DIGITAL DIVIDE IN ROCHESTER: INITIAL DATA & ACTIONS TAKEN

AUGUST 26, 2020

ROC the Future
Authored by: Stephanie Townsend, PhD
                Director of Research & Analytics

rocthefuture.org

For more information contact
rocthefuture@thechildrensagenda.org

Table of Contents

The Problem

*"***Pandemics don't create disparities. They expose them.***"*
– Oliver T. Brooks, M.D., April 30, 2020 President, National Medical Association

As has been identified by the Rochester Black Agenda Group, the digital divide in Rochester has been exacerbated by the current pandemic:

> "The Rochester community has systematically failed to effectively respond to the needs of the Black community, which has exacerbated the negative effects of the digital divide in the face of the current Covid-19 pandemic. The implications are disproportionately experienced across multiple contexts including healthcare, education, social life, government, and the workforce—afflicting the entire lifespan. Key challenges include technology access for education, work, and play; human social connection; and access to vital government, health, and social services. National and state policies such as "New York on Pause" and social distancing promote feelings of loneliness, anxiety, depression. If necessary, progressive actions are not taken in haste, we (members of the Black Agenda Group) fear dire consequences such as self-harm, interpersonal conflict, and even deaths will increase."

As the data in this report will demonstrate, the digital divide similarly has disproportionate impact on Rochester's Hispanic/Latino communities. This report was originally written to inform immediate responses to mitigate the impact of the pandemic. It has been updated to reflect work that has been done to further close the divide. Information has also been added to inform long-term systemic changes to bridge the digital divide in substantial and sustainable ways.

Highlights from the report include:

- FCC data indicate that all blocks in Rochester have necessary digital infrastructure for both residential broadband and wireless communication.

- According to the US Census, the majority of city residents (88%) have some type of computer, smartphone or wireless device and 80% have some type of internet subscription.

- However, 17% of residents rely solely on a cellular data plan. Smartphones have limited functionality for educational purposes. Therefore, 37% of residents have limited online functionality.

- There are geographic disparities in internet access with some neighborhoods having 20% - 40% of residents with internet access and others having 80+%. Most Rochester neighborhoods are in the 60% - 80% range.

- The pandemic has had significant impacts on education that are exacerbated by disparities in access to online learning.

- As of August 2020, all RCSD students in Grades 4 – 12 have been offered a Chromebook and MiFi unit.

- With remote learning at all grade levels in RCSD, PK-3 internet access and devices must be provided.

- It is important to build up digital literacy skills of adults who guide at-home learning.

- Changes to government regulations can make internet access affordable for all residents.

Defining the Divide

The digital divide has multiple levels and, consequently, will require multiple strategies to close.

- **Infrastructure** refers to whether underground cables, transmitters, towers, etc. have been installed that allow broadband service in a geographic area. Broadband is defined by the Federal Communications Commission as a minimum of 25 Mbps download and 3 Mbps upload speeds.
- **Internet access** refers to having a subscription or free access that allows an individual to access broadband infrastructure. The focus in this report is on residential access. However, business and institutional access can also play a role in education when they are made available to students.
- **Devices** refers to an individual having a device that allows them to make use of that internet access. This may include desktop or laptop computers, tablets or other portable wireless devices, or smartphones.
- **Applications and skills** refers to the individual having the digital applications/software, the technical skills to make use of online resources, and the digital literacy to make informed decisions about what they find on the internet.
- **Support** refers to the availability of technical support to troubleshoot hardware and software problems and to build technical and digital literacy skills.

Each of these levels of the divide must be addressed in order to achieve full and equitable digital access for our communities. All sectors can and must play a role in closing the divide, including government, business, education, philanthropy, and community-based organizations.

Figure 1. Levels of Digital Access
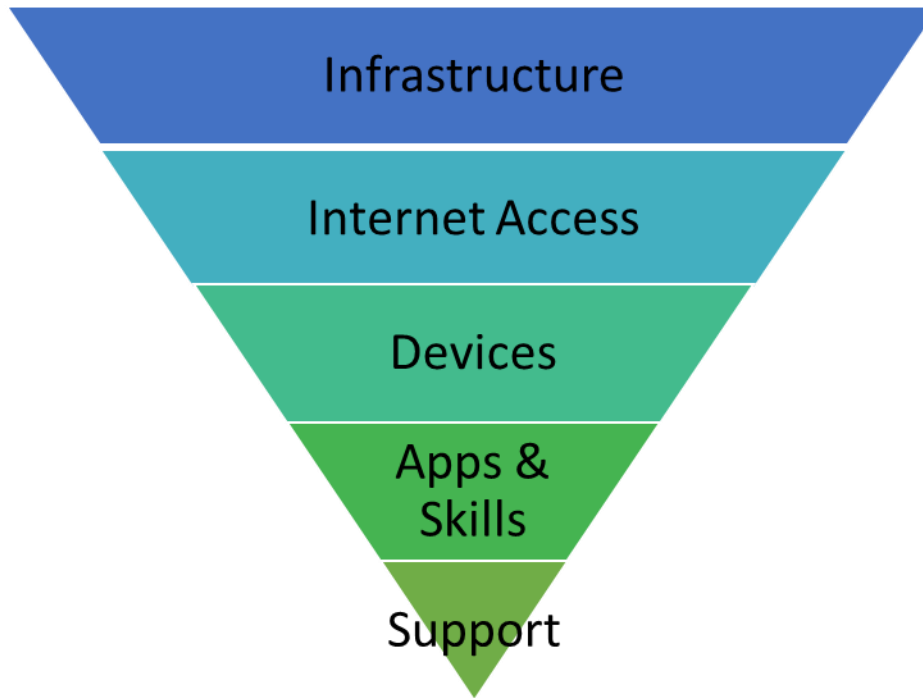
Digital Infrastructure

