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# **Digital Inclusion in Avondale: Identifying Needs, Assets, and Actions**

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# Digital Inclusion in Avondale: Identifying Needs, Assets, and Actions

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# Table of Contents

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Introduction .....	1
Project Methods .....	2
The Importance of Digital Inclusion .....	4
Examining the Pillars of Digital Inclusion in Avondale .....	5
Prioritizing Actions & Additional Considerations .....	13
Conclusions & Next Steps.....	15
References .....	38

## List of Appendices

<b>Appendix A.</b> Summary of Results from the Avondale Digital Inclusion Community Survey .....	13
<b>Appendix B.</b> Summary of Digital Inclusion Priorities in Avondale.....	31
<b>Appendix C.</b> Digital Inclusion Resource Guide .....	34

# Introduction

The National Digital Inclusion Alliance (NDIA) estimates that 36 million U.S. households do not have access to broadband service. Many of these households live in urban areas and find themselves unable to connect to essential services and supports. Recognizing the importance of digital inclusion, Uptown Consortium has partnered with the Avondale Development Corporation (ADC) and the University of Cincinnati to identify how public and private sector partners might support efforts to connect neighborhood residents and small businesses with reliable internet, devices, technical support, and training.

To support this effort, the University of Cincinnati Office of Research Community Change Collaborative commissioned the UC Evaluation Services Center to explore the perspectives and digital inclusion priorities of Avondale residents and stakeholders in 2022. Understanding the strengths and obstacles to digital inclusion will generate short-term and long-term strategies to engage potential partners and secure resources. This report provides a summary of data collected to address the project's three questions:

- 1) What is the status of digital inclusion in the Uptown neighborhoods, specifically in Avondale? Are there current efforts and assets in place to bridge the digital divide? What additional support and partnerships might be developed to help address issues identified?
- 2) Within Avondale, are there populations (e.g., older adults, unemployed, students) who face particular challenges or are there specific geographic areas with the highest need (e.g. affordable housing units that cannot get robust internet service)? Where would it be most beneficial to focus initial efforts?
- 3) What short-term and long-term strategies might increase digital inclusion in Avondale, specifically through community engagement with Digital Futures and the Innovation Corridor?

## National Digital Inclusion Alliance Framework

The National Digital Inclusion Alliance (NDIA) offers a framework for organizations focused on digital inclusion, which NDIA says “requires intentional strategies and investments to reduce and eliminate historical, institutional and structural barriers to access and use technology.” The NDIA identifies five pillars for enabling digital inclusion:

- 1) affordable, robust broadband internet service;
- 2) internet-enabled devices that meet the needs of the user;
- 3) access to digital literacy training;
- 4) quality technical support; and
- 5) applications and online content designed to enable and encourage self-sufficiency, participation and collaboration.”

# Project Methods

Multiple methods were used to compile the information provided in this report, including: a literature review, organizational interviews, focus groups, and a community survey. In this section, we describe key processes and participant information.

## Literature Review

UC Information Technology graduate students and professors conducted a literature review of 17 "trailblazer" cities across the United States that meet best practice indicators within their digital inclusion initiatives. The students reviewed 16 city strategic plans and five supplemental documents that contained a summary of initiatives and best practices, surveys that had been conducted, and other data available from civic institutions and organizations. Results from this review are incorporated in the NDIA strategy sections of this report.

## Organizational Interviews

The University of Cincinnati Evaluation Services Staff (UCESC) staff conducted six interviews with representatives of organizations that support digital inclusion efforts in Avondale. Interviews were conducted virtually with one facilitator and one note-taker. Information collected during the interviews helped to inform the focus group protocols and community survey and key findings from the conversations are incorporated into this report. Interviews were conducted with a total of 10 representatives from the following organizations: Avondale Library, PowerNet, Urban League of Greater Southwestern Ohio, Altafiber (formerly Cincinnati Bell), Rockdale Academy, and South Avondale Elementary School.

## Focus Groups

The Avondale Development Corporation recruited participants for seven focus groups with specific populations in Avondale: older adults, homeowners, residents near the business district, jobseekers, educators, workforce development organizations, and income-based housing residents. A total of 21 individuals across these groups participated in the focus group discussions. All groups were co-facilitated by staff from UCESC and ADC and included one note-taker. Participants were asked permission to record the sessions and all agreed. After the focus groups, participants received a Kroger gift card. The focus group discussions were recorded, transcribed, and analyzed using MAXQDA (VERBI Software, 2019), using a thematic analysis process for identifying, analyzing, and reporting patterns within the data that aligned with the key questions of this project (Braun & Clarke, 2006).

## Community Survey

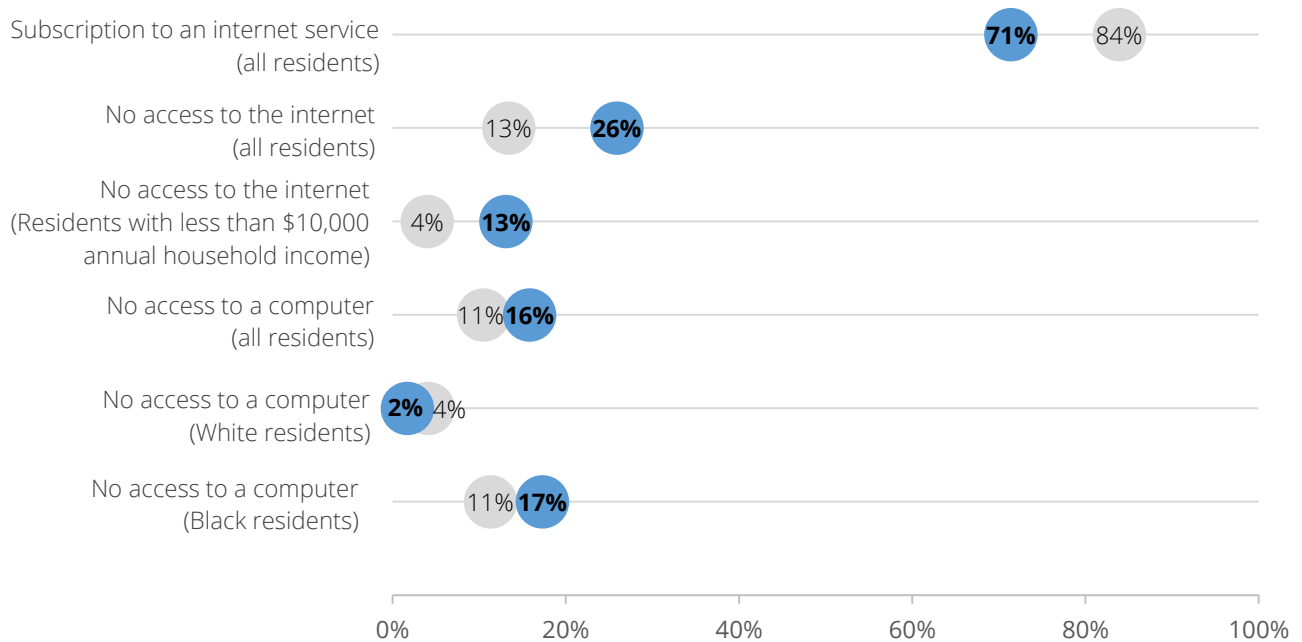
A 45-item community survey was developed to assess digital awareness, use, and needs of people who live, work, worship, serve, and/or visit businesses within Avondale. The survey link was distributed within the community by the Avondale Development Corporation and Uptown Consortium through a variety of methods, including: fliers in strategic locations, email newsletters or listservs, community meetings and canvassing efforts, social media posts, and information on “splash” page of the Avondale Free Wi-Fi service. The link was also provided to all focus group and interview participants to distribute within their networks. In total, 101 survey responses were received. All quantitative survey data were analyzed using SPSS 27 software (IBM Corp, 2020). Descriptive statistics were generated to reveal basic data patterns. Additionally, for cases where a respondent partially completed a survey, those cases were excluded from any analyses where their data were missing. Lastly, open-ended responses were reviewed to understand meaning, then grouped into thematic categories and summarized.

# The Importance of Digital Inclusion

Digital access and skills are no longer luxuries in our society but essential for many aspects of our connected lives, including banking, healthcare, education, work, social connections and more. The COVID-19 pandemic has accelerated the shift from in-person to digital services, which will widen existing disparities among low-income and underserved communities. According to the NDIA, “the work of digital inclusion coalitions is deeply connected to racial equity and justice.” NDIA has found that although Black and Hispanic Americans are more likely to not have access to at-home broadband service compared with White households, past federal broadband funding and policies have consistently targeted rural white communities (Siefer & Callahan, 2020).

U.S. Census data on digital inclusion confirms that Avondale is a critical site for digital equity investment (American Community Survey, 2020). As shown in *Figure 1*, Avondale has lower rates of digital access than the City of Cincinnati as a whole, especially for Black and low-income residents.

**Figure 1.** Compared to the **City of Cincinnati** overall, **Avondale residents** have less access to a computers and internet services.



Results from the interviews, focus groups, and community survey confirmed that Avondale residents highly value digital access. They specifically cited the importance of digital access for: employment opportunities, entertainment and social connections, financial transactions, social services, health information, medical support, and virtual learning.

“So much is expected for, you know, your medical care is done by way of the internet...If you don't have good access that you can utilize and you understand how it works...it's problematic.”  
 – Avondale Resident



# Examining the Pillars of Digital Inclusion in Avondale

The National Digital Inclusion Alliance (NDIA) defines digital inclusion as “the activities necessary to ensure that all individuals and communities, including the most disadvantaged, have access to and use of Information and Communication Technologies (ICTs).” Four of the NDIA pillars for digital inclusion emerged as important focus areas in Avondale:

- 1) affordable, robust broadband internet service;
- 2) internet-enabled devices that meet the needs of the user;
- 3) access to digital literacy training;
- 4) quality technical support.

In this section, important themes for each pillar are summarized across data sources, using the following categories: key barriers and assets, community ideas generated (if applicable), and relevant strategies and resources from digital inclusion efforts across the country. The purpose of this section is to provide a summary of the context of digital inclusion within Avondale, paired with strategies and resources from digital inclusion efforts, which can be leveraged to inform next steps in strategic planning.

## Digital Inclusion Pillar 1: Affordable, robust broadband internet service

### Barriers

Many people within the Avondale community reported **barriers** connecting to internet and accessing stable Wi-Fi service that meets their needs. Of the 101 people that participated in the community survey, **30% reported they experience poor internet connectivity** and **22% stated that they do not regularly connect to the internet**. Nearly half of survey respondents (47%) reported that **concerns about privacy** prevent them from using the internet provided in public places.

Two key concerns were identified that limit access to broadband internet service:

- 1 **Availability and quality of internet service options.** Focus group and interview participants identified several challenges that inhibit access to quality internet, such as:
  - Existing service options do not always meet individual needs (e.g., low bandwidth/speed)
  - Limited offerings of public and private service options
  - Difficulties and limitations of accessing public Wi-Fi options (e.g., usage restrictions)
  - Challenges with physical infrastructure that limits service accessibility (e.g., building design and condition)
  - Challenges working with landlords (e.g., some landlords want internet companies to lease space to add equipment in their buildings)

- 2 **Cost of internet service limits access.** Of survey respondents, 53% reported that internet affordability is a critical concern for the community. In addition, this barrier was identified as the most critical barrier of all 14 concerns listed within our survey (see *Appendix A*).

“The bill's now what \$40 to where I can afford it but beforehand, I was struggling. It was getting cut off every month. **Every month I was getting cut off.** Trying to find a way to get it paid. I know that struggle.”

