The Arc Minnesota and Regional Quality Council

Technology Needs Assessment Analysis and Report

6/2021

The Arc Minnesota

REGIONAL QUALITY COUNCIL

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Introduction and Purpose

The onset of the COVID-19 pandemic worsened an existing state of isolation common among people who have disabilities. As a result of the pandemic, there was widespread need for, and increased reliance on, technology to complete daily tasks. Additionally, recent advancements in technology have created opportunities to connect people and share information in ways that were never previously possible. For these advancements to be equitable, people who have disabilities must be able to access and navigate technology in ways that work for them.

The Regional Quality Councils and The Arc Minnesota partnered to conduct a statewide technology needs assessment to better understand the barriers to access and navigate technology for people who have disabilities and their caregivers. The results from this assessment will inform the development and distribution of resources and training for people who have disabilities and their caregivers.

The needs assessment survey asked questions to understand if people use devices, what devices they use, and what they use their devices for. There were also questions about internet access, privacy, autonomy, safety, and training. The full survey can be found in Appendix A.

Methods

This survey was conducted electronically through Survey Monkey. Other participation options were a printed survey or completing survey over the phone with a staff member. Surveys were translated and available in Hmong, Spanish, and Somali. The survey was open February 1, 2021 through March 31, 2021. Participants who completed the survey were put in a drawing to win a $25 Visa gift card.

There was a robust outreach effort to encourage participation in this assessment. A handout and technology resource document were created to support the outreach process (can be found in Appendix B and C). These materials were sent along with emails outlining the process to the Regional Quality Council and The Arc Minnesota's networks, including but not limited to: the Department of Human Services (DHS), the Department of Employment and Economic Development (DEED), county staff, social workers, provider agencies, non-profit organizations, self-advocacy groups, professional and community groups. A list of the outreach efforts can be found in Appendix D.

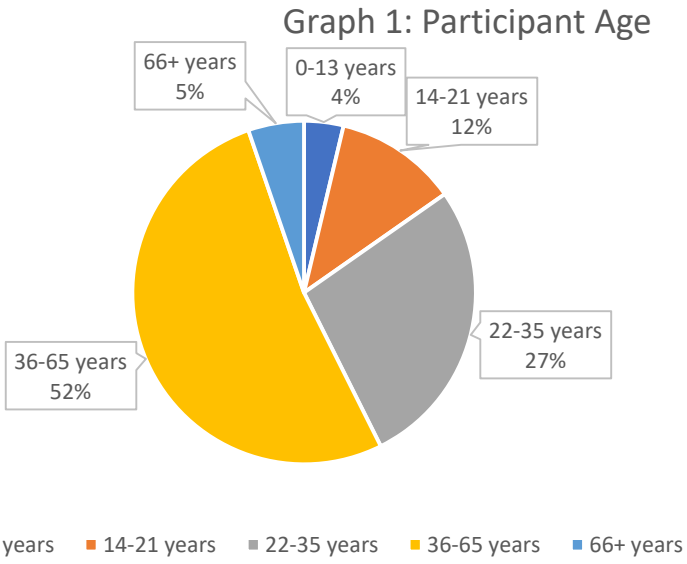
Results

There was a total of 215 responses to this survey. To foster person-centeredness, there were multiple questions that were optional where some participants chose not to answer. There were also a number of questions that allowed participants to check all the answers that applied to them. These are reflected in the results.

Demographics

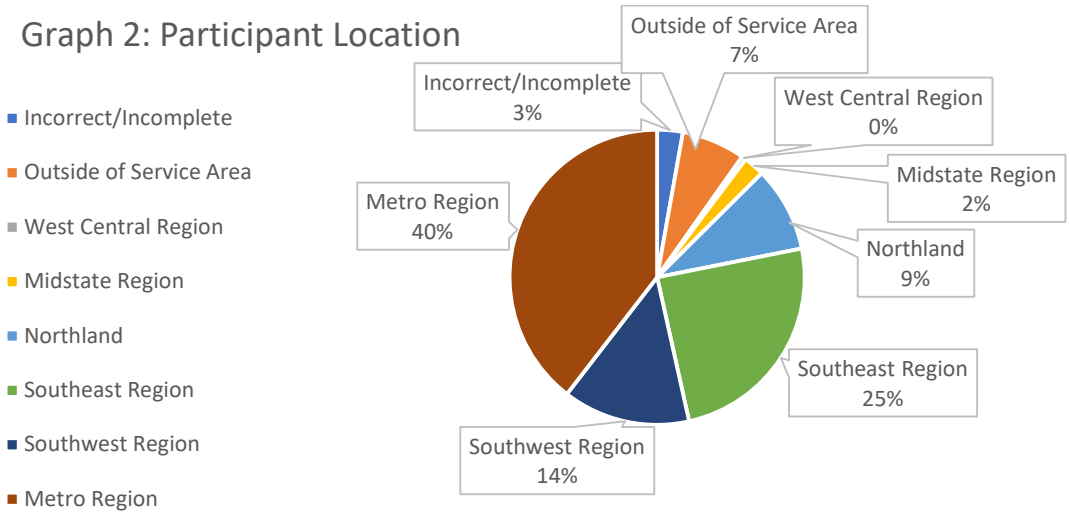
Age

The majority of respondents were between 36-65 years old (52%) followed by 22-35 years old (27%). The remaining 21% fell in the following age categories: 0-13 years old, 14-21 years old, and 66 and older. The full distribution of age can be found in graph 1 below.