The first question is whether the infrastructure for digital communications is available to all residents of Rochester. **Data from the Federal Communications Commission indicates that all blocks in Rochester do have necessary digital infrastructure for both residential broadband and wireless communication.**

Figure 2 shows how many residential broadband providers are providing service on each block.[1] We see that all blocks in Rochester have at least 3 broadband providers. The presence of multiple providers creates the possibility of at least some price competition which should, in theory, lower prices for consumers.

Figure 2. Map of Residential Broadband Providers

---

[1] Federal Communications Commission, https://www.fcc.gov/reports-research/maps/

Figure 3 shows the availability of 4G broadband for mobile devices.[2] This indicates there are 4 or more providers covering the entire city of Rochester.
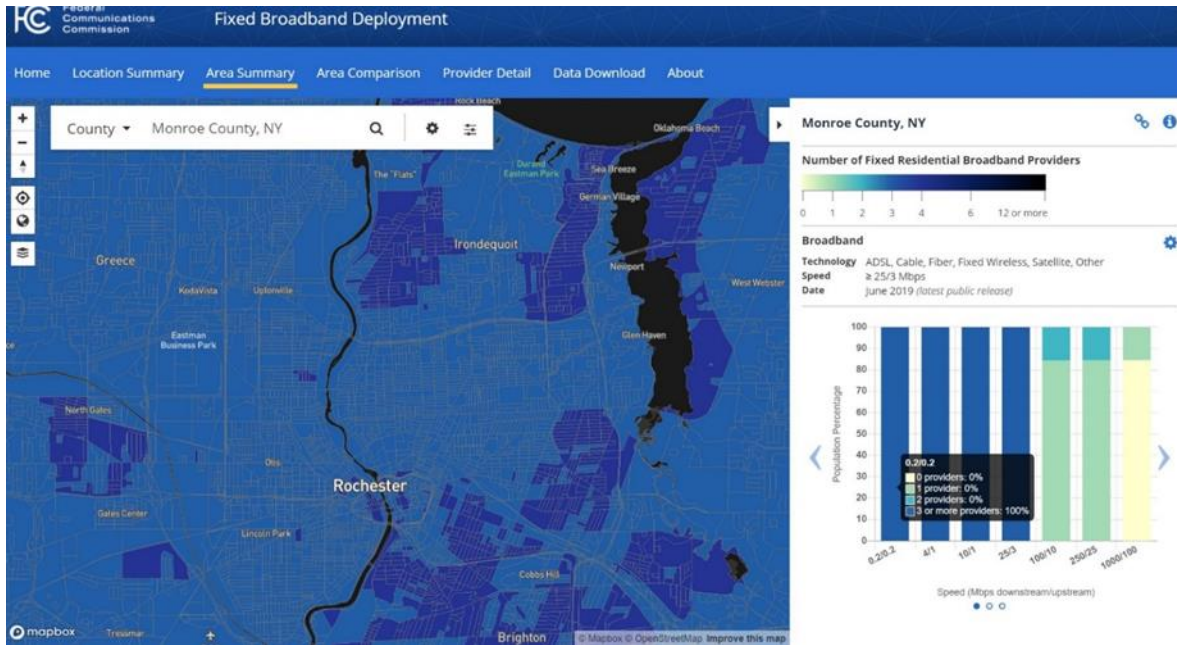
Figure 3. Map of 4G Wireless Communication Providers

