

The Digital Device Lending Library Program at 2Life

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Introducing 2Life Communities

2Life Communities, a nonprofit organization founded in 1965, operates on the belief that all seniors should have the opportunity to live a full life of connection and purpose in a dynamic, supportive environment – a model called *aging in community*, which directly combats the growing public health crisis of social isolation and loneliness among older adults. At 2Life Communities, residents can step out the doors of their own apartments and find friendship, community, physical and intellectual stimulation, and a helping hand day or night. Serving a diverse population of over 1,580 older adults, 2Life creates communities with a laser sharp focus on affordability – a tremendous concern in Massachusetts, the state with the largest gap in the U.S. between seniors' median income and the cost of living.

The Needs Statement

The COVID-19 pandemic underscored that access to technology is an issue of equity and a social determinant of health, while clearly illustrating that Internet access must be provided as a public utility. 2Life Communities spent the pandemic figuring out how to build an accessible, community-supported, user-friendly Digital Device Lending Library (DDLL) for low-income elders who have little to no experience with technology. And at the core of this project has been the shared commitment to move communities toward age-friendly practices, so that older adults have the resources and access they need for healthy living and healthy aging. We look forward to working with and sharing our knowledge with other organizations who are struggling to develop their own program to fill this equity gap by providing access, equity, education, and empowerment for all.

Background Information About the Point32Health Foundation Grant

2Life Communities was honored to receive a one year, \$50,000 grant from the Point32Health Foundation to support our “Bridging the Digital Divide for Older Adults” community investment project. “The Digital Device Lending Library Manual” has been developed as part of this project and is supported by the Point32Health Foundation grant. We are grateful for your interest in this Manual and hope that it will be helpful for launching and developing your own initiative to enable seniors to benefit from accessing technology.

The 2Life Model for Bridging the Digital Divide for Older Adults

In this section, we discuss the challenges that contribute to the generational digital divide, the importance of an intrinsic motivation to use technology, and three levels of the digital divide:

1. device access

2. technical skills
3. positive outcomes

We introduce the 2Life Model for bridging the digital divide for older adults, which is premised on fostering a symbiotic relationship between technology and socialization, with technology being employed as a tool for facilitating socialization, and with socialization serving as a motivation for mastering technology. We demonstrate that the 2Life Model is designed to tackle each of the three levels of the digital divide.

The Challenges

The gap between older adults' and younger users' access to and use of information and communication technologies engenders a digital divide between these populations. A number of factors conspire to create this gap; in addition, the digital divide is further exacerbated for seniors whose background and lifestyle fit a socially disadvantaged profile.

FACTORS THAT CONTRIBUTE TO THE GENERATIONAL DIGITAL DIVIDE

- **TECHNICAL CHALLENGES.** Seniors experience technical challenges related to digital literacy skills, which include knowledge of hardware, software, user interfaces, and familiarity with non-linear hypertextual navigation.
- **FINANCIAL RESOURCES.** Being able to afford a high-quality Internet service and a digital device as well as paying for servicing the digital device is a financial barrier that impedes many seniors' ability to access technology.
- **SOCIAL ISOLATION.** Lack of a social support network makes it challenging for seniors to master technology because it hampers their ability to draw on community support in acquiring new skills.
- **COGNITIVE AND PHYSICAL DEFICITS.** Seniors who experience cognitive deficits, such as memory loss, and seniors who experience physical challenges, such as blindness, visual impairments, as well as mobility and motor challenges, face an uphill battle in accessing and mastering technology.
- **LOW SOCIAL STANDING AND EDUCATIONAL BACKGROUND.** Seniors who come from a lower socio-economic and educational background use technology less than their counterparts who have a higher social standing and educational background (e.g., Fang et al., 2019).
- **NON-ENGLISH LINGUISTIC BACKGROUND.** Seniors who are not fluent in English face challenges with acquiring new technical skills because they may not be connected to speakers of their native language who could train them on using technology, may not have access to instructional materials in their

native language, and may not know how to switch the language of the device they are using to their native language or it may be unavailable.

- **RURAL PLACE OF RESIDENCE.** Seniors' physical location predetermines their ability to access the Internet in a number of ways; by and large, Internet access is superior in urban areas compared to rural areas; at the same time, urban areas typically contain a better support system for seniors, which includes support with using technology.