Location

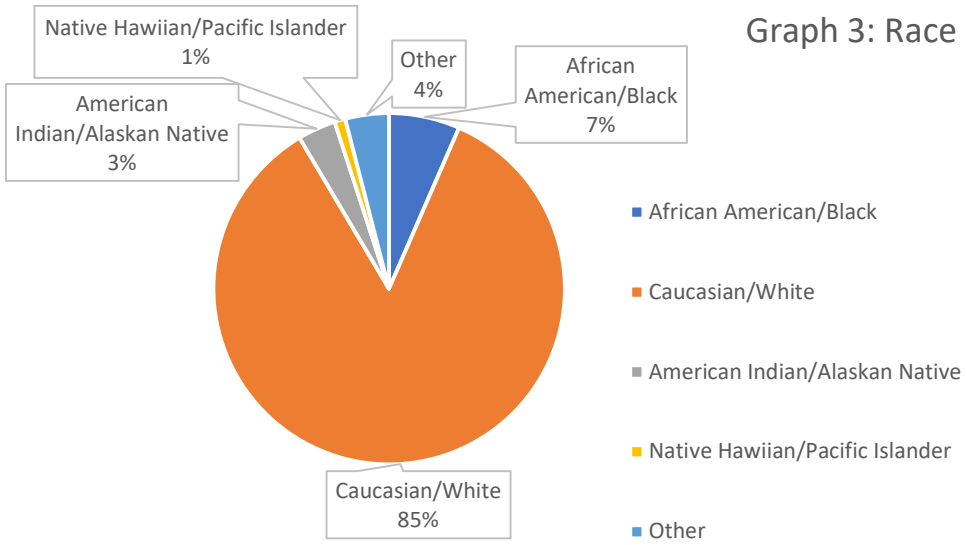
The participants were organized by service area of The Arc Minnesota or affiliates. Out of the 215 respondents, he majority of the participants were from the Metro Region, followed by the Southeast Region and Southwest Region. The participants categorized as "Outside of Service Area" were from counties technically not served by any of The Arc regions such as Beltrami, Sherburne, McLeod, Mower, Wright, Polk and Renville counties. See full participant location breakdown in Graph 2 on page 5.



Race and Ethnicity

The majority of respondents reported not being of Hispanic, Latino, or Spanish origin (96%).

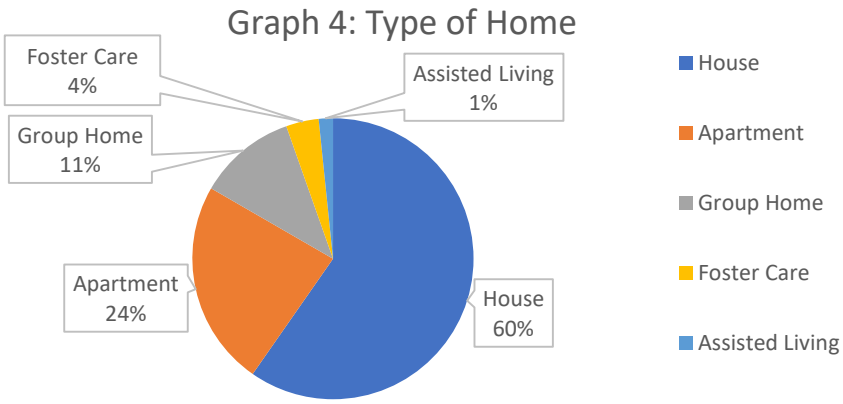
Most respondents were Caucasian/white (85%) followed by African American/Black (7%), other (4%), American Indian/Alaskan (3%), and Native Hawaiian/Pacific Islander (1%). The full breakdown of ethnicity and race can be found in Graph 3 below:

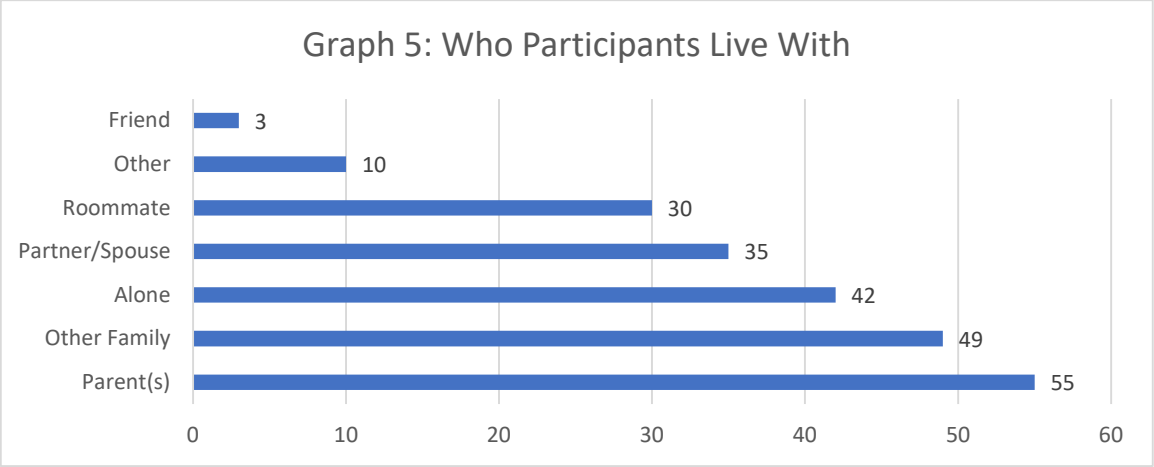


Living Situation

The majority of respondents lived in a house (58%), followed by apartment (23%), group home (11%), foster care (4%), and assisted living (1%).

Respondents had mixed responses regarding who they lived with. The most common response was with a parent (29%), other family member (25%), living alone (22%), or with a partner or spouse (18%). Other people reported living with roommates (16%) and friends (2%). The full breakdown of people's living situations can be found in graphs 4 and 5 on page 6.

