Digital Opportunity for Adults with Language Barriers

Report by Literacy for Life (LFL) for Virginia Department of Housing and Community Development's (DHCD) Office of Broadband

The following case study outlines:

- The steps Literacy for Life has taken to execute its proposed Digital Opportunity Case Study Pilot Program
- The information gathered from surveys completed, assessments taken, and instruction delivered under the program
- Recommendations for addressing the needs of the participants to improve digital equity and opportunity for all Virginians

LFL's Digital Opportunity Case Study proposal outlined five steps to be taken to identify and address the digital equity needs of covered populations served by the agency. Those five steps and the results are described below.

Step 1:
Survey 100 adult immigrant learners to evaluate their need for and access to digital literacy instruction, broadband, and consumer devices.

Literacy for Life staff created a survey to evaluate the digital equity needs of learners in the program who qualify as "covered populations" according to the guidelines of the Digital Equity Act. Of 100 respondents, 100% (100 of 100) were individuals with a language barrier, including individuals who are English language learners and/or have low levels of literacy. 65% (65 of 100) were members of a racial or ethnic minority group. Of those willing to provide household income, 66% (48 of 73) self-reported as living in a household with an annual income that is below 150% of the federal poverty level.

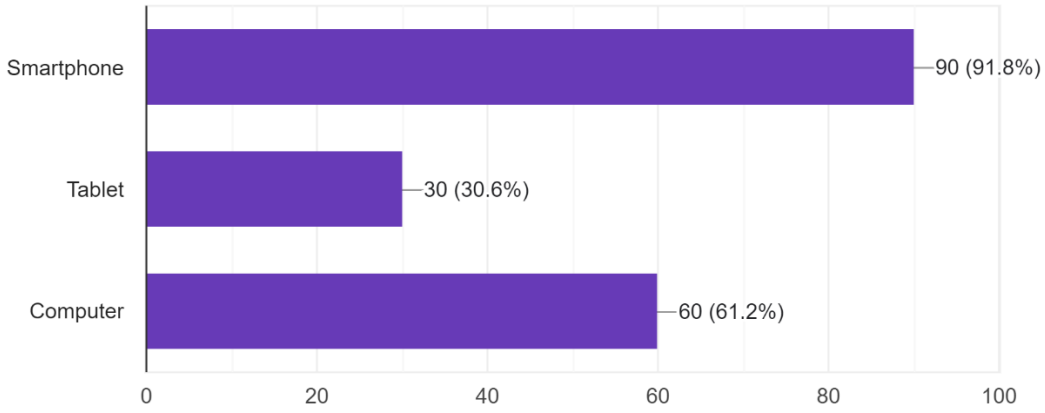
Results of survey

Of note:

- The results reflect the self-reported confidence in digital literacy skills which is not always reflected in the individuals knowledge and skills that were measured using the Northstar Assessment (NSA). For example, of the 19 learners who particpated in the class and answered the survey question 'Do you feel confident using email,' 15 (79%) responded 'yes'. However, the results of the NS showed that of only 2 (11%) had a passing score on the Email unit of the NSA.

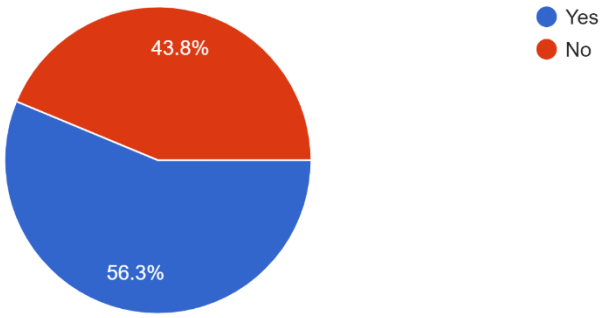
(You can choose more than one.) Do you have a:

