own level of digital literacy or technical skill?

Strong

Organization Name *

Select organization

County (Primary location you support) *

Select County

Tell Your Stories

Focus on current use of the internet and devices by your clients and communities. Your input will be used to help identify ways that the state can do a better job of serving the community. Please share your personal experience working with community, being specific about what works and what doesn't.

What is working? Good ideas should be shared so other communities can adopt

0 of 4000 max characters

What is kind of working, but needs improvement? Please explain why

0 of 4000 max characters

What isn't working at all? Please include suggestions for change

0 of 4000 max characters

How were things within the Community before the COVID pandemic? How are they different now?

0 of 4000 max characters

What are the primary resources that your clients/Community members need?

0 of 4000 max characters

Where do your clients/Community members find the best resources?

0 of 4000 max characters

Do you use the local library to support and improve digital literacy?

Yes

Completed

The following was used for Community members in target audiences to share their direct needs and experiences:

Select Language

Powered by Google Translate

"*" indicates required fields

Full Name *

Enter First Name

Enter Last Name

Email (optional)

County *

Select County

What County do you live in?

Please check all boxes below that apply:

- ☐ At 150% or below the Federal Poverty Line
- ☐ Living with Disabilities
- ☐ Elder
- ☐ Youth
- ☐ Primary language is NOT English
- ☐ Are or have been incarcerated
- ☐ Veteran
- ☐ Without internet service
- ☐ Member of a racial or ethnic minority
- ☐ Live in a rural setting
- ☐ Live in an urban setting

Tell Your Stories - Your input will be used to help identify ways that the state can do a better job of serving the community as well as what they should keep doing.

How do you use the internet?

Please tell us about the ways you use the internet in your daily life. If you can, list all of the different ways you use the internet on a daily basis.

0 of 4000 max characters

What devices do you use?

For example, computer at home or work, public computer, cellular phone, tablet, or other device. Are there enough devices in your home to meet everyone's needs?

0 of 4000 max characters

What do you need to have a better digital experience?

For example, do you have easy access to a strong signal at home? Do you have the devices that you need? Do the devices you have work properly (are they old, broken, etc)?

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Is there anything missing that you need to know or learn?

For example, for work, school, family life, entertainment or other.

0 of 4000 max characters

What do you when you need help using your phone or doing something online?

For example, do you rely on a friend or family member to assist you? Do you search for the answer yourself? Do you get help at school, work or from anywhere else?

0 of 4000 max characters

Do you use the local library for digital support?

Yes

How would you rate your ability to use devices and the internet?

Strong

Do you use the internet differently now, versus before the COVID pandemic (2019)? If so, please describe the differences.

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Completed

APPENDIX B: CONNECT WA COALITION MEMBER ORGANIZATIONS

Asotin County Library

Beacon Business Alliance

Cambodian American Council of WA

Communities in Schools and their 16 affiliate partners

Comunidades Sin Fronteras Washington

Filipino Community of Seattle

Fort Vancouver Regional Libraries

Khmer Community of Seattle King County

Latinos En Spokane

Mindsight Mentors

Mission Africa

Mother Africa

Multi-Ethnic AHANA Business Association

Organizacion Centro Americana

Pierce for Healing

Tacoma Healing Awareness Community

Tribal Technology Training T3

Unidos Nueva Alianza Foundation

APPENDIX C. LIBRARIES ANALYSIS METHODOLOGY - ASSUMPTIONS AND VARIABLES USED

This analysis was conducted based on 97 unique responses from our Community Survey representing a variety of demographics and geographies in Washington State.

We analyzed responses across 13 variables. Note that respondents could choose multiple demographic identities. For example, a respondent could self-report themselves to be an Elder and also lack internet access.