– Avondale resident seeking employment

## Assets

Several **key assets** were identified that provide free, subsidized, or reduced cost access to broadband internet (i.e., Wi-Fi) to the Avondale community, each with their own benefits and limitations (see *Table 1*). These resources could be leveraged, enhanced, and expanded to address the identified barriers to internet access.

**Table 1.** Assets to support broadband internet access in Avondale

Resource description	Limitations
<b>Avondale Free Wi-Fi:</b> Available along Reading Road business corridor and to residents of buildings managed by The Community Builders	Limited availability; limitations to usage; some concerns with connectivity, speed, and privacy
<b>Income-based internet service plans:</b> Free and reduced cost internet service available for individuals who qualify for government assistance	Dependent on qualifications/enrollment in other programs; (potential) lack of awareness
<b>Connect our Students Program:</b> Free and reduced-cost internet services available to Cincinnati Public School students and their families	Delays in installation; lack of awareness; challenges with landlords and physical infrastructure
<b>Free Public Wi-Fi Locations:</b> Available at key community locations (e.g., Avondale Library, Hirsch Recreation Center)	Transportation; childcare needs; limited number of devices; limited service hours; privacy concerns
<b>Discounted internet service plans:</b> Options available through local vendors (e.g., Boost Mobile, Metro PC)	None identified
<b>Supportive services from community-based organizations:</b> (Limited) Wi-Fi support available to trainees in workforce development programs	Available only for program participants

## Community Ideas

Several community residents who participated in focus groups and the community survey said that **expanding free, public Wi-Fi access** within Avondale was an important action for the community. Specifically, residents identified targeted areas where more or improved internet should exist, including: public spaces (e.g., parks, schools, churches, laundry mats, business centers), near and

within public transportation, residential buildings (e.g., low-income or multi-family housing). Residents also stated that extending, improving, and communicating the availability of the Avondale Free Wi-Fi network would be beneficial.

“I think some there should be some sort of basic computer internet service without charge across the board... Just I mean just for basic safety, both for adults and for children. For basic learning opportunities, basic you know seeking work. Basic health opportunities. **No one should necessarily be without because they can't afford it. It should be accessible.**”

– Avondale resident



## Relevant Strategies & Resources

According to the NDIA, “helping community members to get internet access at a cost they can afford is probably the most challenging digital inclusion goal” (Siefer et al., 2020). Strategic efforts to increase internet access typically fall into three categories:

1. **Help community members identify and register for available discounted internet programs.** Use a multi-faceted approach that leverages interpersonal networks and trusted community messengers (e.g., provide flyers, informational meetings, referral strategies). The Federal Communications Commission has created an [outreach toolkit](#) to support these efforts.
2. **Establish free public-use computers with Wi-Fi.** While libraries are an important public institution that provides public access to computers, additional accessible computers could be placed in critical locations (e.g., low-income housing, community centers) and/or opening existing computer labs in organization or businesses for public use.
3. **Implement “community networking” strategies.** Increase the availability of free or affordable public Wi-Fi within a defined space such as the development or expansion of free communitywide networks or establishing free or affordable networks within specific buildings (e.g., public housing), and/or developing a community-owned internet network (see examples from [Detroit](#), [Cleveland](#), and [New York City](#)).



### Digital Inclusion Pillar 2:

#### Internet-enabled devices that meet the needs of the user



## Barriers

Some members of the Avondale community experience **barriers** in obtaining the proper digital device for their intended uses. Although **90% of survey participants reported they have access to a cell phone, only 60% have access to a computer**. Additionally, 32% of survey participants ranked the cost of purchasing or maintaining devices as a critical concern for the community, and device access

was ranked as the third most important barrier to address among all concerns listed in the survey (see *Appendix A*).

Focus group participants consistently echoed the importance of having the proper internet-enabled devices for tasks such as applying for jobs, connecting with social services, participating in training programs, and engagement in virtual learning. **Thus, proper access to a digital device can enable an individual's ability to attain community information and resources.**

**“One of the biggest things we see is people filling out applications on cell phones or devices without the ability to sign or upload documents, which again excludes them from applying for jobs and being considered for opportunities.”**

– Workforce provider

## Assets

Several **key assets** were identified that can connect people in Avondale with internet-enabled devices, including free, subsidized, and public use options. Each asset has benefits and limitations (see *Table 2*). These resources can be leveraged, enhanced, and expanded to support the identified barriers to device access.

**Table 2.** Assets to support device access in Avondale

Resource description	Limitations
<b>Cincinnati Computer Cooperative:</b> Distributor of discounted, refurbished devices	(Potential) lack of awareness; limited to certain populations: older adults, students (any age), low-income, or nonprofits
<b>Cincinnati Public Schools:</b> All students provided a device to support virtual and at-home learning	Intended only for student use
<b>Free device programs:</b> Free devices available for individuals of targeted populations (e.g., low-income, older adults, veterans, students)	Limited to specific populations, program scope is far less than the need
<b>Local vendors:</b> Low-cost device options available for purchase (e.g., Metro PC, Boost Mobile)	None identified
<b>Public use devices:</b> Devices available for public use, with low/minimal restrictions (e.g., Avondale Library, Hirsch Recreation Center)	Transportation; childcare needs; limited number of devices; limited service hours, privacy concerns
<b>Supportive services from community-based organizations:</b> (Limited) devices available to trainees in workforce development programs	Limited to program participants
<b>Urban League Lending Library:</b> Low-cost, lease to own device program for program participants	Limited to program participants; unclear if funding will continue to support program beyond the pandemic



## Relevant Strategies & Resources

The Digital Inclusion Startup Manual (Siefer et al., 2020), identifies several strategies and examples of organizations who partner to enhance device access across the country:

1. **Enhance access to refurbished computers.** Communities can implement small scale, DIY refurbishing and/or partner with existing device refurbishing organizations to gather refurbished devices and distribute them to populations in need. For instance, [E2D](#) (in North Carolina) and [Free Geek](#) (in Oregon) are both examples of organizations that refurbish devices, which are then distributed for free or low-costs, depending on the need.
2. **Purchase of new hardware in mass.** With sufficient financial support, digital inclusion programs can choose to purchase devices at wholesale prices and sell or distribute to identified community members for free or reduced costs.
3. **Enhance access to secure public devices.** Organizations may choose to create, enhance, or extend access to computers for public use, such as creating device hubs in accessible locations, opening existing workspaces for public use, and/or expanding device availability or service hours in existing locations.



### Digital Inclusion Pillar 3: Access to digital skills training



## Barriers

Several **barriers** and needs to enhance digital skills training within the Avondale community were identified. While the importance of digital skills knowledge and training was consistently reported, the barriers and needs were unique based on age groups. Specifically, we identified three targeted age groups: older adults, middle-aged adults and parents, and young people.

### **Older Adults**

For older adults, improving overall access to basic digital skills training is especially important. We identified a few organizations within Avondale providing targeted supports for this population, including Serving Older Adults Through Changing Times (SOACT), who provides devices and technology training for older adults. However, focus group participants (of all age groups) consistently said additional resources and supports were needed to enhance their skills.

“[Older adults] have difficulty just understanding and applying very basic things. The technology changes, even incrementally... **people get confused and they just don't know what to do.**”

– Avondale resident

## Middle-aged Adults and Parents

Adults and parents described interest in enhancing specific digital skills, including:

- **Digital privacy and security training** emerged as a consistent priority across all data sources. Concerns about privacy (31%) and security (33%) were top-ranked concerns of survey participants, and 47% of survey participants said there should be more resources for privacy and security within the community. Within focus groups, parents and educators also identified this as an important concern.
- **Use of school-based platforms training for parents** emerged as a priority from educators.
- **Virtual job seeking and application training** emerged as a necessary support from survey and focus group participants.
- **Technical topics refresher training** (e.g., technology “basics,” typing, internet service options and usage) emerged as a need from focus group participants.
- Survey responses also indicated that more of the following digital resources should be present in the community: **accessing information about community or political gatherings; and accessing tax, stimulus, and financial resources.**

**“I have the computer literacy I just don't know how to do some of these things** like block certain shows that kids are supposed to watch or change like the language so that's some of what's going on.”

-Avondale resident

## Young People

While young people are generally recognized as having a higher level of digital skills, some technical supports for youth may be beneficial.

- 50% of parents who responded to the community survey said that their child **did not typically experience problems** using the internet for schoolwork. Of those parents who did experience barriers to using the internet, their child's knowledge/ability to use the internet was ranked as their top concern (25%).
- **Enhanced training on how to connect to wireless networks and navigate school-based platforms** was identified as a need from educators.
- **Enhanced training and exposure to different digital devices** (e.g., iPad, laptop, and desktop computer) was identified as a need from educators and library staff.

## Assets

Several **key assets** were identified within the community that provide digital skills training, each with their own benefits and limitations (see Table 3). These resources can be leveraged, enhanced, and expanded to support digital literacy within Avondale.

**Table 3.** Assets to support digital skills training in Avondale

Resource description	Limitations
<b>Training programs for older adults:</b> Digital device access and skills training provided within Avondale by SOACT and local churches	Limited to older adults; unsure if church program is continuing
<b>Library Digital Skills Training:</b> Programming for skills training was available at the Avondale Public Library. Staff available for informal support and teaching.	No longer available due to COVID and staffing shortages; Low participation and/or awareness
<b>Workforce development or employer-provided trainings:</b> Skills training available for workforce program participants or employees	Limited to program participants or employees
<b>Digital skills training for students:</b> Training provided by Cincinnati Public Schools teachers and staff	Limited to accessing school-based apps and programs; educators need additional training to be able to teach skills

## Relevant Strategies & Resources

Several relevant strategies and resources were identified for considering the next steps for enhancing digital skills training in the Avondale community:

1. Chapter 4 of the [Digital Inclusion Startup Manual](#) provides a free planning checklist, digital skills training materials, and examples of successful training programs. Within these examples, the public library is often a key leader and facilitator of these efforts.
2. [Generations on Line](#) provides free digital skills training and resources for older adults, including the Sip & Swipe Café® training and app to learn tech basics.
3. [DiscoTechs](#)—short for “Discovering Technology”—is an innovative strategy from the Detroit Community Technology Project, which aim to create an organic platform for learning digital technology together in community. Watch this [video](#) for an example.

### Digital Inclusion Pillar 4: Quality technical support

## Barriers

Focus group participants of all ages described the importance of ongoing technical support, particularly for older adults. Of survey participants who were over age of 50, 42% said that they cannot solve tech problems. Avondale principals also discussed the importance of ongoing training and support to help students and parents stay up-to-date with digital technology.

“[Older adults] need follow up every so often...to reassure them you know or to update them on what's going on. They need some... reassurance, some backup, some follow ups.  
– Older Adult



## Assets

A few **key assets** were identified that provide technical support for community members, each with their own benefits and limitations (see *Table 4*). These resources can be leveraged, enhanced, and expanded to provide quality technical support systems within Avondale.

**Table 4.** Assets for quality technical support in Avondale

Resource description	Limitations
<b>Cincinnati Public Schools:</b> Remote support available via hotline (“Help Line”), Individual schools considered an informal resource	Perceptions from staff and parents that the need is greater than the supports available
<b>Avondale Library:</b> Library staff seen as informal resource for digital technology needs	Low staffing levels at library
<b>Organizations:</b> Support provided by organizations for employees or participants in training programs	Limited to program participants or employees

Participants described an informal network for technical support in Avondale, or as one focus group participant calls: **“Each one, teach one.”** Community members often discussed receiving “ad-hoc” or informal support from people within their networks, such as young people, co-workers, relatives, or program/organizational staff (e.g., librarian). **Focus group participants of all ages described instances where a young person helped them with a technology issue.**

## Community Ideas

Several community residents who participated in focus groups said that expanding quality technical support systems within Avondale was an important action for the community. Their ideas included:

- **Intergenerational support strategies:** A reciprocal support program could pair older adults with young people for mutual benefit, including tech support mentoring, educational support, and/or leadership development. This was suggested by focus group participants of all age groups, and educators were supportive of this idea.
- **Need for ongoing support:** Participants described the importance of enhanced digital skills training paired with ongoing follow-up support or resources.