98 responses



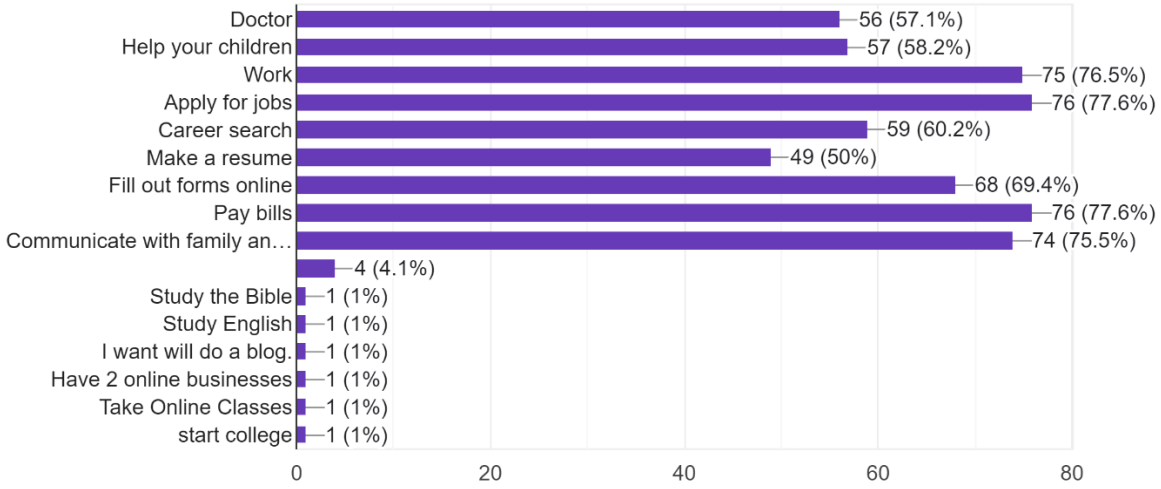
Do you want help getting cheap or free Internet?

96 responses



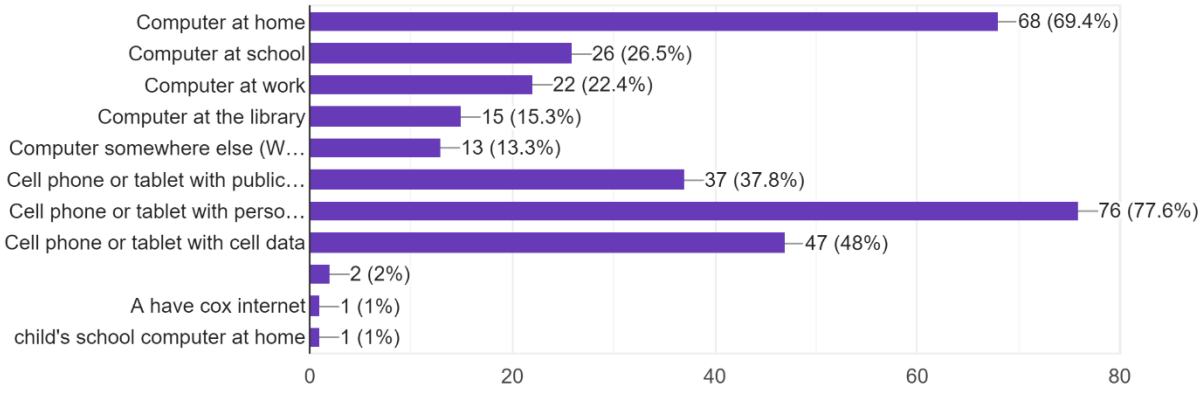
How would computer skills help your life? (Mark yes with a ✓.)

98 responses



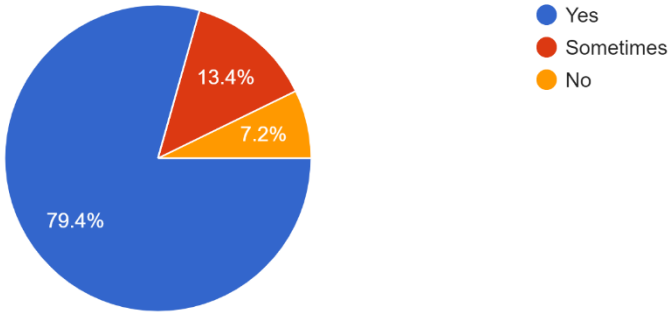
Where do you use the Internet? (Mark yes with a ✓.)