---

[2] Federal Communications Commission, https://www.fcc.gov/reports-research/maps/
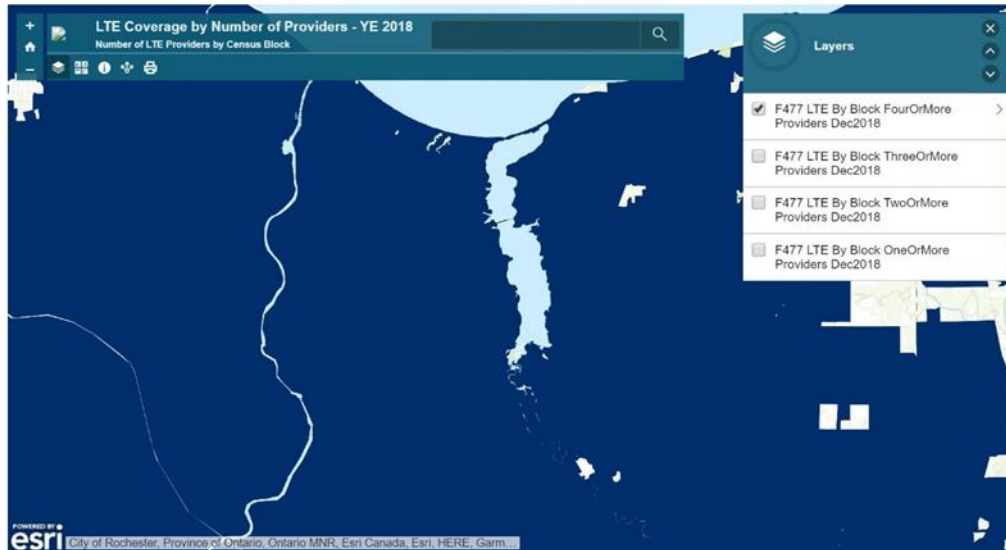
Internet Access

The second question is whether residents have internet subscriptions and, if so, what type. Data from the US Census Bureau indicates that most residents (80%) have broadband access.[3] However, there are two significant limitations to that access:

- 20% of residents have no internet of any type

- 17% of residents only have a cellular data plan with no other type of internet

- This means that 37% of residents do not have internet access that would allow them to fully engage with online education

Lack of internet access disproportionately impacts groups in the community who are more likely to have no internet access of any type:

- Residents 65+ years of age (34%)

- Residents living in households with less than $20,000 annual income (34%)

- Black/African American and Hispanic residents (20% and 18%, respectively)

---

[3] US Census Bureau, https://data.census.gov/cedsci/

Table 1. Internet Subscriptions

	Broadband of Any Type	Cellular Data Plan	Cellular Data Plan with No Other Type of Internet	No Internet of Any Type
All of Rochester	80%	70%	17%	20%
Household Income				
Less than $20,000	61%	--	--	38%
$20,000 - $74,999	86%	--	--	14%
$75,000 or more	92%	--	--	8%
Age				
Under 18 years	90%	--	--	10%
18 – 64 years	86%	--	--	14%
65+ years	66%	--	--	34%
Race/Ethnicity				
Black/African American	80%	--	--	20%
Other Race	89%	--	--	11%
2+ Races	88%	--	--	12%
Hispanic	82%	--	--	18%
White, not Hispanic	90%	--	--	10%

-- = Data not available

Given the economic and racial segregation in Rochester, it is not surprising that some census tracts have disproportionately fewer households with high speed internet access. To make effective use of video-based materials, a minimum of 10 Mbps is required. Figure 4 indicates that[4]:

- **In most census tracts in the city, 40% - 60% of residents have access to 10Mbps or higher**
- Census tracts with 60% - 80% of residences having high speed internet access include tracts in*:
    - Maplewood
    - Upper Mount Hope
    - Highland Park
    - Lower Monroe
    - Cobbs Hill
    - Park and East Avenue
    - Neighborhood of the Arts
- Census tracts with 80+% of residences having high speed internet access include tracts in*:
    - South Wedge
    - Monroe Village
- Census tracts with 20% - 40% of residences having high speed internet access include tracts in*:
    - El Camino
    - High Falls
- High speed internet access in most of Rochester is substantially less than suburban census tracts that have 60% or higher access

---

[4] Federal Communications Commission, https://www.fcc.gov/reports-research/maps/

Figure 4. Map of Internet Access by Census Tract – 10Mbps

* Because the FCC map does not show census tract boundaries or numbers, the correspondence to neighborhood boundaries is estimated

Device Ownership

The third question is whether residents can make use of the available infrastructure. That requires residents have a device that can access digital technology. Data from the US Census Bureau's American Community Survey (2018) indicate that[5]:

- **The vast majority of residents (88%) do have some type of computer, smartphone, or wireless device in their household**
- **The rate is even higher (96%) in households with children**
- **The most underserved group are adults 65+ years old** (76%)
- **There is a disparity in computer or smartphone ownership that disproportionately affects the Black/African American community in Rochester**
    - For those who identify with one race/ethnicity:
        - 11% (8,354) of Black/African American residents report having no computer or smartphone in their household

---

[5] US Census Bureau, https://data.census.gov/cedsci/

- 8% (3,210) of Hispanic residents report having no computer or smartphone
- 6% (4,117) of white, non-Hispanic residents report having no computer or smartphone
  - The impact of households that identify with other or multiple races is negligible. Although they have the highest rates of computer or smartphone ownership, they represent only 578 (less than 1%) of residents.