## Relevant Strategies & Resources

Several relevant strategies and resources were identified for next steps for enhancing technical support systems within Avondale, including:

1. [Cyber-Seniors](#) provides an example of an intergenerational tech training and support model that pairs older adults with (high school/college) students.
2. Chapter 7 of the [Digital Inclusion Startup Manual](#) offers examples of technical assistance programs for community members, including: hotline support and technical support days.



# Prioritizing Actions & Additional Considerations









Within all data collection strategies—interviews, focus groups, community survey—participants were asked to identify top priorities to advance digital equity within Avondale (for a summary of these results, see *Appendix B*). Based on the findings across all data sources, four critical action steps and potential strategies for digital inclusion efforts in Avondale were identified.

- 1 Develop strong support systems for digital skills and technical assistance training.**
  - Provide digital training that meets the needs of different community populations:
    - **Older adults:** Learning tech basics, navigating social and health services
    - **Middle-aged adults and parents:** Understanding digital safety, navigating school-based platforms, accessing/submitting digital job applications, refreshers on tech “basics,” and finding information about community/political gatherings and tax, stimulus, or financial resources.
    - **Young people:** Connecting to wireless networks, exposure to different types of digital devices (e.g., iPad, desktop, laptop)
  - Develop robust technical support systems for ongoing needs of all age groups.
- 2 Reduce the financial burdens of internet access in Avondale.**
  - Expand free, public, or reduced cost Wi-Fi options in Avondale.
  - Enhance awareness and enrollment into existing (free/subsidized) Wi-Fi programs.
- 3 Expand Wi-Fi options & enhance quality service in Avondale.**
  - Document the scope of existing service options (i.e., costs, speed) and work to enhance quality and variety of internet service options in Avondale.
  - Examine and address limitations in physical or network infrastructure that makes broadband internet challenging (e.g., older buildings cannot support new technology).
  - Identify barriers and solutions to challenges with service installation (e.g., long delays in installation, landlords who want to be paid to have equipment installed in the building).
- 4 Expand device access to meet the needs of the Avondale community.**
  - Identify specific target populations and device needs within the community. For instance, parents and young adults may need access to desktop/laptop devices to complete job applications and training.
  - Develop strategies and funding opportunities that can support device distributions and ongoing technical support

Note that these actions align specifically with supporting Pillars 1-4 of NDIA’s digital inclusion framework. Additional research and action efforts could explore opportunities for advancing Pillar 5 within Avondale.

## Further Considerations & Emerging Actions

Across all data sources, several cross-cutting themes that impact each pillar of digital inclusion were identified and should be considered within future strategic planning efforts.

-  **Community members have varied perspectives on the importance of privacy and security.** A consistent theme was a lack of transparency and/or knowledge of how internet security and privacy impacts people's lives. While some individuals identified specific age-related concerns (e.g., protection of older adults from scams, protection of young people, data and meeting security for adults), others said that this issue was not a primary concern.
-  **Community members are concerned with technology boundaries.** Parents and educators often discussed concerns regarding children having too much technology usage or unsupervised access and acknowledged the potential negative impacts it may cause (e.g., isolation, inappropriate behaviors).
-  **Fear and resistance to technology is present within the community.** Often discussed in reference to older adults, these perceptions (e.g., being afraid of technology, preferring outdated devices) prevent individuals from accessing technology and learning digital skills.
-  **Health or physical concerns can limit digital technology usage.** Although only discussed by a few individuals, future digital inclusion efforts should consider and reduce any barriers for individuals impacted by health or physical concerns.
-  **Many existing digital inclusion resources have limitations that reduce their impact.** Program or organizational staff should consider how to reduce barriers to any current or future digital inclusion efforts, such as program requirements/qualifications, low participation/awareness, transportation challenges, childcare needs, and limited hours.
-  **Consider the varied needs of populations that are often excluded.** Some populations are often not fully considered in digital inclusion efforts, including (but not limited to) veterans, individuals with substance abuse disorders or mental illness, and returning citizens.
-  **Identify opportunities for funding, sustainability, and partnerships.** Some discussions organically emerged (often among service providers/organizational staff) about the current and future state of funding this work, including funding restrictions, uncertainty of post-pandemic funding opportunities, need for additional funding to expand efforts, and the importance of partnerships to leverage funding streams.
-  **Impact of digital inclusion on virtual learning.** Participants identified several challenges with virtual learning, including parent and child digital skills, internet connectivity, student engagement, meeting the needs of unique learners, and device and hardware needs.

## Conclusions and Next Steps

Avondale residents identified the growing importance of digital inclusion in their lives and how lack of access affects their ability to attain community resources and information, employment, healthcare, and education. Although community residents and stakeholders identified several formal and informal sources of support in Avondale, they also noted significant barriers to digital inclusion. Three potential next steps are described in this section: (1) implement additional data collection and community engagement strategies to determine priorities, (2) build and support public/private partnerships, and (3) connect and learn from other digital inclusion efforts.

### Implement additional data collection & community engagement strategies

Future data collection efforts could be designed to engage additional populations that were identified as having specific barriers to digital inclusion, but were not fully represented in the initial data collection, including—but not limited to—veterans, individuals with mental health and/or substance abuse disorders, returning citizens, and young people.

Additional community engagement opportunities could be planned to enable Avondale community members to review the key findings of this report and to provide more input into potential priorities, strategies, and solutions for digital inclusion.

### Build public & private partnerships

Further engagement with local and state officials could provide support for this project. New federal infrastructure funding targeting digital inclusion efforts has been provided to the states, which may provide an opportunity for new investment in Avondale and other Uptown neighborhoods. Some local efforts were identified, and others may be planned. For example, Hamilton County recently issued a [broadband survey](#) to guide investment of federal funding, and the City of Cincinnati has announced the planned installation of free [hot spot kiosks](#) in Downtown.

Local broadband providers who were interviewed indicated interest in continuing to support digital inclusion efforts and in participating in a public/private coalition to explore solutions to neighborhood challenges such as aging infrastructure and resistant landlords.

### Connect & learn from other digital inclusion efforts

Communities around the country are beginning to engage in more strategic efforts to eliminate the digital divide and foster inclusion. Efforts in Avondale can continue to utilize resources and lessons learned from these efforts. Specifically, according to NDIA, the next steps in digital inclusion planning often include the following components:

- **Developing a community-wide action plan.** The action plan should include: project champions, and supporting partners, a community vision, goals, strategies, timelines, roles and responsibilities. Examples of community-wide digital inclusion action plans can be found in *Appendix C*.
- **Organizing a local convening to share results and/or identify priorities.** A first step in planning the convening would be to identify the purpose and invite key stakeholders to attend. For insights and resources to plan a community convening, see [Connect Home Playbook](#) or [NDIA Digital Inclusion Coalition Guidebook](#).
- **Convene a multi-disciplinary committee focused on digital inclusion.** This strategy has been successful for many digital equity efforts, as 88% of NDIA's Trailblazer cities have implemented this approach, such as Portland, Long Beach, Seattle, and Washington D.C. For additional guidance on how to build a digital equity coalition, see [NDIA's Digital Inclusion Coalition Guidebook](#).
  - According to this guide, early work of the coalition could:
    1. Identify a diverse group of key cross-sector stakeholders: City or neighborhood decision-makers, community-based organizations and non-profits, funders, institutions of higher education, P-12 educational partners, CM Housing Authority, library staff, private tech organizations, and workforce development organizations, and community members.
    2. Develop concrete roles and decision-making structures.
    3. Develop a vision, mission, goals, and objectives for digital inclusion in Avondale.
- **Continue to engage the community in the development, implementation, and communication of an Action Plan.** Many digital inclusion efforts include additional events to engage the community in the work of digital inclusion, such as:
  - **Pop-up events or activities:** Create events where people already gather to ask targeted questions or gather feedback. For an example of this, see the [Action Plan from Long Beach, CA](#).
  - **Digital Disco Techs:** Utilize an innovative strategy to create an organic platform for learning digital technology together in community. Watch this [video](#) for an example.
  - **Community workshops:** Host meetings to explore the data to generate relevant solutions and key priorities. Some communities choose to utilize art as a tool for community engagement (e.g., [Place It](#) model, developed by James Rojas).
  - **Community-based organization workshops:** Gather groups of community-based organizations to provide input and feedback on the action plan.

# Appendices

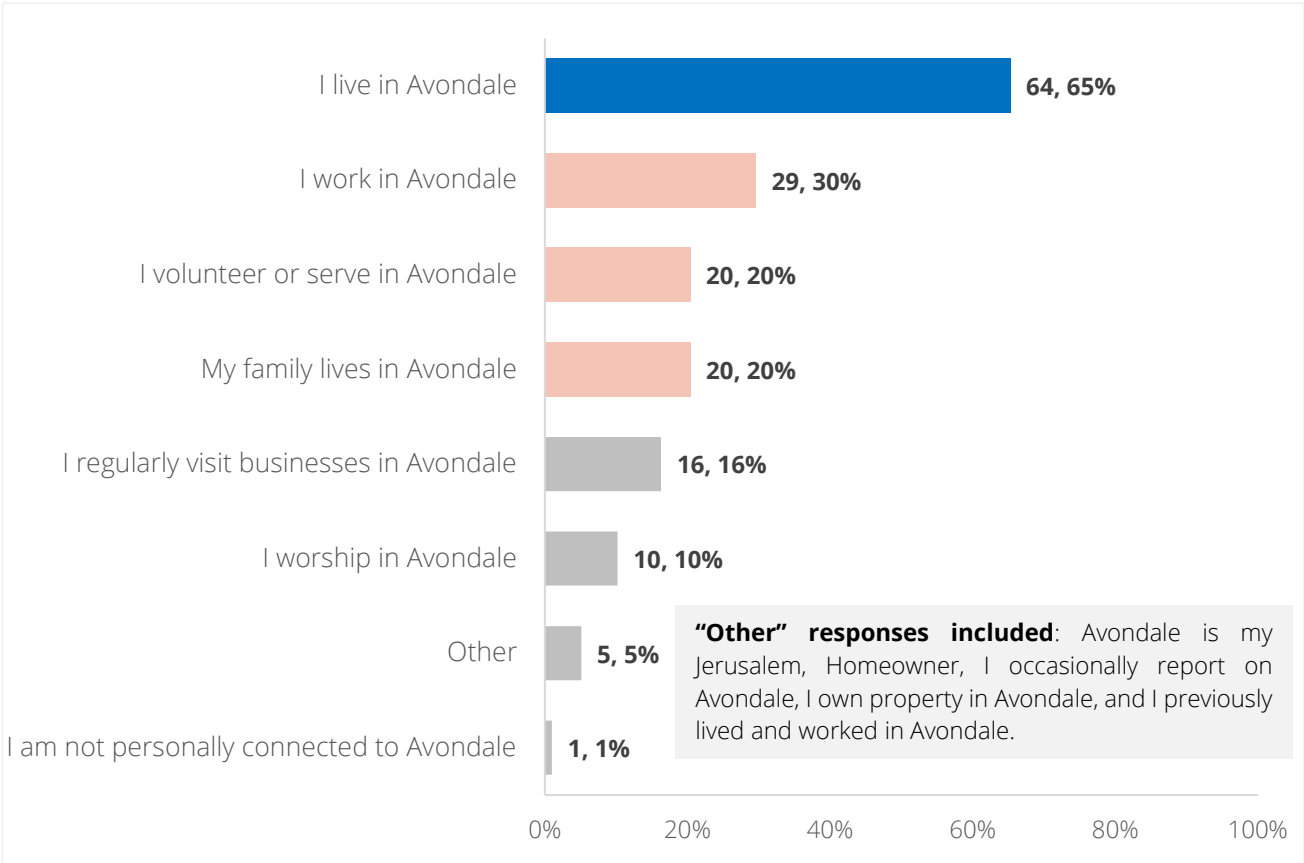


# Appendix A. Summary of Results from the Avondale Digital Inclusion Community Survey

This appendix provides a summary of participants' responses to the community survey. Note that not all participants responded to each question, so total responses are listed for each question.