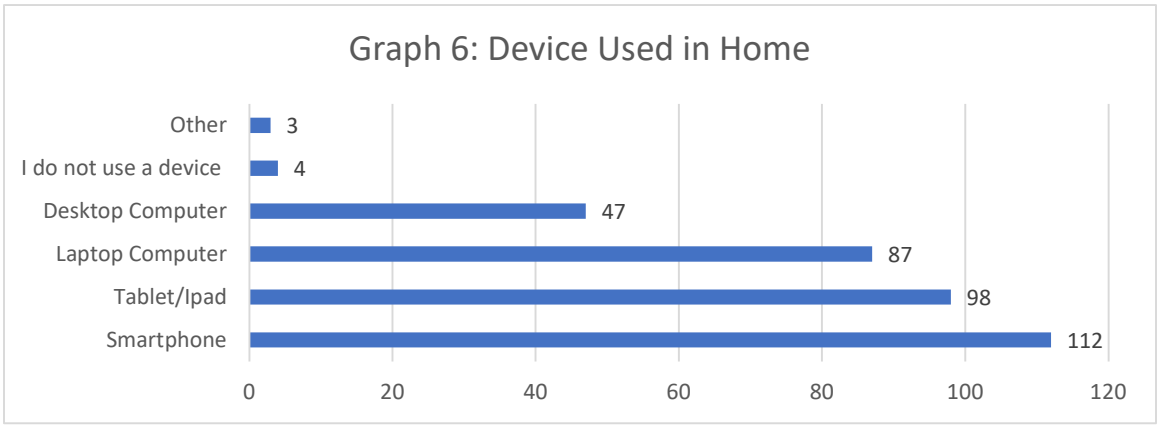




Technology Devices and Internet Privacy

Using a device at home

People reported using multiple devices in their home, with the most frequently used device being a smartphone (68%) followed by tablet/iPad (60%), and laptop computer (53%). See the full breakdown of device use in graph 6. Of the four people who reported not using a device all responded they do not know how to use the device, 3 stated they cannot afford a device and 2 said that staff or caregivers do not know how to help.

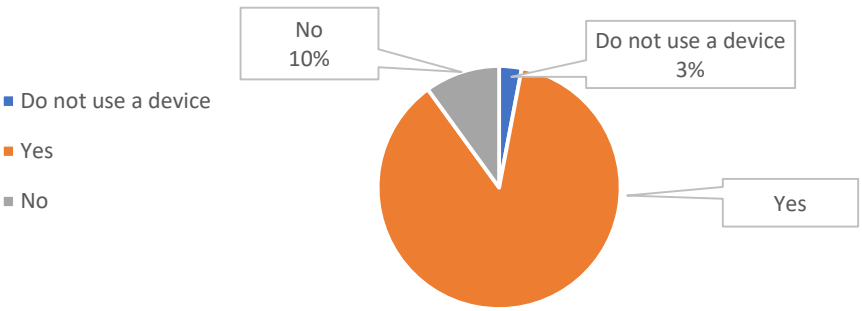


Privacy

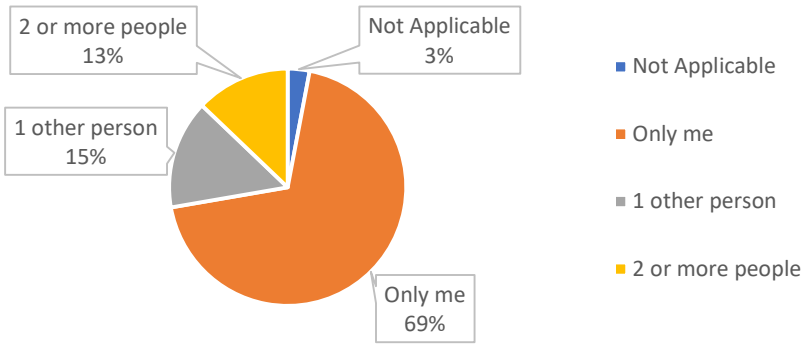
The majority of participants (87%) responded that they have privacy when they use their device. Of those who use devices, 70% reported that they do not share their device(s) with others, 15% reported that they share with one person, and 13% reported that they share with two or more people.

The majority (59%) of respondents who use a device report that they do not share their passwords, while 10% do not have passwords and 27% share their passwords. Of those who share their passwords, 19% do it because they need help remembering, 5% share for school or work, and 4% are told they must share their passwords.

Graph 7: Privacy on Device



Graph 8: Sharing Device



Using the Device

Of those who use a device, 82% report they can use it how and when they want to. Conversely,

- 8% report that others tell them how long they can use their device
- 8% report that others tell them when they can use their device
- 6% report that others tell them where they can use their device,
- 5% report that others tell them what to do on their device, and
- 4% report that they share their device with others, influencing when and how they use it.

Respondents reported using their devices most often to connect with friends (58%), for entertainment (54%), and social media (53%) followed by news (42%) and finding resources (42%). Other activities mentioned were reading/writing, working, school/learning, and using as a communication device.

Respondents reported they were not likely to use their devices for dating, looking for work, and for transportation. See the full breakdown of how people report using their devices in Table 1 to the right:

Table 1: How People Report Using their Devices

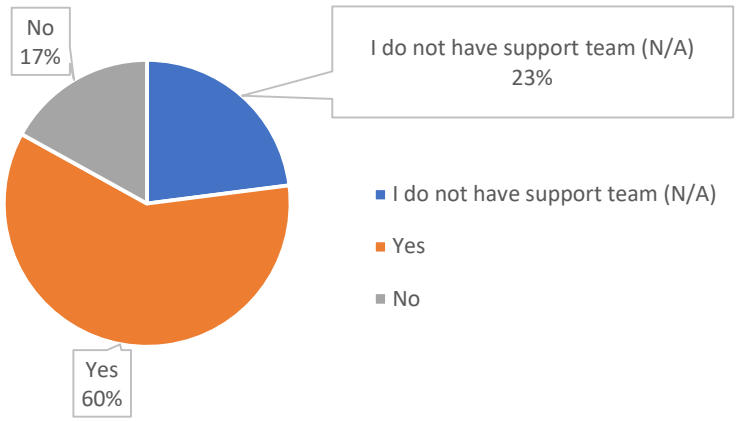
Activity	Not at all	Monthly	Weekly	Daily
Shopping	**40.82%**	34.69%	18.37%	6.12%
Connecting with friends	12.93%	9.52%	19.73%	**57.82%**
Social media	29.86%	3.47%	13.89%	**52.78%**
Dating	**84.35%**	4.08%	6.80%	4.76%
Finding resources	18.24%	14.86%	25.00%	**41.89%**
News	34.25%	6.85%	16.44%	**42.47%**
Entertainment	17.69%	10.20%	17.69%	**54.42%**
Medical appointments	**42.47%**	32.19%	18.49%	6.85%
Transportation	**65.77%**	13.42%	15.44%	5.37%
For job	**58.78%**	4.05%	9.46%	27.70%
Looking for work	**76.03%**	6.85%	10.27%	6.85%

Video Chat

Of those who use a device to connect through video chat, the most frequently used applications are Zoom (72%), Facetime (42%), Facebook Messenger (36%), and Google Meet/Hangout/Duo (28%). The full list of how people connect over video chat can be found in graph 9 below. 11% of respondents reported that they do not use video chat for connecting.