Table 2. Computer and Digital Device Ownership

	Smartphone	Smartphone with No Other Type of Computer	Desktop or Laptop	Tablet or Other Portable Wireless Device	No Computer or Smartphone
All of Rochester	80%	16%	63%	50%	12%
Age					
Under 18 years	--	--	--	--	4%
18 – 64 years	--	--	--	--	7%
65+ years	--	--	--	--	24%
Race/Ethnicity					
Black/African American	--	--	--	--	11%
Other Race	--	--	--	--	4%
2+ Races	--	--	--	--	1%
Hispanic	--	--	--	--	8%
White, not Hispanic	--	--	--	--	6%

-- = Data not yet found

These numbers may at first seem to indicate greater internet access than anticipated. However, it is important to note that the type of device ownership matters when it comes to educational access. While city-wide 88% of residents live in a household with <u>some type</u> of computer or digital device, **only 63% live in a household with a desktop or laptop.** Despite the increasing versatility of mobile apps, smartphones and tablets still have limited functionality for educational purposes.

To illustrate this, consider the difficulty of performing the following tasks on a smartphone:

- Writing a paragraph or essay
- Analyzing data in spreadsheets
- Creating graphs, figures, and tables
- Writing mathematical equations and formulas
- Creating concept maps

The above tasks are all ones children must frequently do beginning at around third grade. In early childhood education (PK – Grade 3) there are additional fundamental skills that are difficult to do with online applications, including:

- Drawing and illustrating
- Handwriting
- Developing fine motor skills
- Developing gross motor skills

Pandemic Impact on Education

On March 16, 2020, all schools in New York were closed by executive order as a way of controlling the spread of COVID-19**. At that time, RCSD students had completed 64% (115 days) of the state minimum requirement.** Initially, school districts scrambled to provide temporary instruction remotely. By May 4, 2020, all school districts were required to submit a plan to ensure continuity of education. Although an official declaration that school would not resume in person had not yet been made, the plans were designed to carry districts through the end of the school year.

A review of 688 continuity instruction plans in New York conducted by the Education Trust-NY[6] provided evidence that concerns about equity in the plans were warranted. Comparisons of the 50 districts serving the greatest number of students from low-income households, including Rochester, found that:

- High-need school districts were less likely to offer teacher-led instruction similar to a "traditional" classroom
- Gaps in technology availability exacerbated inequities for students and teachers
- Only 7 of the 50 school districts serving the greatest number of students from low-income backgrounds provided clear evidence of meaningful alternatives to online learning
- Many plans did not sufficiently support students with disabilities, English language learners, and students experiencing homelessness
- Meaningful access to school counselors was not provided
- Despite multiple strategies to communicate with families, there was insufficient outreach in families' home languages

Due to the inability to provide schooling in-person, school districts relied on remote learning. **For RCSD students, remote learning included a combination of printed learning packets available for pick-up at food distribution sites, online resources, asynchronous teacher-led instruction such as recorded lessons, and synchronous**

---

[6] The Education Trust-NY, https://edtrustmain.s3.us-east-2.amazonaws.com/wp-content/uploads/sites/5/2020/06/25140635/Planning-for-Equity.pdf

teacher-led instruction such as live lessons, small group, and individual interactions conducted via webconferencing.

During this period of remote learning all households experienced elevated stress and all students and families lost the stabilizing routines of the traditional school day. However, some students faced additional barriers and stressors in remote learning. A national analysis conducted by the Urban Institute identified six groups of students who were at higher risk of negative educational impacts, including students:

- Who are English language learners
- With disabilities
- Whose parents work in retail and service industries
- Living in single parent households
- Living in crowded conditions
- With no access to internet or computers

Rochester was identified as one of the districts in the nation with the highest proportion of students with disabilities and living in single parent households.

The social-emotional impact of school closures is also expected to be substantial. There was disruption of relationships with supportive adults and peers, high stress at home, interruption of therapeutic developmental interventions, and increased risk for unreported child neglect and abuse.

These educational and social-emotional impacts must be met with effective responses as students continue remote learning in the 2020 – 2021 school year.

There will not be a simple return to "education as normal." Significant systemic responses are needed to address the impacts of the pandemic. RCSD and some charter schools will begin the school year with 100% remote learning. RCSD will evaluate its remote learning program after the first 10 weeks of the school year. Therefore**, the digital divide continues to be a pressing concern for Rochester.**

Parent Views on Education During the Pandemic

Anecdotally, ROC the Future and its partners heard a number of messages from parents. Although not systematically collected and assessed, the following perspectives are worth considering as we move forward with addressing the digital divide's impact on Rochester in the present and as we strategize for long-term, systemic changes.

Basic needs must be met first. In February the unemployment rate for Rochester was 4.5%.[7] However, the week of March 18 the NYS Department of Labor saw a 950% increase in unemployment claims statewide. Unemployment saw a slight decrease in May, but is still very high (April = 14.9%, May = 11.0%, June = 11.3%). Therefore, parents' first needs are to maintain housing and food security for their children. The coordinated response of Rochester – including county government, business, education, and human services – has helped to address these immediate needs through interventions such as food distribution and additional childcare support for essential workers who receive childcare subsidies. However, the reliance on online communications has been challenging in light of the fact that families that are most likely to need the support are the least likely to have access to digital communications.

Pandemic schooling is not the same as home schooling. To suddenly ask parents, many of whom are working as essential employees or suddenly working from home, to provide the same kind of educational experience as their children would normally receive or an experience equivalent to home schooling under planned and normal circumstances is not feasible. Parents are doing the best they can, but they are stretched thin. Enhancements to remote learning this fall should strengthen educational quality. However, concerns remain about the impact on student learning.