98 responses



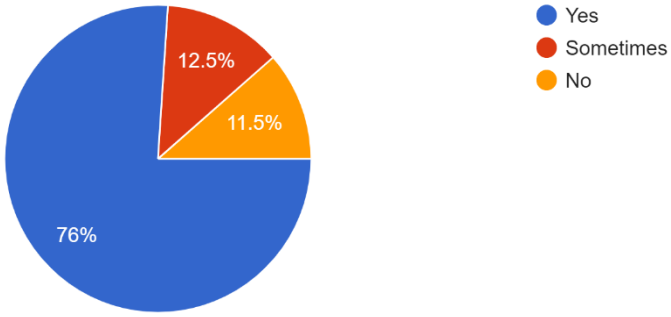
Do you feel confident turning on a computer and logging on?

97 responses



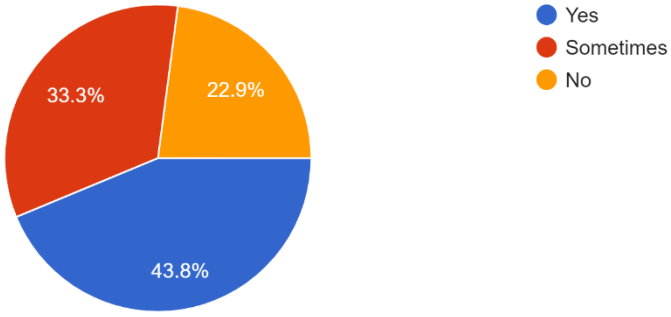
Do you feel confident using a keyboard and mouse?

96 responses



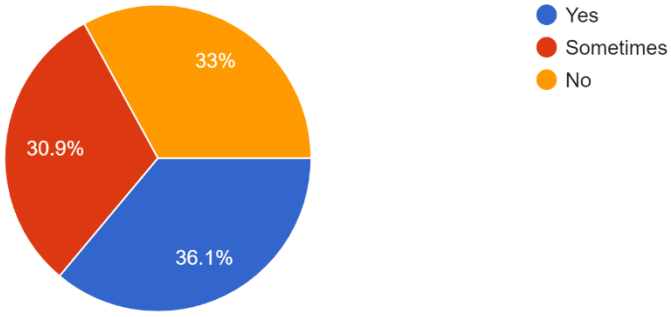
Do you feel confident filling out online forms?

96 responses



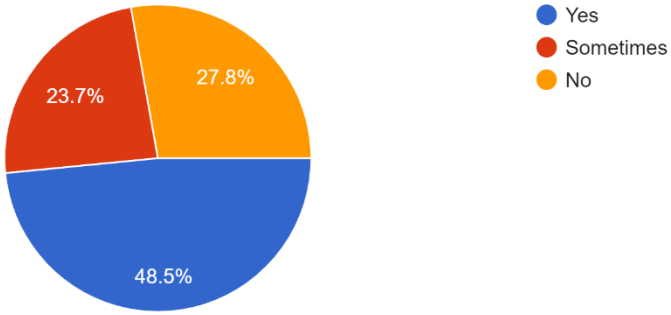
Do you feel confident downloading files, saving files, organizing files, sharing files?

97 responses



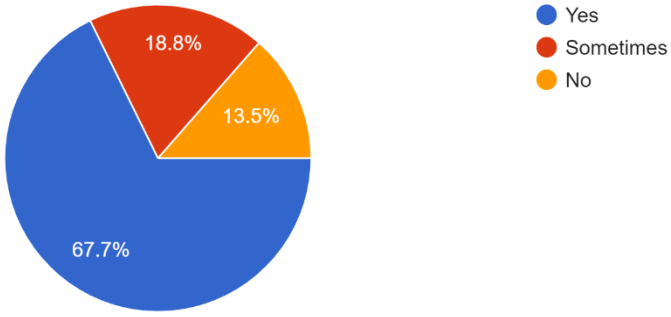
Do you feel confident using Microsoft Word?