## Participant Demographics

**Figure 2.** Summary of responses to the question, "How are you connected to the Avondale community," highlights that most survey participants **lived in Avondale**.



Note. Participants were able to select more than one answer, as applicable.

**Table 5.** Summary of participant demographics

Age	Count	%
Age 18 - 29	10	10%
Age 30 - 50	26	26%
Age 51 - 64	21	21%
Age 65+	16	16%
Prefer Not to Answer	8	8%
Missing	20	20%
Total Responses (n)	101	

Gender	Count	%
Female	49	58%
Male	30	36%
Prefer not to answer	5	6%
Total Responses (n)	84	

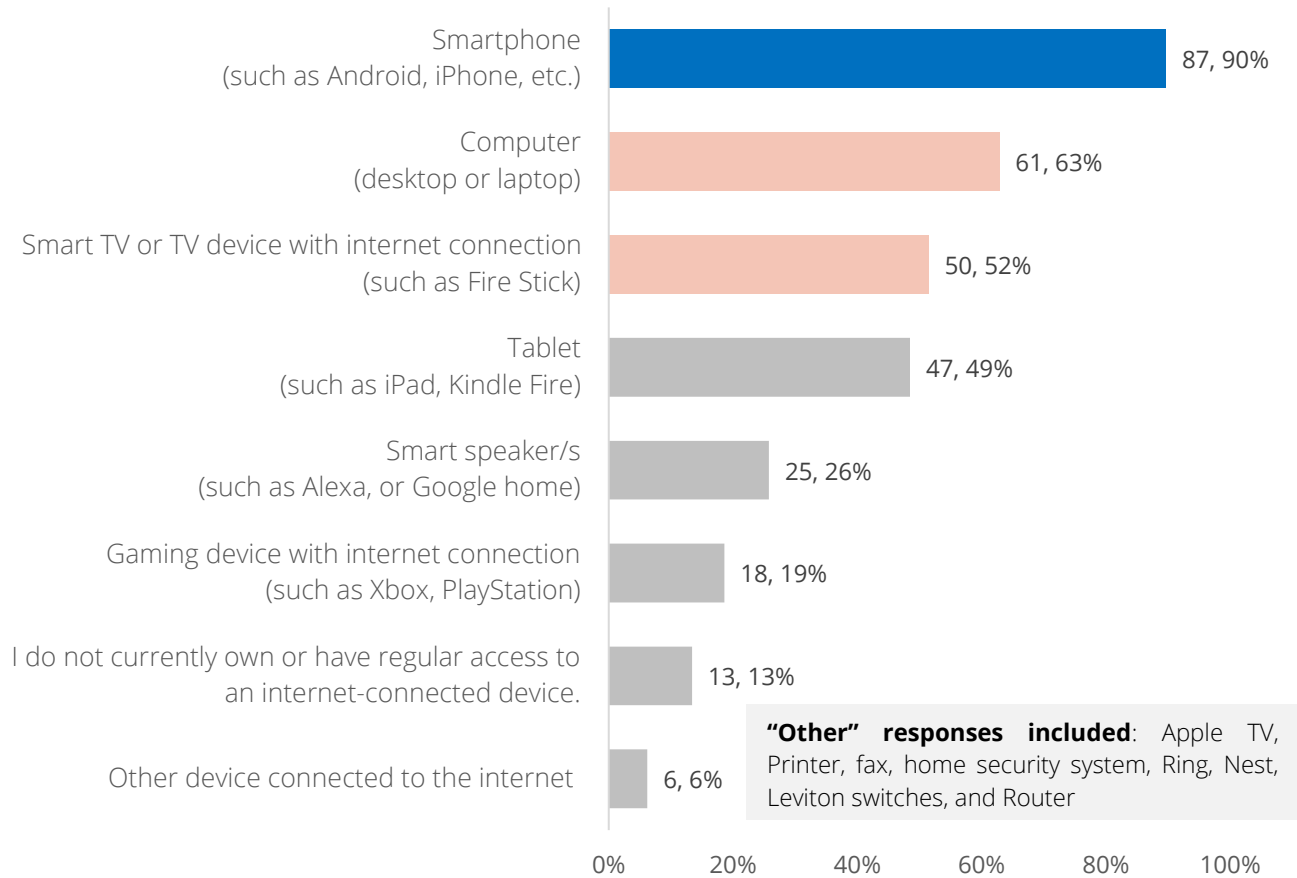
Language	Count	%
Do not speak a language other than English at home	74	89%
Speak a language other than English at home (Serbian, Romanian, Spanish)	6	7%
Prefer not to answer	3	4%
Total Responses (n)	83	

Housing	Count	%
Renter	47	58%
Owner	27	33%
Living with friend/family/others and assisting with payments.	3	4%
Prefer not to answer	4	5%
Total Responses (n)	81	

Parental Status	Count	%
No	67	78%
Yes	19	22%
Total responses (n)	86	

## Device Access

**Figure 3.** Summary of responses to the question, "Please indicate which of the following electronic devices you own or have regular access to," highlights that most survey participants **have access to a cell phone**.

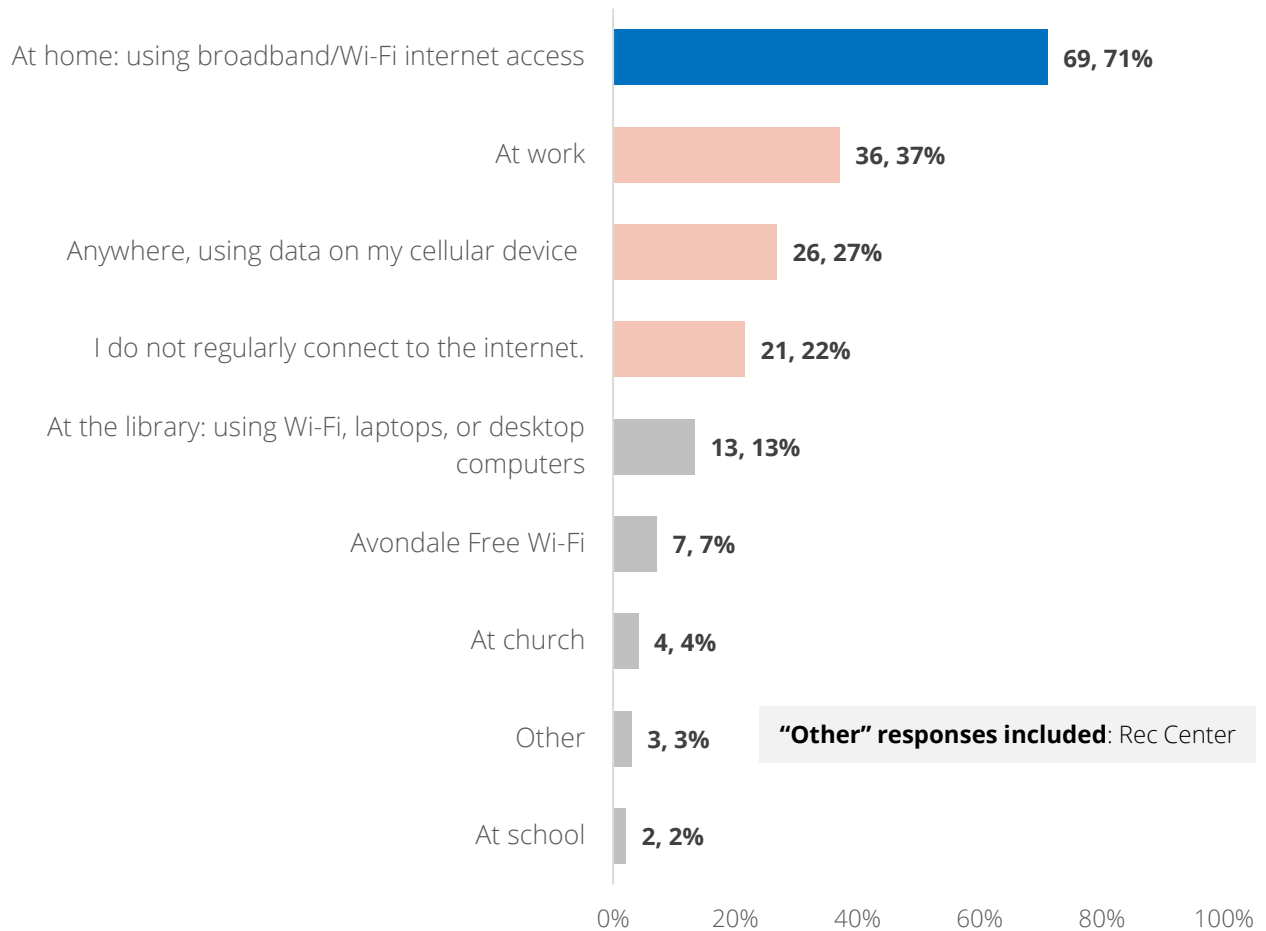


Note. Participants were able to select more than one answer, as applicable.



## Internet Access

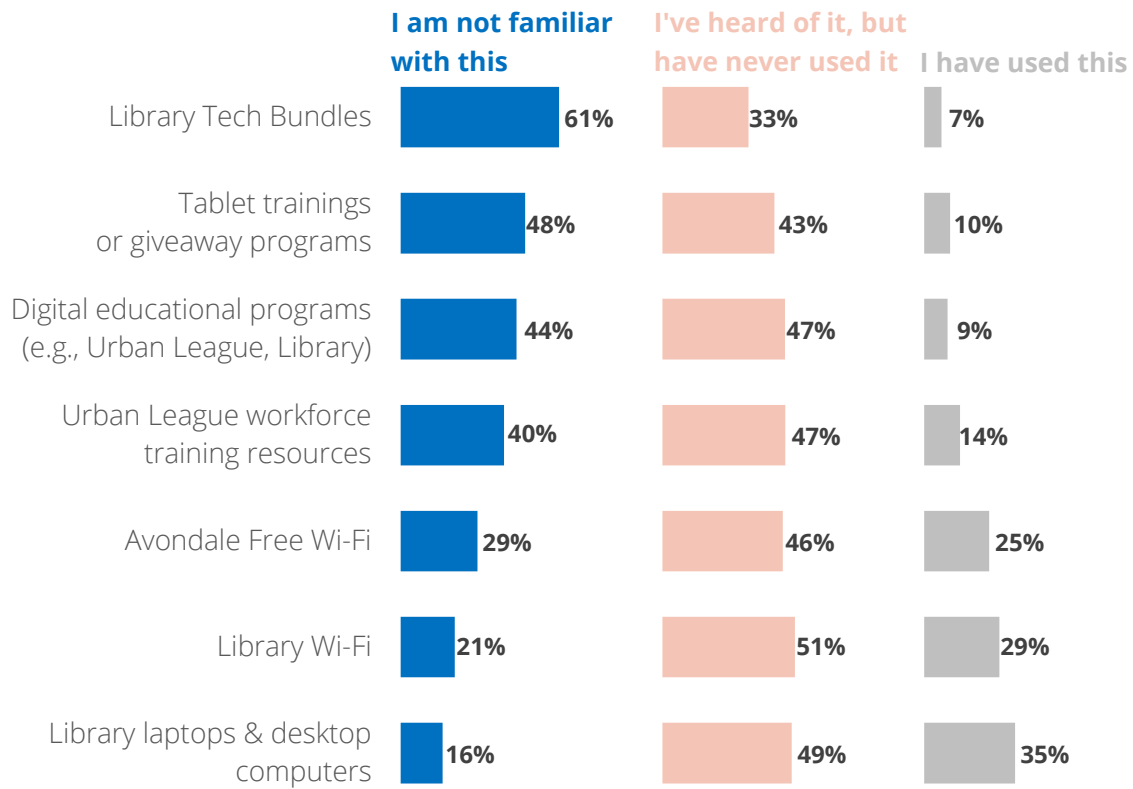
**Figure 4.** Summary of responses to the question, “Where do you currently connect to the internet,” highlights that most survey participants **connect to the internet at home**.