Resources are appreciated, but overwhelming. In the wake of schools closing, a slew of resources were offered via public television, websites, social media, email, and personal networks. For those families who have digital access, the many and disparate resources, most of which were not directly tied to curricula, could be overwhelming. Again, those parents with the most digital access had the greatest access to educational materials while families that are the most economically vulnerable had the

---

[7] NY Department of Labor, https://labor.ny.gov/stats/LSLAUS.shtm

least access. Additionally, families whose children qualify for special education services had to rely on teleservices. In some instances, that worked well, but in others it did not.

A statewide survey conducted on behalf of The Education Trust – New York from March 25 – April 1 also provides insight into parents' concerns.[8] Although not specific to Rochester, the experiences reflected in the survey can be useful:

- 89% of parents were concerned about their child not falling behind academically
- 79% were concerned about ensuring their child feels safe and emotionally at ease
- 78% were concerned with providing for their child financially

These concerns were shared by both low-income and high-income families, although low-income families were more concerned with their child falling behind academically.

Parents reported that most of the schools were providing instructional materials for math and reading/English, but far fewer in science, social studies, and other subjects. Parents were looking for specific additional supports:

- 95% wanted more contact with their child's teachers
- 92% wanted more technical assistance to help families with distance learning
- 90% wanted instruction that does not rely on the internet
- 90% wanted access to school counselors

Most parents said their children's schools were using or planning to use distance learning, but satisfaction with remote or distance learning varied. When asked how successful remote or distance learning has been for their child:

- 22% of lower income parents vs. 13% of higher income parents rated it as less successful (0 – 5 on a 10-point scale)
- 21% of Black parents vs. 16% of Latinx and 14% of white parents rated it as less successful

---

[8] The Education Trust-NY, https://edtrustmain.s3.us-east-2.amazonaws.com/wp-content/uploads/sites/5/2020/04/08092654/Parent-Poll-Graphics.pdf

Dissatisfaction with remote or distance learning was connected to access to technology and the internet. Because RCSD has provided Chromebooks and MiFi units, **access in terms of internet and devices should not be a barrier as students return to school.** However, **skills of both students and parents/families and technical support will need to be carefully attended to if remote learning is going to be a success.**

Student Views on Education During the Pandemic

At this time we have no data available on students' views except for one news article in the *New York Times* that compiled student comments submitted nationally.[9] That article highlighted:

- Positive aspects of the experience have included more time with parents, more flexibility with how time is spent, and less rigidity with following rules
- Difficulties have included not having access to teachers and academic help, boredom, and distractions
- Workloads in the spring ranged from overwhelming with teachers assigning more work than usual to having very little work to do and little motivation to do it because it was not being graded
- The use of technology was described by some students as fun, but they also reported difficulties with submitting work, it all being on screen and typed so not able to physically write on documents, having to navigate too many different platforms and emails for different teachers, and the lack of hands-on learning
- Socially, children of all ages missed their friends and had fears about what will happen; for older high school students those fears were exacerbated by not knowing about how the situation will impact their post-secondary education and employment

---

[9] New York Times, April 9, 2020, https://www.nytimes.com/2020/04/09/learning/what-students-are-saying-about-remote-learning.html

What Has Been Done

Schools in New York were closed on March 16, 2020. Immediately, efforts began to ensure instructional continuity. As it became clear that remote instruction would have to continue for the foreseeable future, distribution of Chromebooks and MiFi units, that had begun with Grades 9 – 12 at the start of the school year, were expanded to lower grades.

Internet Access & Devices

The Education Trust – NY recently conducted an equity analysis of the re-opening plans of the Big 4 districts.[10] Student access to technology was included as three of the 28 indicators. RCSD received favorable ratings for both of those indicators.

Table 3. Education Trust – NY Rating of RCSD Plan for Student Access to Technology

Indicator	Rating
The district reopening plan includes information on how the district will have knowledge of the level of access to devices and high-speed internet all students have in their places of residence	**Some Evidence**
The district reopening plan includes information on how the district, to the extent practicable, will address the need to provide a device for exclusive use to students who currently do not have access regardless of whether an in-person, remote, or hybrid model is utilized	**Strong Evidence**
The district reopening plan includes information on how the district, to the extent practicable, will address the need to provide consistent, reliable access to high-speed internet at a sufficient level to fully participate in remote/online learning (e.g., a hotspot) to students who currently do not have sufficient access regardless of whether an in-person, remote, or hybrid model is utilized	**Strong Evidence**

[10] The Education Trust-NY, https://newyork.edtrust.org/rochester-city/

As of June, all RCSD students in Grades 4 – 12 had been given the opportunity to receive a Chromebook and MiFi unit.[11] That included distribution of:

- 12,096 Chromebooks
- 2,800 MiFi units

Devices were distributed 1:1 for students, so households with multiple students were able to receive multiple devices. Most families who declined the technology did so because they said they already had a device or sufficient internet access in their household.