97 responses



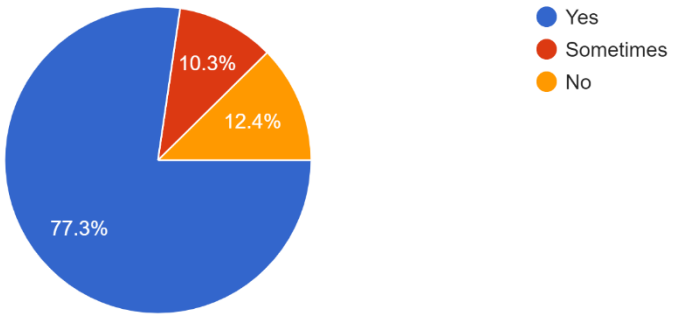
Do you feel confident finding information on the Internet?

96 responses



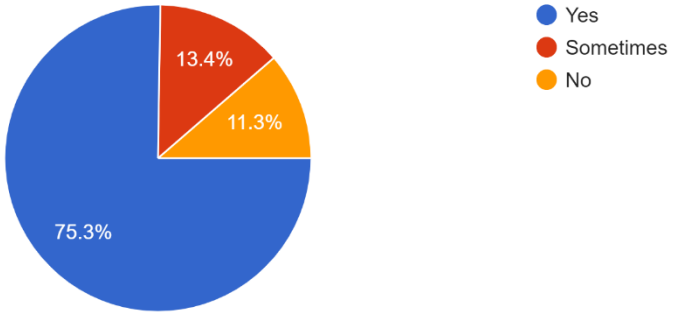
Do you feel confident using email?

97 responses



Do you feel confident using Zoom?

97 responses



Step 2:

Assist 10 learners who do not have access to affordable broadband in applying for Affordable Connectivity Program to identify and document challenges.

A Literacy for Life ESL instructor assisted 10 learners in applying for the Affordable Connectivity Program (ACP). Although ACP is not a part of the Digital Equity Act, LFL included an evaluation of the ACP program in the DHCD project to inform future state policies.

Only two out of ten made it completely through the process and received reduced cost broadband ConnectAssist through COX. Several challenges were encountered:

- **Access to computer/tablet and internet connection**
  Even with the assistance of an instructor, the application process took applicants at least two and a half hours or longer to complete. Most of the learners do not have access to a

device nor internet services, therefore most are unable to complete the process in one sitting.

- **False advertisement**
  Broadband websites advertise *free* or reduced-price internet, but those accessed with participants only granted reduced-price internet access ($30 for individuals and $9.99 for those parents with a K-12 child). For some low-income families, even reduced-price internet is not affordable and, therefore, still inhibits broadband access.

- **Eligibility demands**
  ACP states that the service is for those customers that:
    - fall 200% or less of the federal poverty guidelines
    - currently subscribe to the broadband providers internet, and
    - participate in a qualifying government assistance program.

  This automatically prevents individuals most in need of ACP from being eligible because not all people living 200% below the poverty guidelines receive government assistance, and many cannot afford to pay all fees required to begin the internet services.

- **Digital literacy demands to complete the process**
  Completing the application requires toggling through various internet sites, but most prospective clients do not have the technical ability to navigate this process. The multi-step process is cumbersome, particularly for individuals with limited digital literacy: First, the client must subscribe to a qualifying broadband program (paying all fees and upfront costs). Second, the client applies for the ACP program and must meet the eligibility requirements. To do so, they must go through a third-party website called ID.me to upload documents verifying their identity and their participation in any government assistance programs. If the ID.me site reads a state identification in error, there is no way to move forward and no access to assistance except for chat boxes (which present a barrier for individuals with limited English and/or literacy skills.) The third-party site is not user friendly and hinders the client in the process. At this stage most people will give up on the process. For individuals with a language barrier, including individuals who are English language learners and/or have low levels of literacy, this process is even more difficult to complete.

- **Many individuals with language barriers lack accepted IDs**
  Many individuals with language barriers, especially immigrants and refugees, do not possess a state ID. Consequently, they must either wait until they are able to secure a state ID or pay full price for broadband. For refugees, securing a state ID is a slow process because it often takes a long time to obtain the requisite documentation.