Of those who use video chat to meet with their support team, 60% reported that they use the video program that they prefer while 17% reported that they do not use their preferred program.

Graph 9: Support Team Uses Preferred Video Program

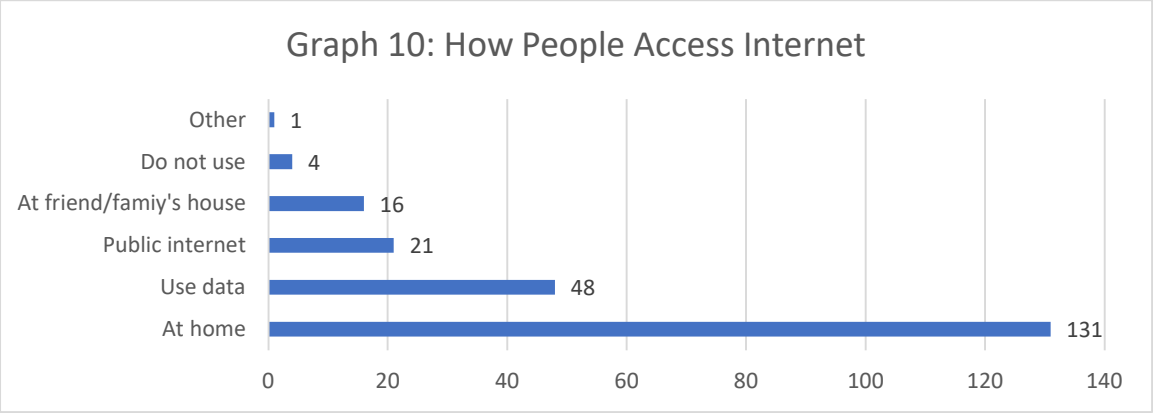


Internet

Accessing Internet

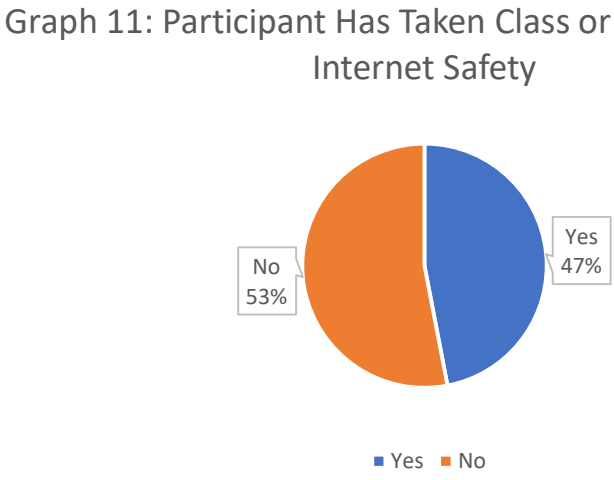
The majority of respondents reported that they get their internet at home (87%), followed by getting internet through their data (32%), using public internet (14%), and getting internet at friends' or family members' home.

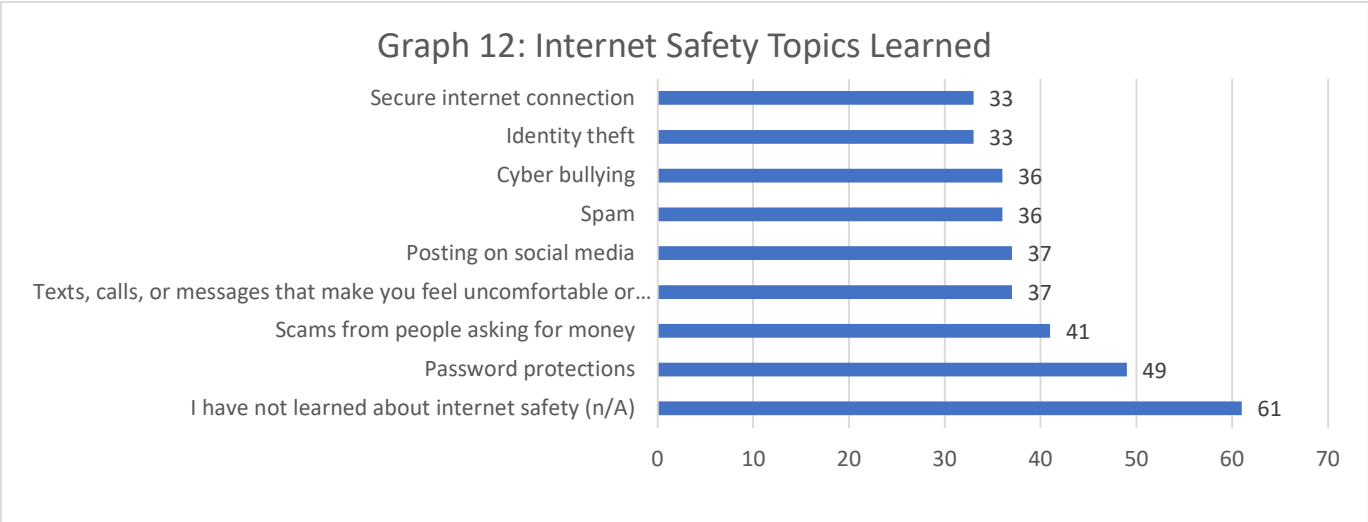
Only 3% of respondents reported that they do not use the internet. The most cited reason for not using the internet was no service or bad service (4%), followed by not knowing how to use the internet (3%), and fear of personal information being shared or stolen (2%).



Internet Safety

The majority of respondents (53%) reported that they had not taken a class or learned about internet safety. Of the 47% of people who reported taking a class or learning about internet safety, the most frequent topics covered were password protections (40%) scams from people or businesses asking for money (33%), texts, calls, or messages that make you feel uncomfortable or threatened (30%), and posting on social media (30%). View the full breakdown on graph 12 on page 10.