RCSD has secure drop-boxes at multiple locations throughout the city where Chromebooks that need repair can be deposited and a new device picked up. Chromebooks were <u>not</u> collected at the end of the school year for summertime maintenance and updates.

Digital Literacy Skills

Because RCSD has integrated technology into classrooms, students should have skills with the platforms and applications that teachers used in the spring and that they will continue using in the coming school year. However, students entering school or being introduced to new applications will be learning them remotely. Young children especially may need assistance at times from adults who are helping them with remote learning at home. To help families, the RCSD website includes some basic guides on how to use Chromebooks and some applications.

Digital Pedagogy

Similar to students needing digital literacy skills to use technology for remote learning, teachers also need to know how to transform in-class teaching to online. Principles of effective online pedagogy outlined by the International Association of K-12 Online Learning include that online courses should:

---

[11] RCSD

- Have clear and coherent organization
- Use quality instructional materials and appropriate technology that enable and enrich student learning
- Demonstrate rigorous course content
- Provide for a high degree of interaction between teacher, students, parents/guardians, and among students
- Embed critical thinking, problem solving, integration, and synthesis in learning activities
- Accommodate different learning styles and be culturally responsive
- Consider time and place limitations of students
- Be supported by research and best practice
- Be continually refined based on assessment of students' needs
- Monitors that work and assessments are completed by the student and not by someone else

RCSD has been preparing its teachers for effective online learning through their Digital Transformation courses that are available to teachers and that fulfill requirements for professional development. **More than 75% of RCSD teachers had already taken at least some of these courses.**[12]

---

[12] RCSD

Funding and Assistance

Deploying internet access and devices to so many students and on a schedule that was not pre-planned was a community effort. It is a prime example of the kind of collective impact the community can have when there are shared goals, aligned strategies, and continuous communication. The distribution of internet access and devices was made possible through RCSD and the following community partners:

Figure 5. Community Partners Meeting Immediate Student Needs in RCSD

Internet Access	Devices
•1 Million Project •MiFi Units	•City of Rochester •$700,000 •Rochester Area Community Foundation •$221,000 •United Way of Greater Rochester •Procurement facilitation

Figure 6. Timeline of Remote Learning

March		
Pre-K	•	Activities to do at home aligned with curriculum posted on RCSD website weekly
K – 5	•	Printed packets available at food distribution sites
6 – 8	•	Printed packets available at food distribution sites
9 – 12	•	Online instruction with amount of synchronous and asynchronous instruction and type of learning activities varying between schools and teachers for students who had internet access and devices

April		
Pre-K	•	Activities to do at home aligned with curriculum posted on RCSD website weekly
K – 5	•	Printed packets available at food distribution sites
	•	Survey of device and internet needs completed for Grades 4 - 5
6 – 8	•	Printed packets available at food distribution sites
	•	Distribution of MiFi units and Chromebooks to Grades 6 - 8
9 – 12	•	Online instruction with amount of synchronous and asynchronous instruction and type of learning activities varying between schools and teachers for students who had internet access and devices
	•	Distribution of MiFi units and Chromebooks to students who declined them at the start of the year

May		
Pre-K	•	Activities to do at home aligned with curriculum posted on RCSD website weekly
K – 5	•	Printed packets available at food distribution sites
6 – 8	•	Online instruction with amount of synchronous and asynchronous instruction and type of learning activities varying between schools and teachers for students who had internet access and devices
9 – 12	•	Online instruction with amount of synchronous and asynchronous instruction and type of learning activities varying between schools and teachers for students who had internet access and devices

June	Pre-K	• Activities to do at home aligned with curriculum posted on RCSD website weekly
	K – 5	• Printed packets available at food distribution sites • Distribution of MiFi units and Chromebooks to Grades 4 – 5
	6 – 8	• Online instruction with amount of synchronous and asynchronous instruction and type of learning activities varying between schools and teachers for students who had internet access and devices
	9 – 12	• Online instruction with amount of synchronous and asynchronous instruction and type of learning activities varying between schools and teachers for students who had internet access and devices

Charter and Private Schools

Although we do not have detailed information on all charter and private schools, most of them already had 1:1 technology programs that provide students with devices and internet access. Some of those schools that only provide devices added internet access support once they went to 100% remote learning.

What Is Next

The data in this report can be used to inform immediate, intermediate, and long-term strategies to close the digital divide in Rochester. There are many opportunities for community organizations, businesses, and others to help with this work. ROC the Future will continue to serve as a convening body and to connect potential partners.

Immediate Needs: Internet Access and Devices

The immediate crisis of internet access and devices for RCSD students in Grades 4 – 12 has been addressed. All students in those grades will begin the new school year with MiFi units and Chromebooks available to them through the district.

However, the needs of students in pre-K through Grade 3 have not yet been fully met. Work is underway for these students. Specifically, ROC the Future has convened community partners to ensure a coordinated response for pre-K students that ensures children and their families, whether in RCSD or community-based pre-K programs, have internet access and age-appropriate devices. ROC the Future has convened a group to address this need.