Variable	Description
Language	Primary language spoken by respondents. All recorded responses were either English or Spanish.
County	Name of the County in Washington state in which the respondent currently resides in.
IsRural	Whether the respondent self-reported as living in a rural community. Binary variable taking a value of 0 for non-rural and 1 for rural.
IsUrban	Whether the respondent self-reported as living in an urban community. Binary variable taking a value of 0 for non-urban and 1 for urban.
IsElder	Whether the respondent self-reported as being an elder. Binary variable taking a value of 0 for non-elder and 1 for elder.
IsYouth	Whether the respondent self-reported as being youth. Binary variable taking a value of 0 for non-youth and 1 for youth.
EnglishNotPrimaryLang	Whether the respondent self-reported that English is their primary language. Binary variable taking a value of 0 for English being the primary language and 1 for English not being the primary language spoken by the respondent.
EverIncarcerated	Whether the respondent self-reported as being formerly incarcerated. Binary variable taking a value of 0 for not formerly incarcerated and 1 for being formerly incarcerated.
IsVeteran*	Whether the respondent self-reported as being a Veteran. Binary variable taking a value of 0 if not a veteran and 1 for being a veteran.
NoInternet	Whether the respondent self-reported having access to internet. Binary variable taking a value of 0 if there is access to internet and 1 if there is no access to internet.
IsEthnicMinority	Whether the respondent self-reported being part of an ethnic minority. Binary variable taking a value of 0 if not part of an ethnic minority and 1 if part of an ethnic minority.
BelowFederalPovertyLine	Whether the respondent self-reported being below the federal poverty line. Binary variable taking a value of 0 if the respondent is above the federal poverty line and 1 if the respondent is below the federal poverty line.
IsLibraryHelpful	Whether the respondent perceives libraries to be helpful. Binary variable taking a value of 0 if libraries are perceived as not helpful and 1 if libraries are perceived to be helpful.
LiteracySkillLevel	Respondents self-perceived digital skills level. Ordinal variable ranging from Weak, Fair, Good, and Strong.

** No respondents self-identified as veterans, so this variable was excluded from the analysis due to the absence of a comparison group between veterans and non-veterans.*

APPENDIX D. IDENTIFIED KEYWORDS AND FREQUENCIES - DIGITAL NAVIGATOR SURVEY

"What is working? Good ideas should be shared so other communities can adopt."

Keyword	Frequency
1:1 outreach	5
Ease of Access	5
Virtual and Hybrid workshops	5
Community Mobilization	4
Involvement	4
Northstar	4
Technical Skills Training	4
Collaboration	3
Assistance	2
Build trust	2
Classrooms	2
In-person	2
Outreach	2
Providing laptops	2
Broadband Access Points	1
Communicate	1
Confidence	1
Connections	1
ConnectWA meetings	1
Desire to access resources	1
Free Website	1
Individual approach	1
Information about eligibility	1
Job mobility	1
Language translation	1
Location based classes	1
Phones	1
Proactive	1
Public library hosted sessions	1
Recordings	1
Respect	1
Targeted curriculum	1
Workshops	1

"What is kind of working, but needs improvement? Please explain why."

Keyword	Frequency
Outreach	9
Training	9
Communication	5
Community engagement	5
In-person session	5
Access to digital equipment	4
Capacity	4
Retention	2
Organization	1

"What isn't working at all? Please include suggestions for change."

Keyword	Frequency
Accessibility	7
Community engagement	7
Outreach	5
Connectivity	3
Language	3
Funding restrictions	2
Lack of engagement	2
Public libraries	2
Elderly training	1
Flexibility	1
Literacy courses	1
Personalized support	1
Small business training	1
Spam calls	1

"How were things within the Community before the COVID pandemic? How are they different now?"

Pre-covid

Keywords	Frequency
In-person	5
Community mobilization	2
Lack of skills	2
Apathy	1
Depression	1
Everybody was home	1
Financial assistance	1
Hopeless	1
Isolated	1
Lack of elder support	1
Lack of fiber	1
Lack of outreach	1
Lack of translation	1
Less active	1
Limited focus on digital divide	1
Misinformation	1
Powerpoint	1

Post-covid

Key Word	Frequency
Community recovery	3
Skills development	3
Community engagement	2
Online	2
Virtual meetings	2
Addressing misinformation	1
Best practices	1
Community impacts	1
Costly fiber	1
Digital literacy	1
Expanding digital divide	1
Financial difficulties	1
Gatherings and meetings	1
Health difficulties	1
Isolation	1
Learning curve	1

"What are the primary resources that your clients/ Community members need?"

Key Word	Frequency
Digital access	18
Training	14
Internet access	9
Affordable internet	8
Financial assistance	6
Community centers	4
Housing assistance	4
Elderly assistance	3

"Where do your clients/ Community members find the best resources?"

Key Word	Frequency
Community_support	16
Libraries	12
Non-profit_organizations	9
Referrals	7
Word-of-mouth	6
Resource_fairs	3
Social_media	2
IT_departments	1

APPENDIX E. IDENTIFIED KEYWORDS AND FREQUENCIES - COMMUNITY SURVEY

The following is a list of the questions asked in our Community survey. 41 participants responded in English while 56 responded in Spanish. Additionally, of the 97 respondents in total who responded to the survey, 69 self-reported that English was not their primary language.