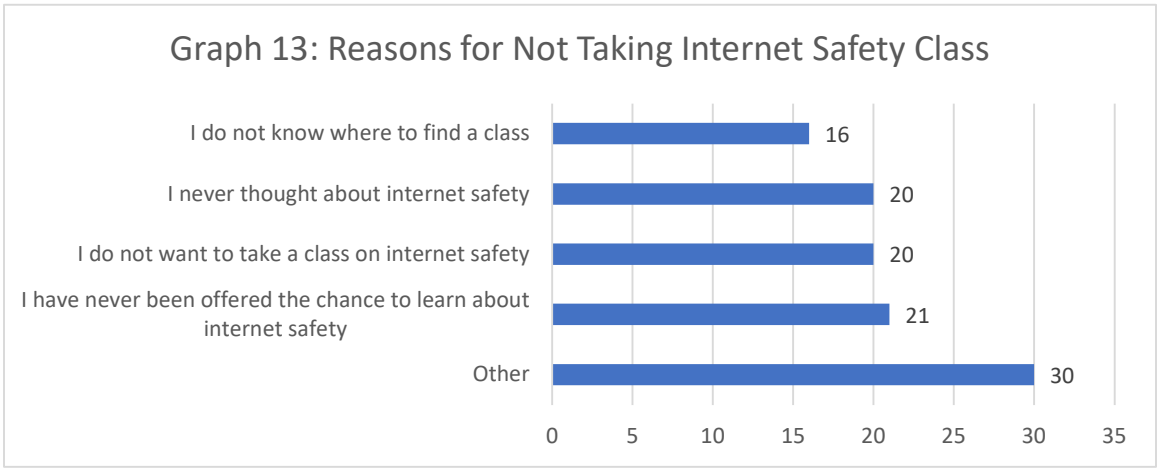




Of those who have not taken a class or learned about internet safety, "other" was the most frequent reason why (33%) with responses such as:

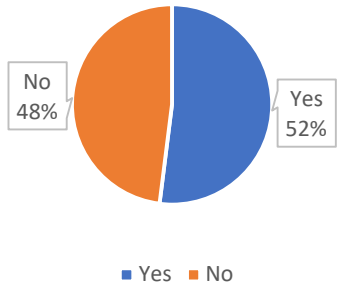
- "I don't need a class, I'm not stupid"
- "My family taught me about the stuff"
- "Does not read"
- "I have not taken a class, but I have learned about internet safety via informational resources through my work."
- "Parental controls"

Additional reasons people cited for not taking a class or learning about internet safety were, never being offered to them (23%), they had never thought about it (22%), and they do not want to take a class on internet safety (22%).



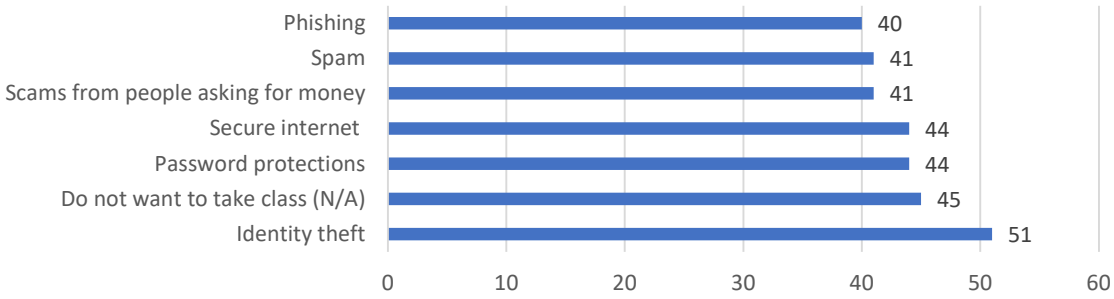
When asked, 52% of respondents said that they would like to learn more about internet safety and 48% said they would not like to learn more about internet safety.

Graph 14: Participant Would Like to Learn More About Internet Safety



Of those who were interested in learning more about internet safety, there was a broad range of topics of interest. The most popular topics were identity theft (44%), password protections (38%), secure internet connection (38%), scams from people or businesses that ask for money (35%), spam (35%), and phishing (34%).

Graph 15: Internet Safety Topics of Interest



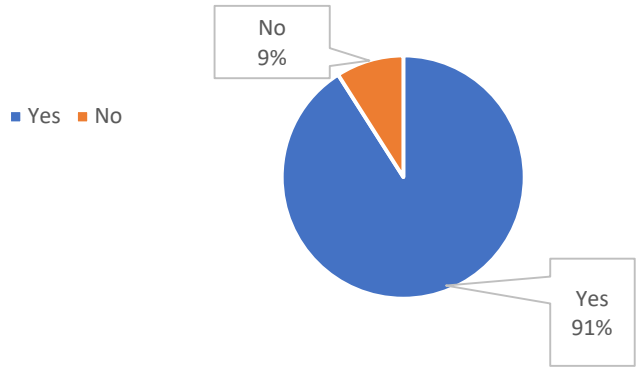
Technology and Connecting During COVID-19

The large majority of people reported that technology had helped them stay connected during the COVID-19 pandemic (91%), with only 9% reporting that technology did not help them stay connected. Specific examples of how people used technology to stay connected were:

- “Communicate with friends.”
- “Facebook has helped so much to keep in touch with old classmates and talk about losing loved ones and the grieving.”
- “Self-advocacy meetings on the Internet”
- “I'm very social and it was difficult not being able to visit getting and family so this has helped greatly. I have anxiety issues and this seems to help”
- “Dept of Health updates, CDC updates, vaccine locator, online orders for groceries, facetime with grandkids/kids/siblings, Pinterest activities”
- “I did my distance learning with school using my school iPad”

- “Technology allows me to work as productively at home as when I was in the office. My job became completely remote during the pandemic. Remote work has been a lot better for my health and well-being since I am able to take care of all my disability-related needs at my own pace, without doing things that jeopardize my health (like skipping meals, bathroom breaks, therapy, because of inaccessible work environments). Technology has allowed me to stay connected to my friends and family even though we can't be together in person.”
- “I have been able to do Facebook video with my relatives. I have been able to join virtual activities from my service providers to do yoga and other fun things”
- “It's the only way I have been able to stay in touch with friends, relatives, social workers etc.”