Figure 6. Work In Progress on Pre-K Internet Access and Devices
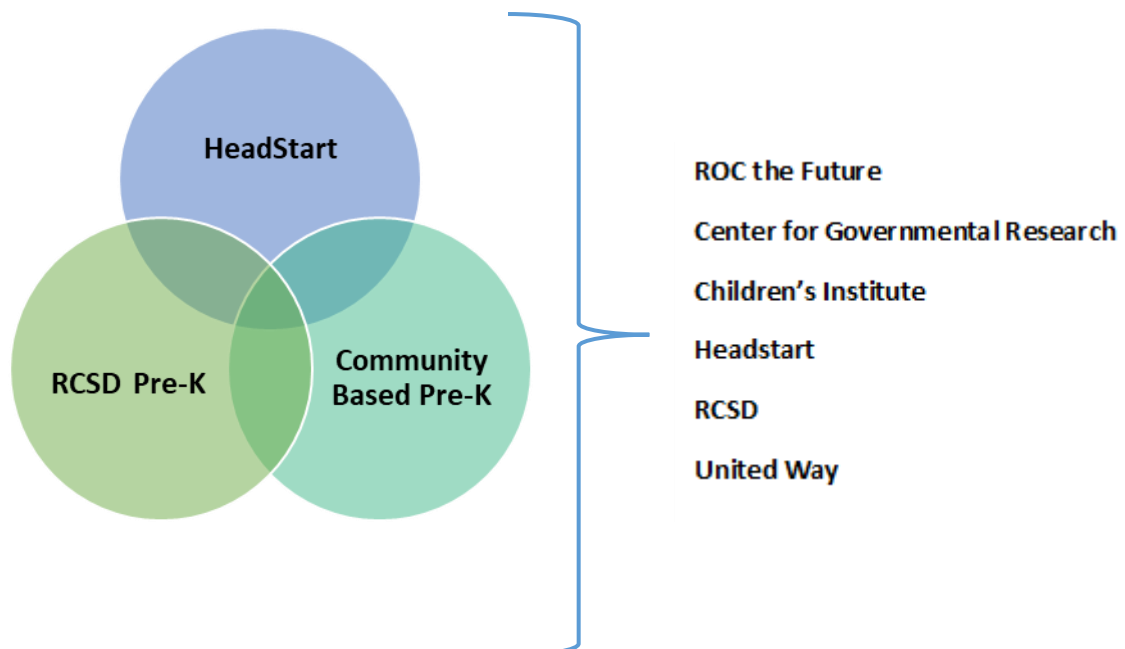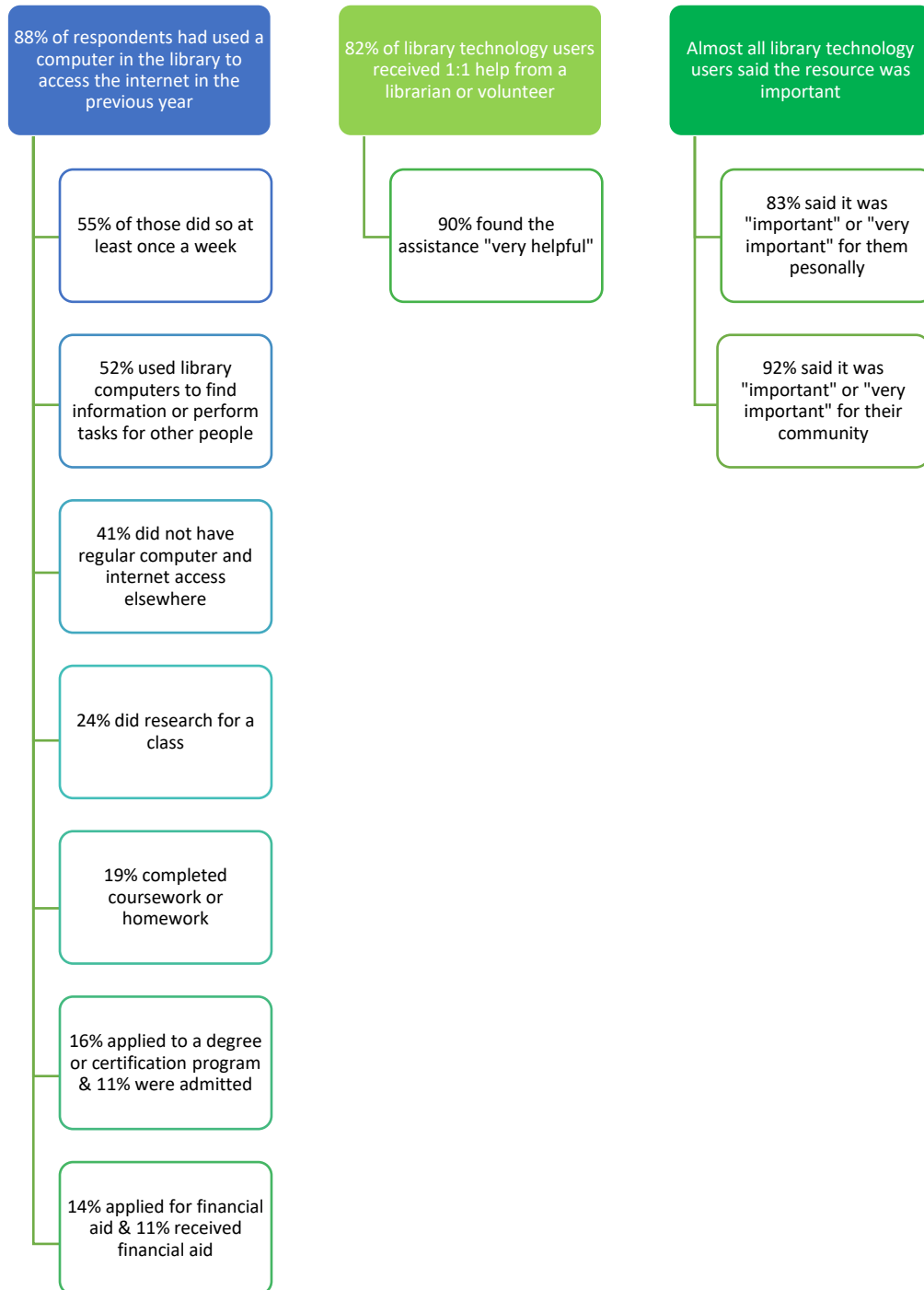
Intermediate Needs: Digital Literacy Skills