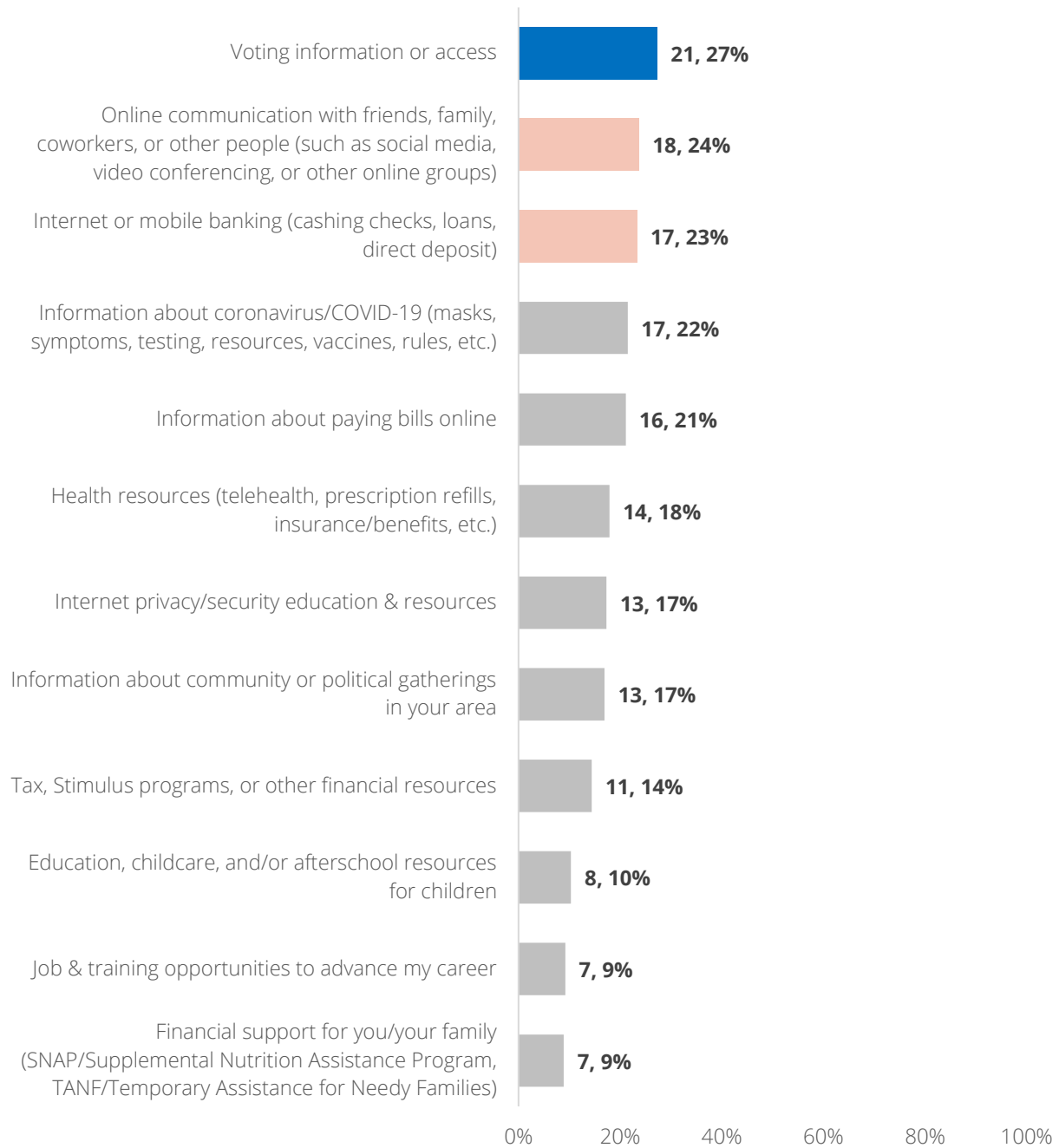
*Note.* Participants were able to select more than one answer, as applicable.

## Awareness and Usage of Digital Resources

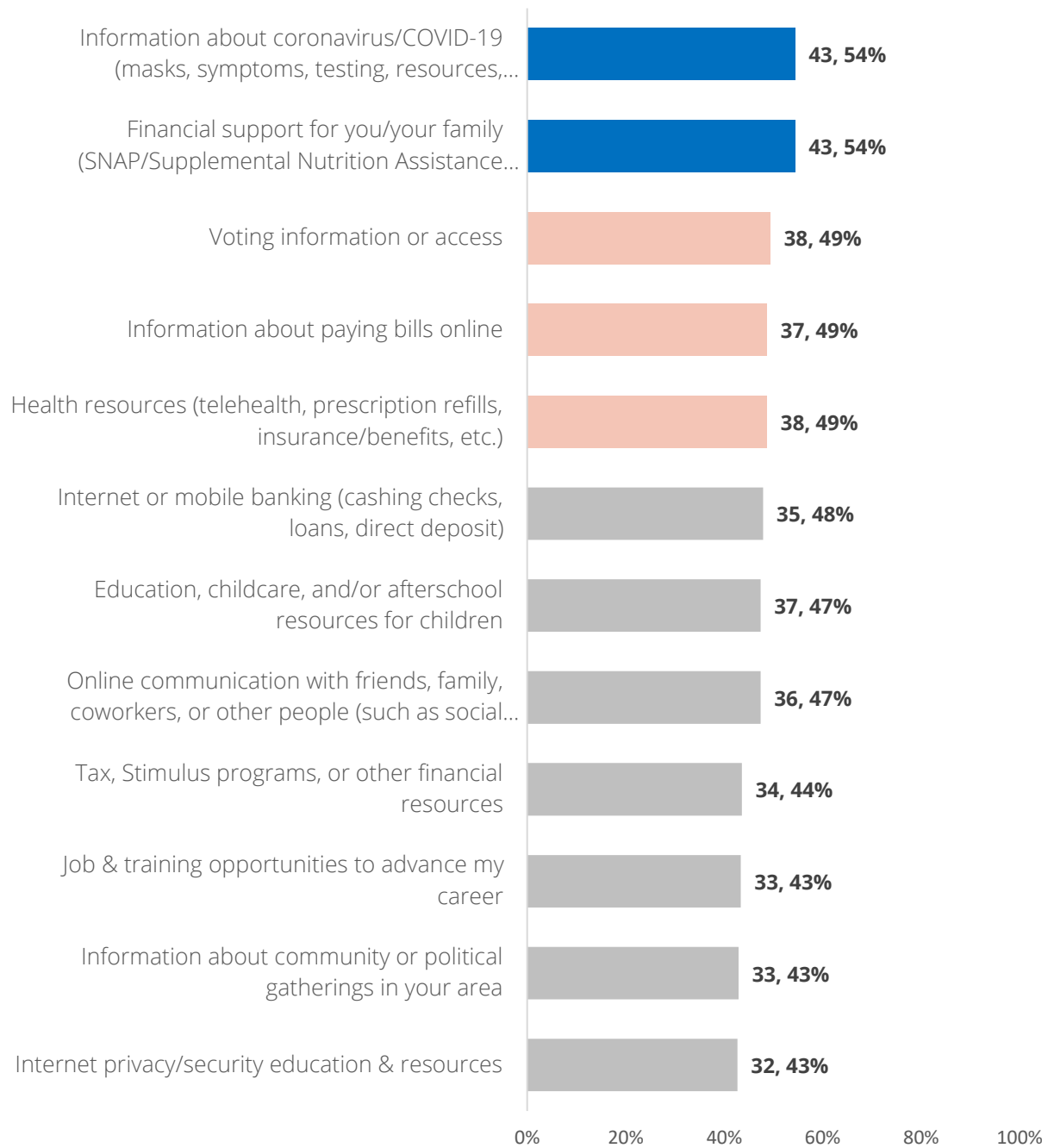
**Figure 5.** Summary of responses to the question, “Which of the following digital resources have you heard of or used?” highlights that many of the survey participants **were not familiar with** or **have never used** many of the digital resources available within Avondale.



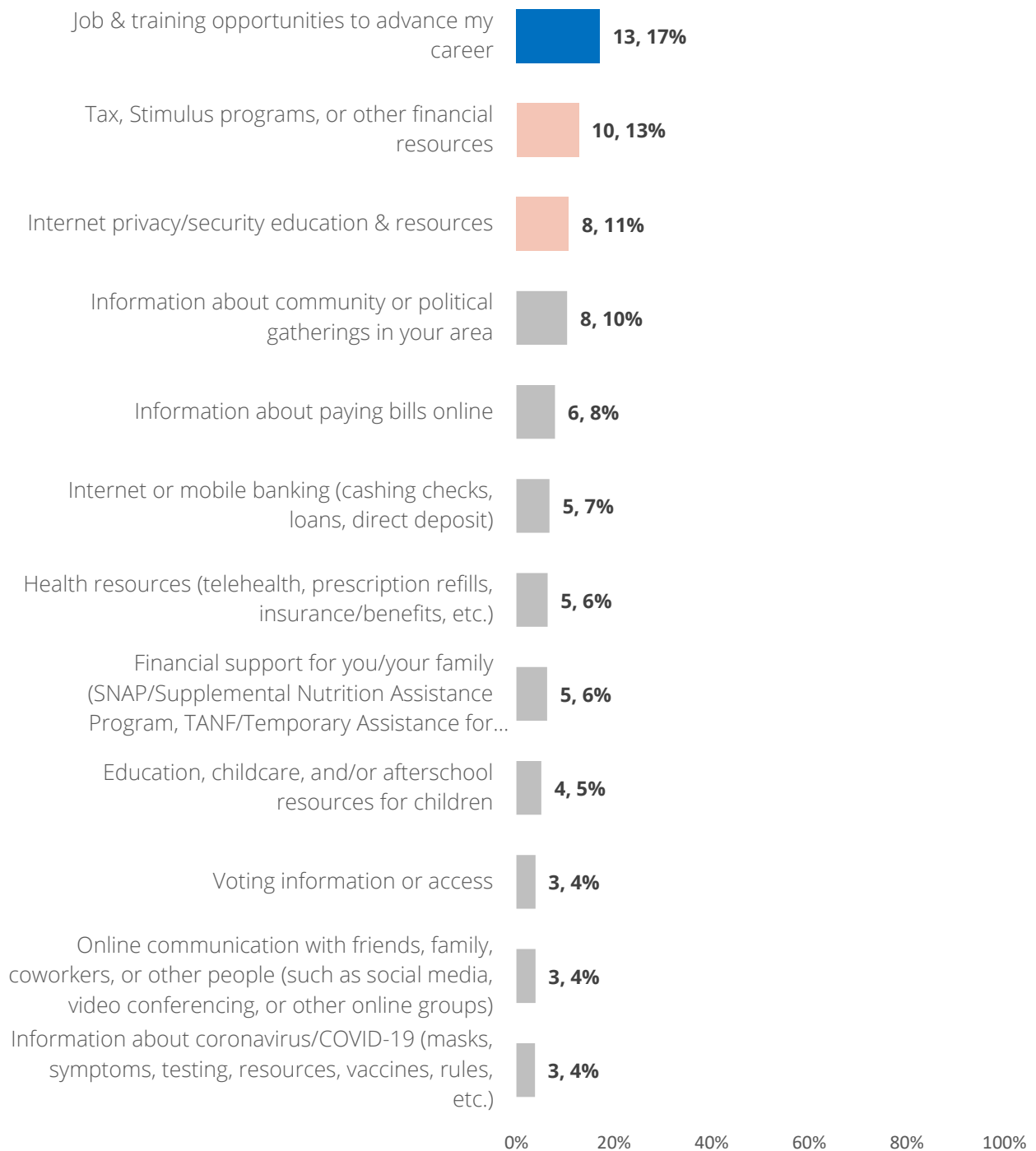
**Figure 6.** Summary of responses to the question “I use this resource” highlights that **voting information was the most highly accessed resource.**