Graph 16: Technology Supporting Connection During COVID-19 Pandemic



When asked what people needed in order to stay connected during the COVID-19 pandemic, responses related to:

- Access to social media
- Auto-captions or Communication Access Realtime Translation (CART) caption services for meetings
- Access to quality wi-fi, internet connection, or hotspot
    - Help paying for internet access
- A device other than a phone to promote accessibility
    - Laptop for larger screen
    - Laptop for keyboard
- Access and trainings to use Zoom
- Camera for online meetings or connecting
- Buy minutes for phone calls
- Help buying smartphone - currently using flip phone
- Help from family or caregivers
- More family and friends to communicate with

Discussion and Recommendations

The onset of the COVID-19 pandemic worsened an existing state of isolation that is widespread for people who have disabilities. As a result of the pandemic, there was ever-present need and increased reliance on technology to complete daily tasks such as working, shopping, and connecting with friends and families.

The American Association on Intellectual and Developmental Disabilities (AAIDD) recognized the importance of accessible technology. In September 2020, they adopted a Technology and Internet Access Position Statement highlighting the issues for a digital accessible world. This position statement states:

> *"Technology is an integral part of participation in the community in the digital age. People with intellectual and developmental disabilities (IDD) can maximize their independence and inclusion in society with readily available off-the-shelf devices and products, accessible technology, technology-enabled supports, and internet/broadband access. However, the costs of these vital supports present a substantial barrier to the vast majority people with IDD who have incomes below the poverty line, as these expenses are not typically covered by insurance nor are allowable expenses under public benefit guidelines.*
>
> *Access to technology solutions and the internet has become an essential part of everyday life. Personal devices facilitate social communication, provide vital health monitoring around the clock (with appropriate privacy protections), and other supports to people with IDD in nearly every aspect of their lives. In addition to offering specialized supports, key technologies and internet access enable people with IDD to connect with and utilize educational supports and services, apply for jobs, take courses to develop new skills, navigate public transportation and ride share services, maintain contact with others, and engage fully in the world.*
>
> *As the ways to access important information and resources have shifted, primarily if not exclusively, online, internet access has become essential, on par with electricity, heat, and running water. For example, electronic communication has become nearly universal for rapidly transmitting vital information that affect public health and safety, such as dangerous weather conditions, transportation disruptions, public health emergencies, and law enforcement activities; those who lack access cannot take prompt action to preserve their health, wellness, and safety.*
>
> *To maximize their independence and inclusion in society throughout their lifetimes, people with IDD must have access to affordable, appropriate, useable, and accessible technologies and internet access of sufficient bandwidth to perform typical educational, employment, or leisure activities."*[5]

You can access the full AAIDD Technology and Internet Access Position Statement here: https://www.aaidd.org/news-policy/policy/position-statements/technology-and-internet-access

The Regional Quality Councils and The Arc Minnesota conducted a technology needs assessment to better understand the experiences, challenges, and needs of Minnesotans who have disabilities to access and navigate technology. The following sections will highlight general and targeted recommendations to improve equitable access to technology for Minnesotan's who have disabilities.

Center Civil and Human Rights

When advocating for increased access to technology for people who have disabilities, human and civil rights must be at the forefront of all discussions. There are various laws that protect the human and civil rights of people who have disabilities to access and use technology. Historically, these rights have not always been upheld as a result of a deep rooted and false assumption that people who have disabilities are inherently vulnerable and therefore incapable of using technology.[4] This misconception is especially prominent for people who live in group or congregate settings, as there has been a long history of staff, families, and professionals limiting rights under the guise of "safety" skills and capability. Not only does this restrict the rights of people who have disabilities, but it also limits their fundamental knowledge of what internet is and what is available through the internet. If the support system around people who have disabilities assume vulnerability and incompetence, they will be less likely to equip them with the knowledge, skills, and tools to safely access and navigate the internet.

The Americans with Disabilities Act (ADA) and Section 508 of the Rehabilitation Act require government entities and businesses to make their online resources equally accessible to everyone.[7] However, despite these requirements, the Department of Justice (DOJ) has abdicated their responsibility to provide clear requirements to assist entities with complying to the laws.[8] This lack of guidance has resulted in confusion and inconsistent implementation of accessibility practices. Additionally, many websites change frequently or do not have the proper framework in place to ensure reliable accessibility of their information. The widespread lack of accessibility considerations on devices, websites, and applications creates another large barrier for people who have disabilities to access and navigate technology. This prevents people who have disabilities from accessing the same content and information that non-disabled people have access to, further perpetuating inequity.

Recommendations:

- The Accessibility Guidelines Working Group is function of the Web Accessibility Initiative (WAI), which is funded by the National Institute on Disability, Independent Living, and Rehabilitation Research (NIDLRR) within the United States Department of Health and Human Services (HHS). The Accessibility Guidelines Working Group has created the Website Accessibility Guidelines 2.1 (WAG 2.1), which comes in three levels: A, AA, and AAA.[2,6,8] Until the Department of Justice sets accessibility standards, states and local governments must adhere to and promote WAG 2.1 guidelines. Generally speaking, these guidelines have requirements that ensure websites are:

- "*Perceivable – Information and user interface components must be present to user in ways they can perceive. This means that users must be able to perceive the information being presented (it can't be invisible to all of their senses).*
- *Operable – User interface components and navigation must be operable. This means that users must be able to operate the interface (the interface cannot require interaction that a user cannot perform).*
- *Understandable – Information and the operation of user interface must be understandable. This means that users must be able to understand the information as well as the operation of the user interface (the content or operation cannot be beyond their understanding).*
- *Robust - Content must be robust enough that it can be interpreted reliably by a wide variety of user agents, including assistive technologies.*
  This means that users must be able to access the content as technologies advance (as technologies and user agents evolve, the content should remain accessible)."[1]
    - All organizations who utilize the internet must go beyond the bare minimum accessibility standards. They must implement the guidelines and best practices outlined by WAG 2.1 and continue to update procedures as needs and technology change/advance. Learn more about these guidelines here: https://www.accessibility.works/blog/2021-ada-wcag-website-accessibility-standards-requirements/
        - Add alt-text to images: Describe the image in context based on what details the image adds to the text. For example, if the image is of a dog and a firefighter, depending on the context, the alt-text could be, "Smith poses with the station's new rescue dog." Keep the descriptions short and concise. Longer descriptions (more than about 125 characters) should be included in the comment section of the post, rather than as alt text.
        - Caption videos and add the link to transcripts if possible.
        - Check the color contrast in your images if you are conveying textual information. Make sure letters and images are clear and stand out.
        - Make all functionality available from a keyboard.
        - Do not use content that can cause seizures.
        - Use camel case in your hashtags. For example, write #WeWork, not #wework
- Advocacy organizations, government entities, provider agencies, and other disability-related organizations have the responsibility to educate people who have disabilities, family members, and formal supports about their rights to technology.
    - They must also provide the support and infrastructure to maintain rights and respond to rights restrictions.
    - They must ensure that people with IDD have equal access to the digital world as their peers without disabilities.