As out of school time programs eventually resume, they will continue to be another resource for students to access computers with internet access and to develop their digital literacy skills. For example:

- **R-Centers** have computer and internet access for after school homework
- **Boys & Girls Clubs of Rochester** offer the My.Future program that teaches youth computer skills including word processing, spreadsheets, and database. The program is intended to level the virtual playing field and give youth the resources and skills they need to perform better in school and, eventually, the workplace.
- **Quad A for Kids** includes computer technology in their after-school programs at School #2, 4, 16, and 34.
- **Rochester Childfirst Network**'s Wrap-Around program for school age children includes technology activities.
- Summer learning programs such as the **Horizons** programs build digital literacy skills students can take with them into the following school year.

Community partners can assist with building skills among families so they can assist with their child's remote learning. The work of the Rochester Public Library is an important component of this response. The library has more than 250 public access internet terminals that are heavily used and relied upon by many patrons for internet access. In 2019 the library system provided 520 digital literacy programs to 1,506 patrons. They also and served 1,093 patrons in one-on-one help sessions. In an impact survey done at the Central Library in 2017:

Figure 7. Impact of Rochester Public Library Technology Access

88% of respondents had used a computer in the library to access the internet in the previous year

55% of those did so at least once a week

52% used library computers to find information or perform tasks for other people

41% did not have regular computer and internet access elsewhere

24% did research for a class

19% completed coursework or homework

16% applied to a degree or certification program & 11% were admitted

14% applied for financial aid & 11% received financial aid

82% of library technology users received 1:1 help from a librarian or volunteer

90% found the assistance "very helpful"

Almost all library technology users said the resource was important

83% said it was "important" or "very important" for them pesonally

92% said it was "important" or "very important" for their community

In addition to onsite internet access, the library system also has more than 500 MiFi units available for patrons to check out on a three-week basis. However, the current subscription costs for these units comes to $180,000 annually, an amount that is not likely sustainable.[13]

The library also offers in-person technology classes to build skills such as:
- Beginning computers
- Digital learning
- Excel
- Word
- PowerPoint
- Smartphones

The current, pressing need for digital literacy as part of remote learning is an opportunity to build a broader community network. This may include:
- **Library-school partnerships** to offer training at libraries on the online classroom platforms being used in the schools and specific educational applications
- **New settings** for short technology classes focused on school platforms and applications, such as:
  - Faith communities
  - Refugee service organizations
  - Large employers immediately before and after shifts or on breaks (e.g. URMC, dining and facilities departments at colleges, etc.)
  - Human/social service departments and organizations
  - YMCA branches
  - Outdoor pop-up technology fairs

---

[13] Rochester Pubic Library

Long-Term Needs: Public Internet Access

The pandemic has heightened discussions about how to make internet access more publicly available through systems-level changes by state and local government. The ways education, health, and human services are relying on remote access and teleservices during the pandemic is not expected to fade. Rather, it has accelerated the transition to more reliance on digital access. There is a broad range of options available that rely on state, county, and/or municipal government. An in-depth understanding of the reach and the advantages and disadvantages of the strategies is needed in order to pursue those strategies that will best serve our communities.

Figure 8. Strategies for Public Internet Access

Federal
- FCC Lifeline
- Broadband Tech Opps Progam
- National affordability standards

State
- Affordability standards as condition of grants
- Subsidy program for businesses that provide free or low-cost internet access
- Regulating internet as a public utility

Internet Access

City
- Publicly owned network
- Direct subsidy program
- Waive permitting fees
- Connect homes to municipally owned lines
- MiFi distribution through Library
- Mobile internet bus through Library

Schools
- MiFi distribution
- School libraries/computer labs open to public after school hours