Figure 3. Word cloud on "how do you use the internet?"

Keyword	Frequency
Entertainment	35
Homework	21
Social_media	17
Googling	16
Work	16
News	15
GPS	14
School	14
TV	14
Messaging	11
Video_Calls	11
Connect_with_Family	10
Research	10
Email	9
Shopping	9
Study	9
Phone	8
Recipes	8
Schedule_Appointments	8
Music	6
Communicate	5
Banking	4
Calendar	4
Communicate_with_Teachers	4
International_Calls	4
Learning	4
Gaming	3
Job_Search	3
Pay_bills	3
College_search	2

Keyword	Frequency
Community_Events	2
Don't_know_how_to_use	2
Learn_English	2
Movies	2
Tasks	2
Translations	2
Weather	2
YouTube	2
Activities	1
Advertising	1
Business	1
Chores	1
Classes	1
College	1
Compare_food_price	1
Conduct_Business	1
Daily_life	1
Dating	1
Don't_have_internet	1
Education	1
Fitness	1
Home_Remedies	1
Interviews	1
Investing	1
Learn_computer_skills	1
Online_sales	1
Personal	1
Phone_as_Hotspot	1
Reading	1
Religion	1
Reports	1
Schedule	1
Technical_Skills	1
Text	1
Training	1
Videos_for_Job_Skills	1

Figure 4. Word Cloud on "what devices do you use?

Keyword	Frequency
Phone	92
Tablet	34
Computer	30
Laptop	19
TV	14
School_Computer	11
Home_Computer	6
Work_Computer	5
Gaming_Console	4
iPad	4
Public_Computer_at_Library	2
SmartTV	2
Apple_Watch	1
Cameras	1
Library	1
Security_Cameras	1
Smart_Display	1

"What do you need to have a better digital experience?"

Keyword	Frequency
Stronger_signal	49
Update_devices	22
Improve_internet_speed	21
More_devices	19
Affordable_internet	13
Computer	11
Stronger_Service	5
Update_Tablet	3
Internet_at_home	2
Update_Laptop	2
Access_to_Secure_Internet	1
Better_Connectivity	1
Can't_Afford	1
Computer_classes	1
English_classes	1
Improve_Bandwidth	1
More_Laptops	1
More_Reliable_Internet	1
Need_internet_access_at_home	1

Keyword	Frequency
New_Router	1
Only_have_phone	1
Printer	1
Security_Cameras	1
Technical_skills	1
TV	1
Update_old_borrowed_devices	1
Update_Phone	1

Figure 6. Word cloud on "Is there anything missing that you need to know or learn?"

Keyword	Frequency
Gateway_skills	24
Online_life	14
Information_skills	10
Mobile	10
Workplace	7
Communication	6
Creation	3
Device_ownership	2
Information_management	1
Lifelong_learning	1
Privacy_and_Security	1

"What do you do when you need help using your phone or doing something online?"

Keyword	Frequency
Family	53
Myself	31
Friends	27
Children	23
Internet_search	21
School	8
Videos	7
Coworkers	6
Mission_Africa	4
Teacher	4
Library	3
Neighbors	3
Brother	2
Doctors	2

Keyword	Frequency
Comunidades_sin_Fronteras	1
Email	1
Grandchild	1
Husband	1
Latinos_en_Spokane	1
Parents	1
Social_Workers	1
Uncle	1
Unidos_Nueva_Alianza	1
YouTube	1

"Do you use the internet differently now, versus before the COVID pandemic? If so, please explain the differences."

Pre-covid

Key Word	Frequency
Limited internet use	3
In-person	2
Limited phone use	2
No internet access	2
Less negativity	1
Limited community engagement	1

Post-covid

Keyword	Frequency
No change	16
Use internet more	16
Appointments	12
Video calls	8
Shopping	7
Entertainment	5
Increased digitization	5
Online shopping	4
Increased knowledge	3
News	3
Online meetings	3
School	3
Social Media	3
Bill payments	2
Communicate	2
Communicate with family	2

Keyword	Frequency
Connect with teachers	2
Interviews	2
Work	2
Applications	1
Connect with Community	1
Emails	1
Homework	1
Improve English	1
International video calls	1
Isolated	1
Learning	1
More knowledge	1
Online Church	1
Online classes	1
Organizations provided support	1
Research	1
Save time	1
Search for resources	1
Study	1
Technology	1
Virtual calls	1

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