Summary of Outcomes for Ten ACP Applicants

Learner	Eligibility
AV	ACP eligible
TV	ACP eligible
GG	200% below poverty guideline, but not eligible due to living situation & no state ID
OE	200% below poverty guideline, but not eligible due to living situation & no state ID
KM	200% below poverty guideline, but not eligible due to living with a relative who does not qualify & no state ID
JF	200% below poverty guideline, but not eligible due to no state ID
NZ	200% below poverty guideline, but not eligible due to living situation
LM	200% below poverty guideline, but not eligible due to not receiving benefits
LR	200% below poverty guideline, but not eligible due to no foreign ID
VV	200% below poverty guideline, but not eligible due to not receiving benefits

Step 3:

Administer the Northstar Digital Literacy assessment for basic computing, internet, email and Microsoft Word to 25 learners to identify areas of greatest need and develop an instructional model.

The Northstar pre-assessments for Internet Basics, Email and MS Word were completed by 36 English Language Learners and highlighted the areas of greatest instructional need. Initially LFL intended to include an instructional module on MS Word. However, because of the slow pace of instruction required for learner understanding, and the abbreviated timeframe, the MS Word unit was not delivered. The three modules below were delivered over five 1.5 hour lessons:

Internet Basics

- Recognize different ways to connect to the internet
- Open an internet browser
- Write a web address or URL into the address bar
- Understand the meaning of the letters at the end of a website (.com, .org)
- Identify the correct place to click on websites to find information
- Use buttons to go back to different websites
- Recognize the difference between website content and ads

Internet Privacy and Safety

- Erase your internet viewing history so other people cannot see the websites you have visited
- Open a special private window to view websites with more internet privacy
- Recognize when websites are safe to share private information
- Identify when your device could be infected with a virus
- Identify emails that could hurt your computer or steal your information
- Fill out an online job application form
- Allow the computer to open an extra window
- Use a CAPTCHA to show the computer you are a real person and not a robot

Email

- Make an email account with a professional username you can use for work, school, and job applications
- Make a strong and safe password
- Log in and log out of email
- Type short and clear subjects for emails, for better understanding of email topic
- Type polite emails with a greeting, a short body, and a closing
- Reply to the sender of an email
- Reply to the sender of an email, and a group (everyone else the email was sent to)
- Forward a copy of an email to another person
- Recognize emails that include extra files (attachments)
- Download and open attached files
- Send a file as an attachment

Step 4:
Select 10 learners with similar instructional needs and availability to attend a digital literacy class.

Through a partnership with William & Mary, LFL was able to secure a computer lab that allowed 19 learners to participate in the class. Learners were selected by their English language level, their availability to attend the scheduled class, their desire to attend the class, and their digital literacy needs.

Demographics of Class Participants:

- English Language Learners: 19/19 (100%)
- Race: Hispanic: 8 (42%), White: 8 (42%), Black: 2 (11%), Asian:1 (5%)
- ＜150% Federal Poverty Level: Yes: 10/19 (53%), No: 6 (32%), not known: 3 (18%)

Literacy for Life assesses English Language Learners using the Comprehensive Adult Student Assessment System (CASAS). The class was offered to English language learners who were Low/High Intermediate Education Functioning Level.

Low Intermediate CASAS Skill Descriptor

Listening/Speaking:

- Can satisfy basic survival needs and very routine social demands.
- Understands simple learned phrases easily and some new simple phrases containing familiar vocabulary, spoken slowly with frequent repetition.

Reading/Writing:

- Can read and interpret simple material on familiar topics.
- Able to read and interpret simple directions, schedules, signs, maps, and menus.
- Can fill out forms requiring basic personal information and write short, simple notes and messages based on familiar situations.

Employability:

- Can handle entry-level jobs that involve some simple oral and written communication but in which tasks can also be demonstrated and/or clarified orally.

High Intermediate CASAS Skill Descriptor

Listening/Speaking:

- Can satisfy basic survival needs and limited social demands; can follow oral directions in familiar contexts.
- Has limited ability to understand on the telephone.

- Understands learned phrases easily and new phrases containing familiar vocabulary.

Reading/Writing:

- Can read and interpret simplified and some authentic material on familiar subjects.
- Can write messages or notes related to basic needs.
- Can fill out basic medical forms and job applications.

Employability:

- Can handle jobs and/or training that involve following basic oral and written instructions and diagrams if they can be clarified orally.
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Step 5:

Develop and deliver an 8-session digital literacy class and evaluate the most effective strategies for addressing the digital skills gaps for individuals who are English language learners and/or have low levels of literacy.