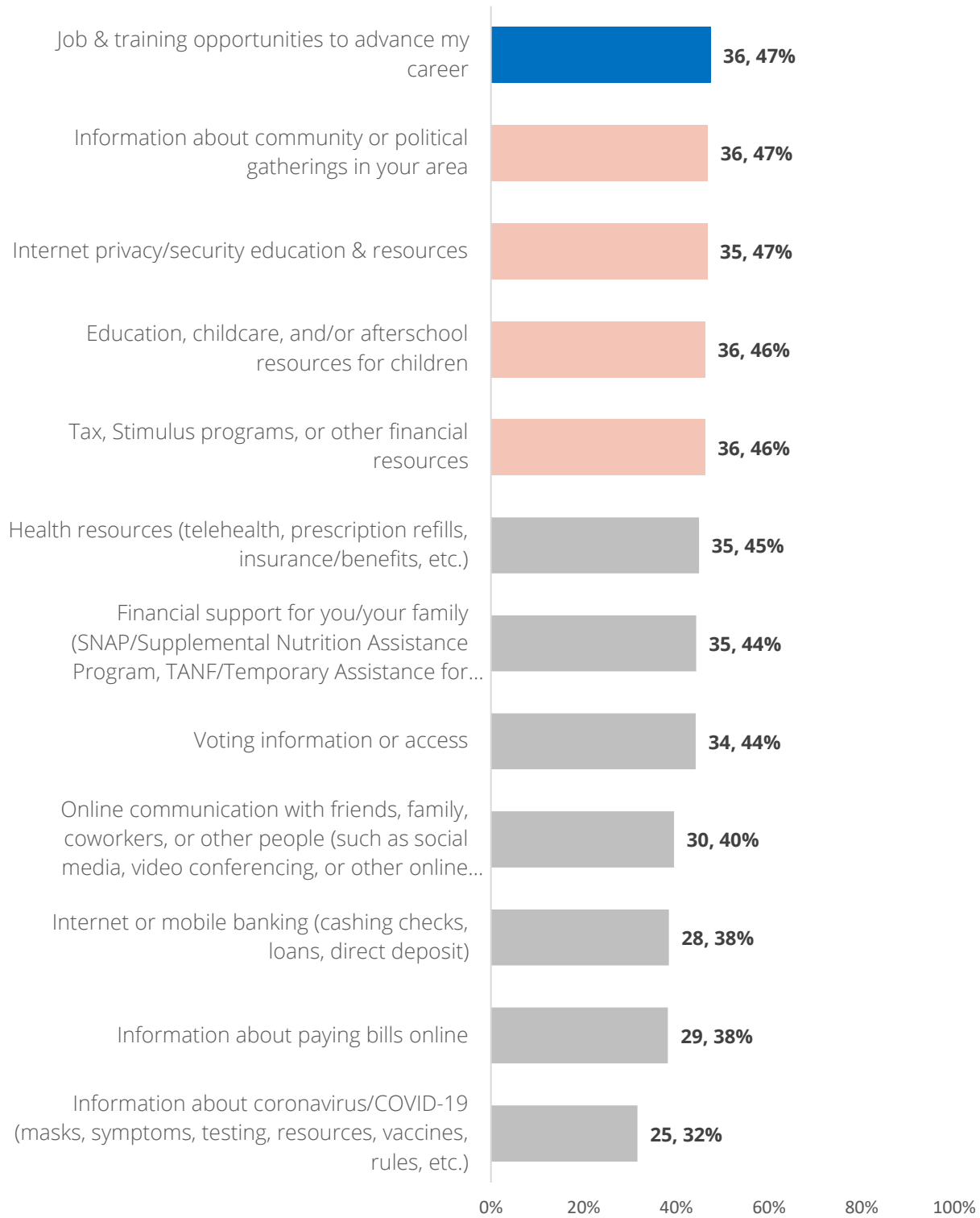
**Figure 7.** Summary of responses to the question “I know how to access this resource” highlights participants are most familiar with accessing **information about COVID and financial supports.**



**Figure 8.** Summary of responses to the question “I want more information about this resource” highlights participants are most interested in additional information about **job and training opportunities**.

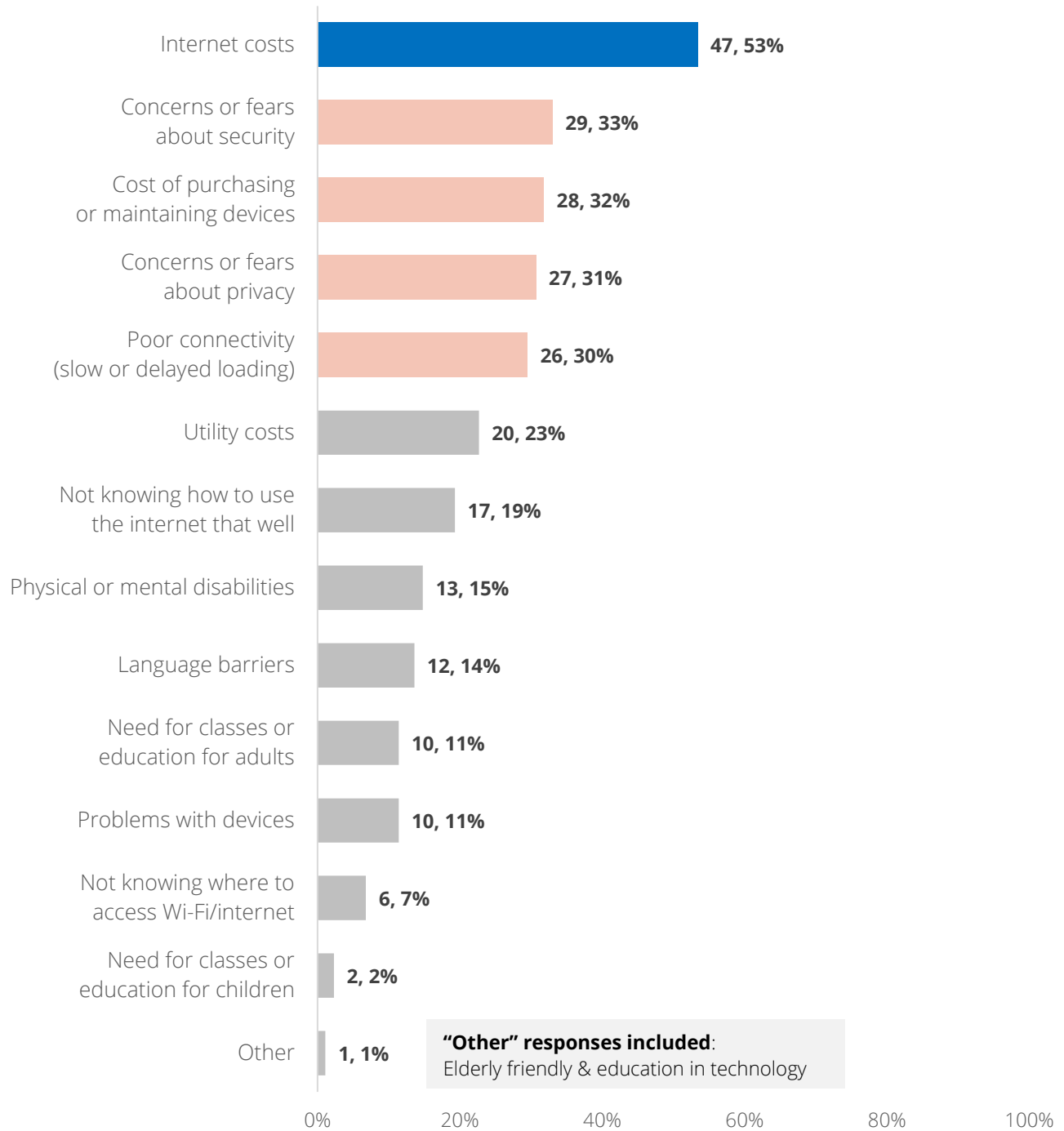


**Figure 9.** Summary of responses to the question “More of this resource should be available within the community” highlights participants are most interested in additional resources dedicated to **job and training opportunities**.



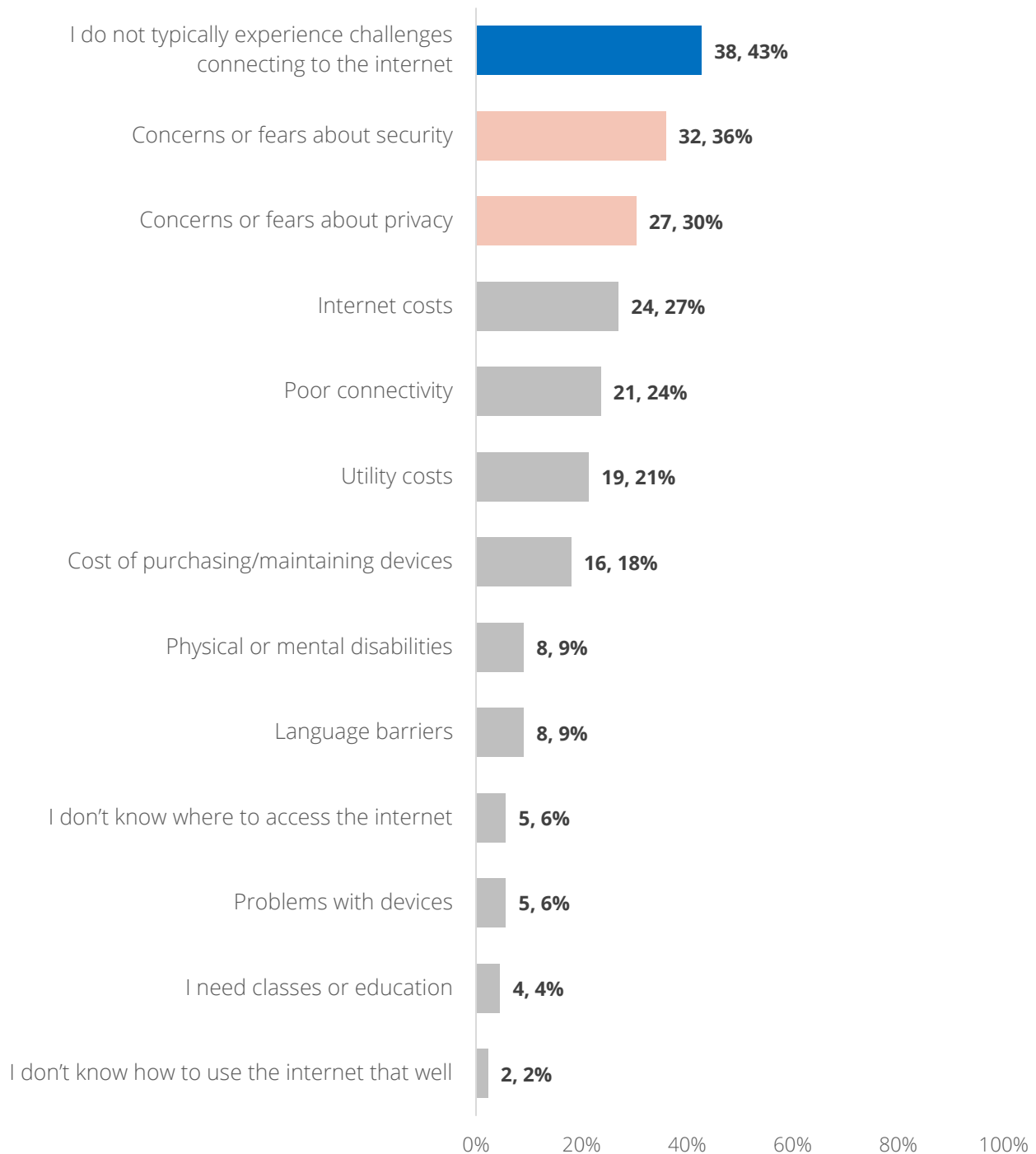
## Top Concerns & Barriers for Digital Inclusion in Avondale