- Funding must be made available through waivers and other services to support individual technology needs. The state must supplement this funding with grants for those who are not able to use their waivers or who are not a part of the formal service system.

Intentionally Fund Equitable Access

There must be funding dedicated to increase and improve access to technology that promotes participation in ways that fits individual needs.

Recommendations:

- The state must prioritize developing electrical and technological infrastructure to expand internet reception in all communities across the state, with a focus on rural communities. Internet access must be treated as any other utility necessary for health and safety. According to the 2020 Annual Report of the Governor's Task Force on Broadband,

  > "There is an increased urgency to bring broadband access to the 157,000 rural households that are unserved in Minnesota while making an equivalent effort to move the needle closer to the 2026 speed goal of 100/20 Mbps to all households as the need for broadband has proven itself a basic necessity to Minnesotans during this pandemic. Minnesota communities are rallying to deploy innovative, but temporary solutions to the situation by distributing hot spots to students, parking school busses with Wi-Fi signals in neighborhoods and working with businesses to offer parking spots in their lots for members of their community to access online resources. A few communities have embarked on wireless solutions to bring marginal service to unserved areas."[3]

  In order to equitably provide broadband to residents across the state, we support the following recommendations made by the 2020 Annual Report of the Governor's Task Force on Broadband:

  1. *"Continue to fund the Broadband Grant Program at a biennial amount of $120 million from the base budget each year and ensure that all future expenditures must be on service that meets or exceeds the 2026 speed goal of 100 Mbps download and 20 Mbps upload.*
     - *The $120 million is based on the Task Force's estimate of the State funding that will be required to achieve its 2022 goal.*
     - *The State should fund the Border-to-Border Broadband Grant Program as a part of the base budget each year. Past allocations to the Border-to-Border Program have been from surplus funds, which caused inconsistent (or no) funding year-to-year.*
     - *There is continuing need for funding from the Border-to-Border Broadband Grant Program, as requests for funding have exceeded funds available each year. It is a successful program, increasing broadband deployment in places where ISPs cannot do it alone. The chart below details the history of applications for*

Broadband Grant Program awards in each year in which funding was provided. The funding amounts requested consistently exceeds the amount available in the program, demonstrating the interest in the Program by ISPs.

2. Create an Office of Broadband (OBD) operating annual fund of $1.5 million to promote broadband adoption and use and redress digital inequity. With an annual budget of $1.5 million, OBD could create the following digital equity programs:

- *Digital literacy: Via a modest grant program, state resources will be aimed at populations known to have barriers to digital literacy (including low-income individuals, rural and minority populations) to provide training opportunities related to digital skills. This funding would be competitively awarded to community-based organizations with demonstrated experience working with target populations on digital literacy issues. By launching a grant program to address these needs, OBD would have the opportunity to coordinate digital literacy efforts, curricula, and best practices on a statewide basis.*
- *Low-income broadband access: Similar to the Border-to-Border Broadband Infrastructure Grant Program, this program will award targeted grants to assist providers in developing low-income service models that are financially sustainable and facilitate providers and communities to work together toward additional solutions."*[3]

- Waivers and other forms of funding must include reasonable budgets for accessing technology as a basic need. Budgets must account for ongoing updates and accommodations to technological devices. The state must supplement this funding with grants for those who are not able to use their waivers or who are not a part of the formal service system.
  - Coverage must be expanded to include appropriate technology solutions and technology-enabled supports, including smart home technologies.
  - Technology benefits must be robust and cover the cost of devices as well as selection, installation, customization, maintenance, capacity (such as high speed), and training regarding the devices and internet access.
- Eliminate barriers for Medicaid beneficiaries to multi-use and commercial off-the-shelf technology that could support independent living in the community.
- Schools, providers, and other applicable organizations must ensure that technology needs (including internet access) are addressed in Individualized Education, Support, and Family Service Plans (IEP, ISP, and IFSP).
- Disability organizations, state entities, providers, and all other organizations that serve or employ people who have disabilities must budget for and use universal design principles when sharing information. This ensures that peoples' access needs are accounted for and accommodated as a norm, not as an exception, and alleviates the burden of access requests from those who have disabilities. Specific accommodations within universal design may be, but are not limited to:
  - Providing CART captioning and/or American Sign Language (ASL) interpreters.

- Provide language-specific interpreters and translations.
- Ensue accessibility considerations are made to online materials;
  - Alternative text
  - Image descriptions
  - Screen-reader friendly text/format
- Ensure culturally appropriate communication methods.

Person-Centered Technology

One clear theme that emerged from this assessment is that people who have disabilities have unique and individual experiences with using technology that are largely dependent on factors such as their location, living arrangement, and access to quality supports. Being person-centered in this area may be difficult but it is necessary to promote an equitable experience. There must be support, resources, and training available to help people who have disabilities navigate technology in ways that ensure a quality experience. It is not enough to provide access alone.

Technology resources and trainings must be responsive to individual needs and focus on the types of devices that individual prefers (such as a smartphone, tablet, or laptop) as well as the applications they want to use (such as Zoom, Facetime, and Facebook Messenger).

Additionally, there are many barriers to navigate technology that must be considered. For example, some applications are not easy to use on a smartphone. To enter a video call with multiple participants on a smartphone or tablet can be very difficult to see participants, see a shared content. Engaging with other participants is difficult, which results in an incomplete experience. Touch screen devices can be sensitive and offer small buttons, making a keyboard a better tool to support full participation in meetings or when chatting with friends and family.