Since funds were received later than the proposed start date and Literacy for Life closes for summer break, the timeline for delivering classes was shortened. This resulted in the instructor delivering 5 lessons rather than the proposed 8 lessons. With the additional instructional time not used for 3 lessons, the instructor met one-to-one with an additional 9 learners.

The instructor used the Northstar curriculum as a resource for building three modules that were delivered across the 5 lessons (see content in Step 3). PowerPoint slides were created to guide the lesson. They provided clear visuals to direct the participants. There were individual and pair activities. Each participant was given a binder of handouts with instructions, visuals, and activities to support the lesson content. In addition to the instructor, there were 4 volunteers to assist as needed.

Key Instructional Strategies:

- Following a *learn – practice – explore* model helped learners absorb information more efficiently. During the *learn* portion, the participants observed and listened to the instructor and were asked not to touch their computers. During *practice,* learners completed activities in pairs, with class helpers, or with the instructor. Finally, during the *explore* stage, learners were able to practice individually with support from the instructor and class helpers. Handouts were also created to help learners practice at home.
- In a class setting learners grasp the information at different paces, so it was important that those who were processing the information more slowly had the support of a class helper to keep from falling behind.

- There were four classroom helpers during each lesson. It is best to recruit helpers that have a sound level of digital literacy, so that they can offer support quietly and quickly without any disruption to the lesson.
- Most of the learners felt they knew more than they demonstrated, but it was the digital vocabulary that hindered their progress. For English language learners understanding digital vocabulary is imperative. Upon completing vocabulary exercises and activities most of the learners had a better grasp of the information and steps to each activity.
- Overall, the instructor had to teach at a slower pace than expected and the learners needed significant time to practice in class. Learners without devices at home struggled more than those that had access to computers.
- Incorporating one-to-one meetings allowed instruction to be delivered to a small number of learners who fell below the prerequisite of Low/High Intermediate Education Functioning Level to attend class instruction. An additional advantage to one-to-one instruction was that the instructor was able to meet at a time convenient to the learners' schedules.

Outcomes:

Overall, 18/19 (95%) participants improved their digital literacy in two areas: Internet Basics and Email. The assessment scores on a 100 point scale. Results are highlighted below.

Participants receiving only class instruction

Learner	Internet Basics Scores		Internet Basics (% gain)	Email		Email (% gain)
	Pre-	Post-		Pre -	Post-	
SC	25	58.3	133%	46.7	76.4	36%
JH	66.2	75	13%	80.5	87.2	8%
OG	35.8	90.7	153%	37.6	83.1	119%
XH	60.3	89.7	90%	67.6	94.9	83%
NL	54.3	52.5	-1.6%	63.3	79	25%
EM	42.2	74.5	77%	67.4	83.1	23%
MO	49	78.9	61%	74.1	84.6	14%
MS	76	90.7	19%	74.4	92.3	24%
RS	72	90.7	26%	89.5	94.4	5%
MS	59.3	81.9	38%	62.3	80.5	29%
MT	64.7	68.6	6%	52.3	73.1	40%

Participants receiving class and one-to-one instruction

Learner	Internet Basics (point gain)		Internet Basics (% improvement)	Email (point gain)		Email (% improvement)
AL	56.9	87.3	53%	Did not complete		
AR	36.8	89.7	160%	57.2	89.2	66%
DS	53.4	95.6	79%	90.8	94.9	5%

Participants receiving only one-on-one instruction

The instructor worked one-on-one with 9 learners. They were at a lower level of English and required more time. At the end of the project, only 4 were ready to take the pre- and post-assessment for Internet Basics.