**Figure 10.** Summary of responses to the question, “In your opinion, what do you think are the top three most important concerns to address to improve digital access and inclusion in Avondale?” highlights that **most of the survey participants were concerned about internet costs.**



Note. Participants were required to make only three selections.

**Figure 11.** Summary of responses to the question, “Do you experience any of the following challenges that prevent you from using the internet as much as you would like?” highlights that the largest percentage of survey participants **do not typically experience challenges connecting to the internet**, and others were concerned about **security and privacy**.

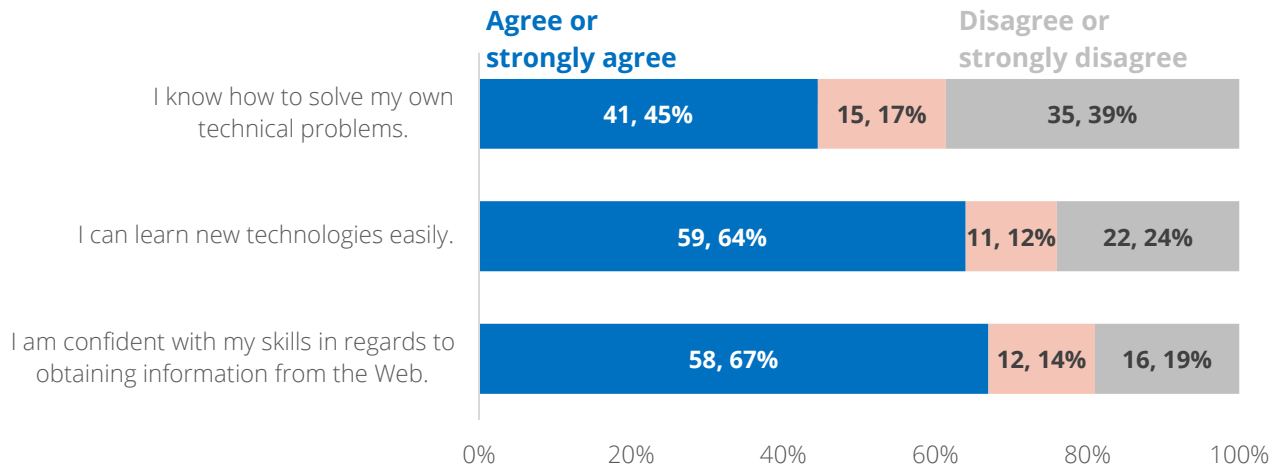


Note: Participants were able to select more than one answer, as applicable.



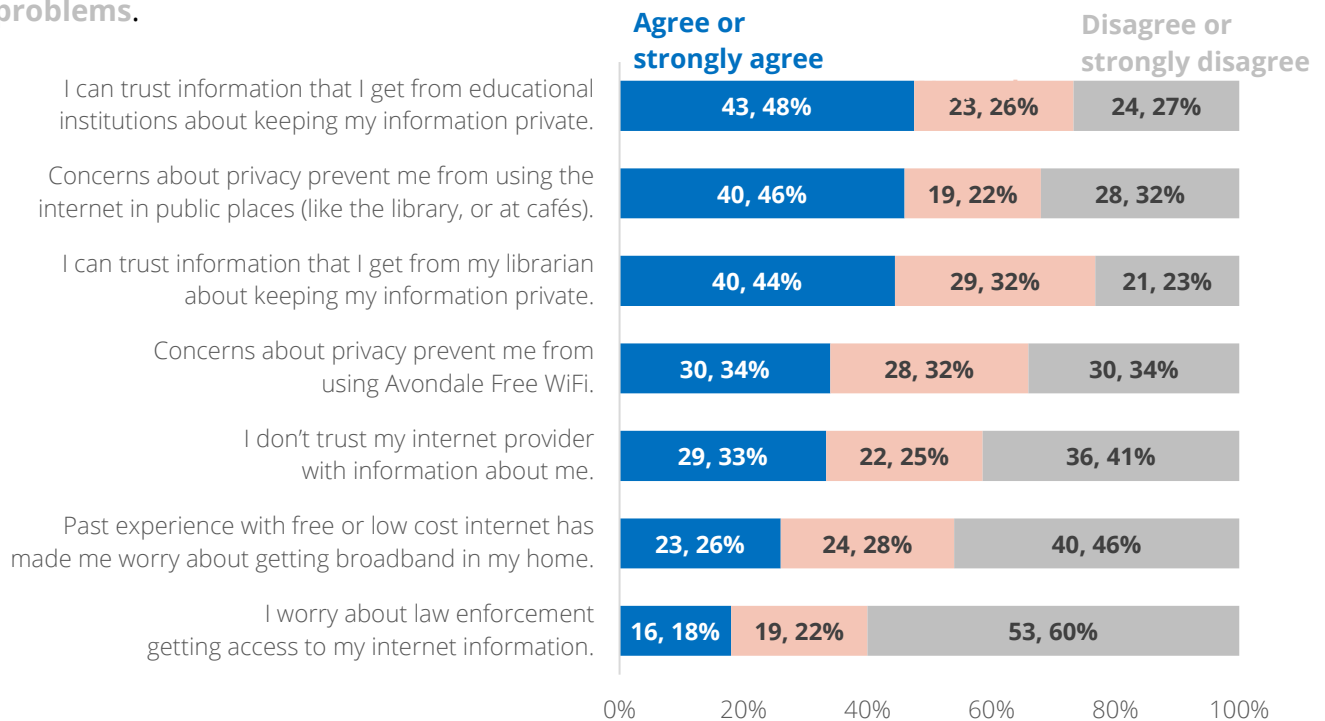
## Digital Skills

**Figure 12.** Summary of responses to questions about digital skills highlights that most survey participants **felt confident in their abilities to obtain information on the web and learning new technologies**, however, **some struggle to solve their own technical problems**.



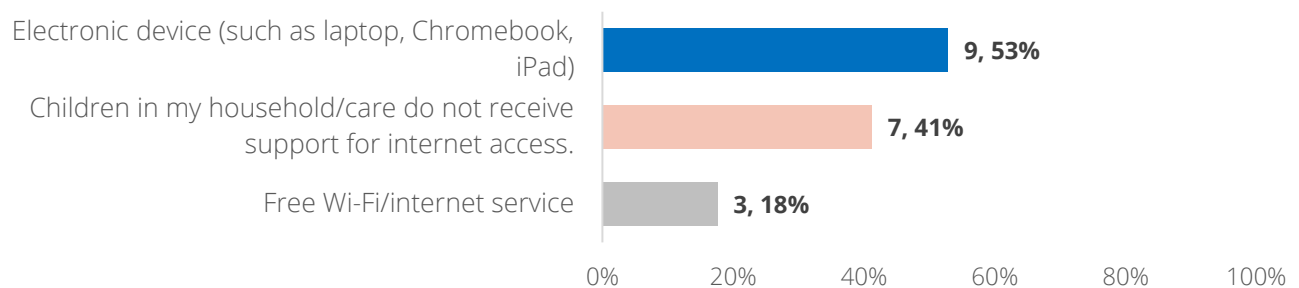
## Digital Privacy and Trust

**Figure 13.** Summary of responses to questions about digital privacy and trust highlights that almost half of survey participants **have some concerns about struggle to solve their own technical problems**.

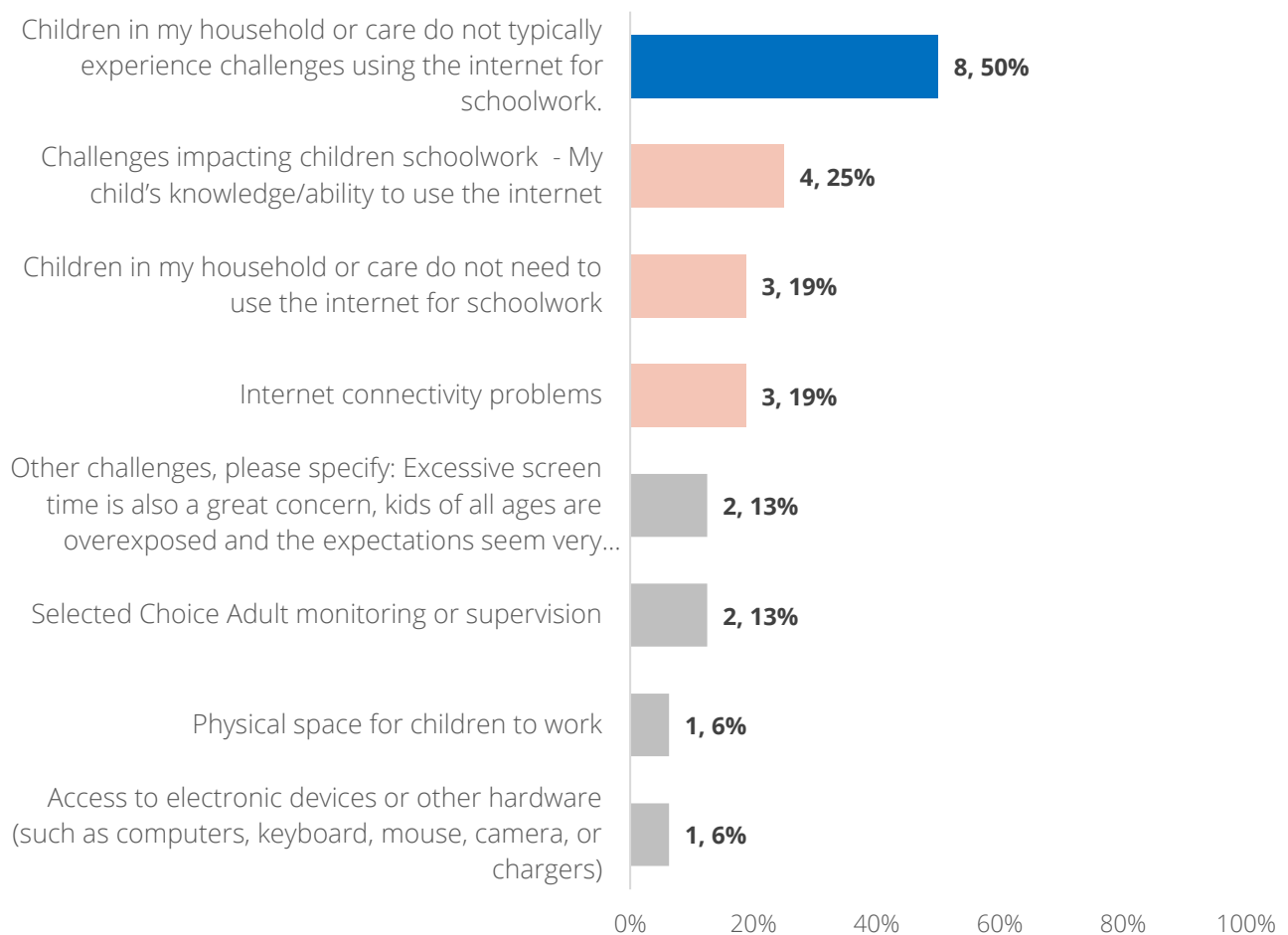


## Resources and Challenges for Parents

**Figure 14.** Summary of responses to the question “Do your children/dependents receive any of the following resources from the school they attend?” highlights that almost half of families **receive an electronic device from their school.**



**Figure 15.** Summary of responses to the question “Do you experience any challenges that may impact your children/dependent’s ability to complete schoolwork online?” highlights that half of families **do not experience challenges using the internet for schoolwork.**



Note: Participants were able to make more than one selection, as applicable.