Some people have more specific needs that may not be able to be solved by the device itself. In this case, it is important to train caregivers and family members how to use and navigate technology. They also must learn best practices when supporting someone who has disabilities to access technology in ways that balances safety and their rights to access information, while also ensuring privacy and autonomy. Members of one's support systems must continue to promote person-centeredness by using the video or meeting program that the individual prefers. To do so, training should be available to case managers, providers, and other members of support teams so they are able to provide high quality meetings while using the program that the person prefers.

To do this, there must be intentional budgeting and funding in programs, waivers, and services to help people access the specific devices they choose. Training and resources must be available to help people successfully navigate apps and software programs in ways that work for them.

Recommendations:

- Disability organizations, providers, and other related entities must expand the adoption of commercial, off-the-shelf, multiple-use technology to support people who have disabilities.
- Disability organizations must collaborate to provide streamlined, consistent, and comprehensive technology training to people who have disabilities as well as family members, caregivers, and members of support teams.
    - Continued community engagement is necessary to inform trainings so that the content, methods, and delivery meet the needs of those most impacted.
- Disability organizations, government entities, and other related organizations must engage with the community before events to understand how they prefer to get information. Offer events on multiple platforms may also help reach more people and encourage participation.
- Waivers and other forms of funding must include reasonable budgets that includes technology as a basic need. Budgets must account for ongoing updates and accommodations to technological devices.
    - The state must have grant funds available to support those who have higher technology needs or do not receive services through the formal system.
    - Funding must make specialty assistive technology available to those who need it.
- Promote ongoing research on the impact of adopting effective technology solutions and adaptations and on information services concerning technology-enabled supports. Advances in technology have the opportunity to alleviate various consequences of the support staff crisis and promote independence.

Presume Competence

One common fear of technology is the risks that come with using the internet. While there are risks for all internet users, too often people who have disabilities are assumed to be "too vulnerable" to be able to safely navigate the internet. As stated above, this misconception and presumed incompetence leads to a lack of opportunity for people who have disabilities to receive training. The absence of opportunities leads to a lack of knowledge, experience, and ability to safely navigate the internet.

Additionally, people who have disabilities generally reported being interested in learning more about internet safety. The most popular training topics include identity theft, password protections, secure internet connection, scams from people or businesses that ask for money, spam, and phishing. To offer this training in an equitable way, all materials must be developed with accessibility and plain language at the center. There also needs to be partnerships developed across disability services that connect providers, support staff, and other community partners to offer this training where people feel most comfortable. We must move forward with the understanding that all people must be able to make informed decisions, including how they choose to use and enjoy the internet.

Recommendations:

- Technology is interwoven into the fabric of our lives. Therefore, it must be talked about at all stages of life for people who have disabilities: with family, throughout school, at work, and related to services. All people have a responsibility to assume competence for others, provide accommodations and information in accessible language, and promote safety within technology.
- Disability organizations must develop internet safety trainings and discussions on an ongoing basis to meet the current needs and technology. Materials must be accessible and offered in multiple formats.

Assessment Limitations

There were limitations in the outreach and methods of this assessment that may have impacted the results.

There were options for participants to get a paper survey or complete the survey over the phone. However, the vast majority of surveys were completed online through Survey Monkey. Additionally, due to safety concerns related to COVID-19, the bulk of the outreach was done online through emails, social media posts, and newsletters. Because of limitations of in person outreach, we can assume that we missed a portion of the population of Minnesotans with disabilities who have challenges accessing and navigating technology.

Despite offering surveys in Hmong, Spanish, and Somali, no one requested a translated survey. Based on this, we can assume that we did not have sufficient outreach to non-English speaking communities. In the future, there must be intentional outreach to organizations that support people who do not speak English, even if they do not serve people who have disabilities. Additionally, there are communities who communicate with spoken words rather than through written language. To connect better with these groups, we must utilize video and audio recordings.

The nature of this survey was to promote person-centeredness. In doing so, most of the questions were optional and gave participants the option to skip questions if they did not understand. This resulted in between 20 and 100 people skipping various questions throughout the survey.

There were 215 respondents to this survey. Upon reviewing the participants' names and contact information, an estimated 17% of the responses were from professionals or people who do not have disabilities. This survey was explicitly designed to gather information from people who have disabilities and lived experiences. Because a majority of the surveys were done online it is unknown if the person answered on their own behalf or the professionals answered on the person's behalf. The responses from professionals were not removed and may impact the validity of the results.

Despite these limitations, themes and best practices have emerged from the assessment. These findings are preliminary and more additional research is recommended to confirm or reject the findings of this assessment.

Conclusion

Advancements in technology have the opportunity to connect people and share information in ways that were never previously possible. In order to continue to connect with friends and family, participate in community, work, and navigate daily tasks, people who have disabilities must be able to access and navigate technology in ways that work for them. This needs assessment found that there are many financial barriers to accessing technology and a lack of training and resources that prevent a high-quality experience. To alleviate this, there must be targeted funding available to meet individual needs, in programs, and across the system to provide a person-centered approach. There must be a broad range of training and resources available in multiple formats so that all people are given the opportunity to learn how to be safe and have autonomy in their technological experiences.

Appendix

Appendix A: Technology Needs Assessment Survey

Technology Needs Assessment with Imag

Double click the image above to access the survey

Appendix B: Technology Needs Assessment Outreach Materials

Technology Needs Assessment Flier 2.1.2

Double click the image above to access the Technology Needs Assessment Flier.

FB Technology Needs Assessment Announce

Double click the image above to access the Technology Needs Assessment Facebook Post.

Appendix C: Technology Resource Page

Technology Needs Assessment Resource

Double click the image above to access the Technology Needs Assessment Resource Page.

Appendix D: Technology Needs Assessment Outreach List

You can access the Technology Needs Assessment Outreach List spreadsheet here: https://docs.google.com/spreadsheets/d/16yROOdVZn_IPkeLOefqC2f8xyiSGbnEpDHGlCjex7bs/edit?usp=sharing

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