Learner	Internet Basics (point gain)		Internet Basics (% improvement)
GG	25	74	196%
ZN	18.6	25.5	37%
MZ	43.1	73	69%
VV	28.9	49	67%

Comparison results of instructional models

Instruction received	Internet Basics (average gain)	Email (average gain)
Class only	22	17
Class and limited one-to-one	44	21
One-to-one only	27	N/A

Recommendations:

According to the Digital Equity Act, State Digital Equity Plans are required to address:

1. The availability and affordability of broadband access (fixed and wireless)
2. The online accessibility and inclusivity of public resources and services
3. Digital Literacy (defined as “the skills associated with using technology to enable users to find, evaluate, organize, create, and communicate information”)
4. Awareness of, and the use of, measures to secure the online privacy of, and cybersecurity with respect to, an individual
5. The availability and affordability of consumer devices and technical support for those devices

Based on the objectives of the Digital Equity Act as described in Sec. 60304(c)(B) and the findings of this project, LFL makes the following recommendations to the Office of Broadband:

1. **Provide competitive grant funding for digital literacy instruction.**
   The single greatest need related to digital equity and inclusion for participants in LFL's program was digital literacy instruction. LFL demonstrated the effectiveness of classroom and one-to-one digital literacy instruction based on English language and/or literacy level. Overall, participants who received digital literacy instruction at an appropriate English language level demonstrated significant increases on their Northstar Digital Literacy Assessments for Internet Basics and Email.

   In light of the demonstrated effectiveness of level-appropriate digital literacy instruction provided through this program, LFL strongly recommends that ***significant competitive grant funds*** be made available through Virginia's Digital Opportunity Plan to community-based literacy organizations, adult education programs and other agencies who have demonstrated effectiveness in addressing the literacy/education needs of covered populations by providing appropriate levels of instruction.

2. **Set aside funds for financial assistance to make broadband more accessible.**
   A significant need of participants in LFL's Case Study Program was affordable broadband access. Out of 100 individuals responding, 56 (56%) indicated that would like assistance securing more affordable broadband access. Currently, a provision is made through the federal Affordable Connectivity Program for eligible individuals to apply for such assistance. However, as noted above, these funds are difficult to access for many individuals who are part of covered populations and, therefore, limited in their benefit. Furthermore, ACP funds are projected to run out by the first half of 2024.

   In light of this, LFL recommends that, as part of Virginia's Digital Opportunity Plan, funds be set aside for individuals with low-income to receive financial assistance to make broadband more accessible.

3. **Improve application process for individuals with language barriers, including individuals who are English language learners and/or have low levels of literacy, to remove barriers to affordable broadband access.**

   When creating a state program to address affordable connectivity that replace ACP funds, LFL encourages the Office of Broadband to adopt strategies that remove the language and literacy barriers which limit accessibility and inclusivity in the application process. According to US Census data, more than sixteen percent of Virginians (nearly 1.4 million residents) speak a language other than English in their homes. For these individuals, contextualized vocabulary for navigation of digital resources is often difficult

to understand. In LFL's experience, this has made the application process for the Affordable Connectivity Program inaccessible for non-native English speakers. By making applications for similar initiatives available in multiple languages, Virginia's Office of Broadband will increase the likelihood that non-native English speakers in the state will be able to experience digital equity and inclusion.

4. **Create an application process for individuals with no existing digital access.**
   LFL recommends the development of a process whereby individuals without digital access can more easily apply for funding to obtain affordable broadband. Currently, individuals applying for the ACP must have internet access to apply for free or reduced-price broadband. This seems counterintuitive.

   To remedy this barrier, it is recommended that agencies receiving competitive grants be encouraged to act as satellite sites in communities across the state where covered populations can go to complete paper applications or receive assistance to complete online applications for affordable broadband access.

5. **Encourage partnerships to address device needs for covered populations.**

   As part addressing learner digital access, LFL has partnered with an institution of higher education (William & Mary). William & Mary donated refurbished devices to LFL that were then distributed to covered populations according to need. It is recommended that competitive grant fund recipients receive funds through Virginia's Digital Opportunity Plan be encouraged to pursue similar partnerships with institutions of higher learning, corporation, and other entities to recycle and refurbish devices to meet the needs of covered populations.

Additional Note:

The Virginia Digital Opportunity Survey that was created by DCHD's Office of Broadband and distributed by Literacy for Life to its learners and tutors. To encourage learners to complete the Virginia Digital Opportunity Survey created by DHCD, LFL shared the survey on social media and distributed to its 115 English language tutors to complete with their learner in English. Following the release of the survey in Spanish, Ukrainian, Russian, and Arabic, LFL distributed the survey to 205 individuals to complete in their native language. 151 learners received the Spanish survey. 26 received the Ukrainian survey. 19 received the Russian survey. 9 received the Arabic survey.