## Appendix B. Summary of Digital Inclusion Priorities in Avondale

This Appendix provides a summary of the key priorities identified within each data collection strategy (i.e., focus group discussions, interviews, and the community survey), and a summary of priorities across all data sources.

### Top Digital Inclusion Priorities from Focus Group Participants

Within each focus group, participants were asked the following question: *When you think about these three components: (1) access, (2) devices, and (3) digital resources/skills, what are the biggest challenges or unmet needs for digital inclusion in Avondale? Why?* *Table 6* provides a summary of the discussion for participant group.

**Table 6.** Summary of Identified Priorities, by Focus Group Participants

Participant Group	Priorities			Notes
	Device Access	Internet Access	Digital Skills	
Older Adults		1	2	Emphasized importance of internet access
Homeowners		1 (comm)	1 (personal)	Both skills and internet access are important: Top priority for this group (personally) was skills but said the community (overall) may need more support with internet access.
Residents near businesses		2	1	This group said digital skills were most important, but also discussed problems with Wi-Fi connectivity.
Educators			1	Highlighted the importance of navigating school-based apps
Income-based housing residents	-	-	-	Did not identify any of these as priorities, said knowledge & access of existing resources was most important.
Workforce providers	3	1	2	Internet access as most important, Skills are "close second."
Jobseekers			1	If you have the skills, it leads to "the growth in your life"

## Top Digital Inclusion Priorities from Interview Participants

Within each interview, participants were asked the following question: **When you think about these three components: (1) access, (2) devices, and (3) digital resources/skills, what are the biggest challenges or unmet needs for digital inclusion in Avondale? Why?** Note that interviews with internet service providers (i.e., PowerNet, AltaFiber) did not include this question. *Table 7* provides a summary of the discussion for organization.

**Table 7.** Summary of Identified Priorities, by Interview Participants

Organization Representative	Priorities			Notes
	Device Access	Internet Access	Digital Skills	
Avondale Library			*	"Hard to answer." Highlighted the importance of skill development & tech assistance, but challenges with participation
Urban League		1		Said the top priorities are Wi-Fi access + utility bills
Rockdale Academy (CPS)			1	Highlighted the importance of helping parents navigate school-based apps/programs for their children
South Avondale School			1	Highlighted the importance of helping parents navigate school-based apps/programs for their children

## Top Digital Inclusion Priorities from Community Survey Participants

Within the community survey, participants were asked: **In your opinion, what do you think are the top three most important concerns to address to improve digital access and inclusion in Avondale?** *Table 8* provides a summary of the top priorities selected from survey respondents.

**Table 8.** Summary of Identified Priorities, by Community Survey Participants

Participant Group	Priorities			Notes
	Device Access	Internet Access	Digital Skills	
Community Residents	3	1	2	53% of participants concerned most about internet costs 33% of participants concerned about security 31% of participants concerned about privacy 32% of participants concerned with costs of devices 30% of participants concerned with poor internet connectivity

## Digital Inclusion Priorities, Summary Across All Data Sources

After priorities were identified for each participant group and data collection strategy, rankings were compiled into one list to determine overall top priorities for advancing digital inclusion efforts in Avondale. *Table 9* provides a summary of priorities across all data sources.

**Table 9.** Summary of Digital Inclusion Priorities, Across All Data Sources

Priority Ranking	Priorities			Notes
	Device Access	Internet Access	Digital Skills	
1 <sup>st</sup> priority		5 sources	6* sources	* Reflects that the library staff did not specifically identify a priority, but they focused their response on digital skills.
2 <sup>nd</sup> priority		1 source	3 sources	
3 <sup>rd</sup> priority	2 sources			Many participant groups or organization representatives did not discuss the importance of device access in their responses, at all, thus only 2 sources are represented here.

# Appendix C. Digital Inclusion Resource Guide

This Appendix provides a summary of resources to support digital inclusion in Avondale.

## National Digital Inclusion Organizations

- **National Digital Inclusion Alliance (NDIA):** National organization providing technical knowledge, research, coalition building, and community engagement for organizations working toward digital equity in communities across the United States.
- **Next Century Cities:** Supports and highlights communities and municipalities across the United States that are working to expand broadband access and adoption.

## National Digital Inclusion Resources & Guidebooks

- **Digital Inclusion Coalition Guidebook (NDIA):** Planning and resource guide for developing a digital equity coalition.
- **Digital Inclusion Startup Manual (NDIA):** Planning and resource guide for organizations aiming to increase access and use of technology within disadvantaged communities. This guide includes example strategies to advance all pillars of the digital inclusion framework, gathered from Digital Inclusion Trailblazers and affiliates.
- **Community Broadband Roadmap:** Planning toolkit from the U.S. Department of Commerce, National Telecommunications & Information Administration (NTIA)
- **ConnectHome Playbook:** Overview & planning guide for establishing a digital inclusion plan within a housing community
- **Digital Equity Playbook (National League of Cities):** Guidebook for city leaders aiming to address digital divide in their communities.

## Digital Inclusion in Ohio

- **Connected Nation Ohio:** Nonprofit organization working to advance broadband connectivity within the state
- **The Ohio Broadband Strategy:** Statewide plan to bridge the digital divide and deliver high speed internet access across the state
- **The Ohio Case Study (Next Century Cities):** Information, examples, and resources for digital equity projects in Ohio
- **Connect Your Community Institute:** Nonprofit organization in Cleveland, OH supporting training, research, advocacy, and program development to advance digital skills
- **DigitalC:** Nonprofit organization in Cleveland, OH focused on expanding broadband access

## Digital Equity Action Plans: Examples from the NDIA Digital Inclusion Trailblazers

- **Long Beach, CA:** [Digital Inclusion Roadmap](#)
- **Portland, OR:** [Digital Equity Action Plan](#)
- **Seattle, WA:** [Digital Equity Action Plan](#)

## Resources for Advancing the Pillars of Digital Inclusion

### Pillar 1: Affordable, robust broadband internet service

- **Digital Inclusion Startup Manual:** Chapter 5 of the Startup Manual provides examples and resources for supporting affordable internet access.
- **Discount Internet Guidebook (NDIA):** Guide for practitioners and policymakers, describing affordable broadband plans offered by commercial internet providers.
- **Affordable Connectivity Program:** Information on expanded opportunities for affordable internet plans (\$30/month) for families who qualify, based on income or enrollment into existing social services (e.g., SNAP, Medicaid).
- **Free and low-cost internet plans (NDIA):** Resource for digital inclusion practitioners, community leaders, service providers, libraries, media, and others who may give guidance to clients and constituents in need of internet services.
- **EveryoneOn:** Searchable database for low-cost internet and device plans.
- **The Ohio Case Study:** Information, examples, and resources for broadband internet projects in Ohio.
- Examples of autonomous, affordable Wi-Fi networks:
  - Cleveland: [Digital C](#) (nonprofit organization) & [EmpowerCLE](#) (wireless network)
  - Detroit, MI: [Detroit Community Technology Project](#)
  - New York City, NY: [Community Tech NY](#)
  - [Community Technology Collective](#)

### Pillar 2: Internet-enabled devices that meet the needs of the user

- **Digital Inclusion Startup Manual:** Chapter 6 of the Startup Manual provides examples and resources for supporting device access.
- **E2D:** Nonprofit organization in Davidson, NC who partners to provide technical training (in IT and device refurbishment) and distributes devices to communities in need.
- **Free Geek:** Nonprofit organization in Portland, OR who refurbishes devices and distributes (free or low cost) devices to communities in need.

### Pillars 3 & 4: Digital skills training & technical support

- **Digital Inclusion Startup Manual:** Chapter 4 of the Startup Manual provides examples and resources for supporting digital skills training and tech support. Chapter 7 provides guidance on technical support strategies.
- **Generations on Line:** Nonprofit organization in Philadelphia, PA providing digital skills training resources for older adults, including the Sip & Swipe Café Training & App program to learn tech basics.
- **Cyber-Seniors:** A non-profit organization to connect older adults and (high school/college) students to provide an intergenerational tech training model.
- **DiscoTech:** An innovative strategy to create an organic platform for learning digital technology together in community. Watch this [video](#) for an example.

## Summary of Assets Supporting Digital Inclusion for the Avondale Community

Resource Name (with links)	Internet access	Device access	Digital skills	Technical support	Notes
<a href="#">Affordable Connectivity Program</a> (ACP)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			Discounts for internet services and devices for individuals who qualify for government assistance
<a href="#">Avondale Free Wi-Fi</a>	<input checked="" type="checkbox"/>				Free internet services available along Reading Road business corridor and to residents of buildings managed by The Community Builders
Cincinnati Public Library ( <a href="#">Avondale Branch</a> )	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Public use laptops, desktops, and internet service available; Some digital skills and informal technical support may be offered, with limited availability
<a href="#">Cincinnati Public Schools</a>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Free internet services and devices, skills training and technical support provided by the district.
<a href="#">Cincinnati Computer Cooperative</a>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	Low-cost, refurbished devices available for purchase for certain populations: older adults, students (any age), low-income, or nonprofits
<a href="#">Community Action Agency</a>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Digital skills training and certificate program; Limited supports for device, internet, and technical assistance may be available for program participants
<a href="#">Connect Cincinnati</a>	<input checked="" type="checkbox"/>				Digital app (provided via AltaFiber) to track free public Wi-Fi locations in Cincinnati
<a href="#">Easter Seals</a>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	Limited supports for device, internet, and technical assistance may be available for program participants



## Summary of Assets Supporting Digital Inclusion for the Avondale Community (cont.)

Resource Name (with links)	Internet access	Device access	Digital skills	Technical support	Notes
Local Vendors (e.g., Metro PC, Boost Mobile)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			Low-cost device and internet service options available
<a href="#">Talbert House</a>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	Limited supports for device, internet, and technical support may be available for program participants
<a href="#">Urban League of Greater Southwestern Ohio</a>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Digital skills training and certificate program; Lease to own Lending Library available for program participants; Limited supports for technical support may be available for program participants
<a href="#">Veterans Affairs</a>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	Consultation and resources available to connect veterans with supports to meet their digital needs

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