USING AN INTERSECTIONAL APPROACH TO ACHIEVE DIGITAL EQUITY

Since many barriers to learning new technology skills experienced by socially-disadvantaged seniors are highly interrelated, they need to be viewed through the lens of intersectionality. Therefore, seniors who fit the most socially-disadvantaged profile in relation to experiencing challenges in accessing and mastering technology require (and deserve) the most support in order to overcome these challenges.

The Motivation to Use Technology

Socially-disadvantaged seniors are less likely to be aware or fully aware of the benefits of using technology, which include staying connected, accessing information, and accessing essential services, such as telemedicine. This knowledge gap results in seniors' lack of motivation to use technology, exacerbating the generational digital divide (van Dijk, 2012). Educating seniors on using technology to engage in activities that are most useful and relevant to them is key to overcoming the motivational obstacle to closing the generational digital divide.

Fang et al. (2019) identify the following motivators for using technology as they relate to seniors.

WHAT MOTIVATES SENIORS TO USE TECHNOLOGY

- information access
- social connection
- personal enjoyment
- social encouragement
- individual characteristics
- broadening knowledge

Moreover, it was **social support** that was found to be the major catalyst which compelled seniors to access and use information and communication technologies (Fang et al., 2019; Larsson et al., 2013). And conversely, it was found that seniors who benefit from their families', friends' and communities' social support networks use digital devices more than their counterparts who lack these networks (Fang et al., 2019; Larsson et al., 2013).

For seniors, the main motivator for using technology is social connectedness.

The Three Levels of the Digital Divide

Above we have discussed a variety of factors that contribute to creating a gap between the younger and older technology users; these factors conspire to create the generational digital divide at several distinct levels, each of which needs to be addressed in order to close the equity gap. According to a wide consensus in the digital divide literature, the digital divide is a multidimensional phenomenon, which involves three distinct levels (Scheerder et al., 2017).

THE THREE LEVELS OF THE DIGITAL DIVIDE

1. Digital access – being in possession of an Internet-connected digital device.
2. The user's skill level in using digital devices with online access.
3. The user's ability to reap the benefits of using Internet-connected digital devices, which may include forging social connections, utilizing health resources, and accessing information.

It is only by tackling all three levels of the digital divide that we will make major progress in reducing the gap between older adults' and younger users' experience with technology.

The 2Life Model

2Life seniors fit a disadvantaged social profile, which exacerbates the generational digital divide that they experience.

- 69% of 2Life older adults hail from Russia and China and have varying degrees of English proficiency.
- 94% of 2Life seniors have a median annual income that is under \$12K, which is considered “extremely low-income” by all state and federal standards.
- 2Life seniors’ average age is 80, and one third of the seniors are over 85 years of age.
- Given their age, 2Life seniors experience a range of cognitive and physical disabilities.

We have been determined to bridge the digital divide for our seniors despite these challenges.

At 2Life, we have developed and employed a multipronged holistic approach to bridging the digital divide for a socially-disadvantaged senior population, which can be replicated with and adapted to other senior populations.

Since socializing and feeling socially connected are central to seniors’ well-being, and since technology is a powerful tool for facilitating socialization, we have used technology to create a variety of social opportunities for 2Life seniors.

The 2Life approach to bridging the digital divide is premised on fostering a symbiotic relationship between socialization and technology.

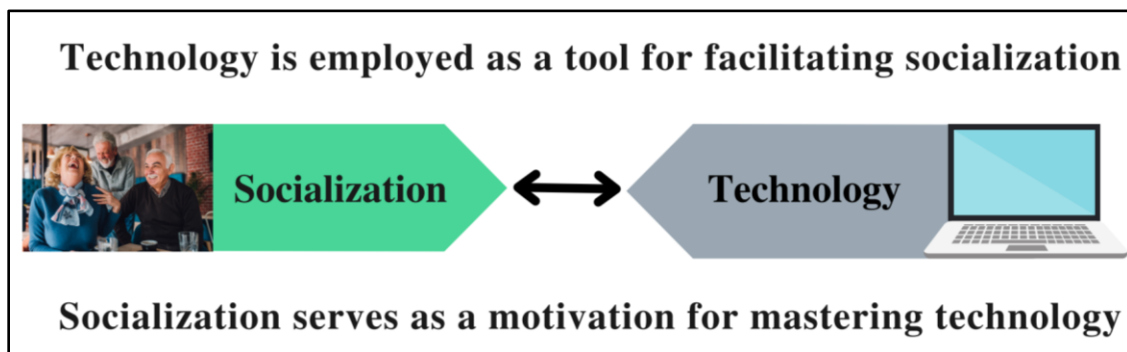
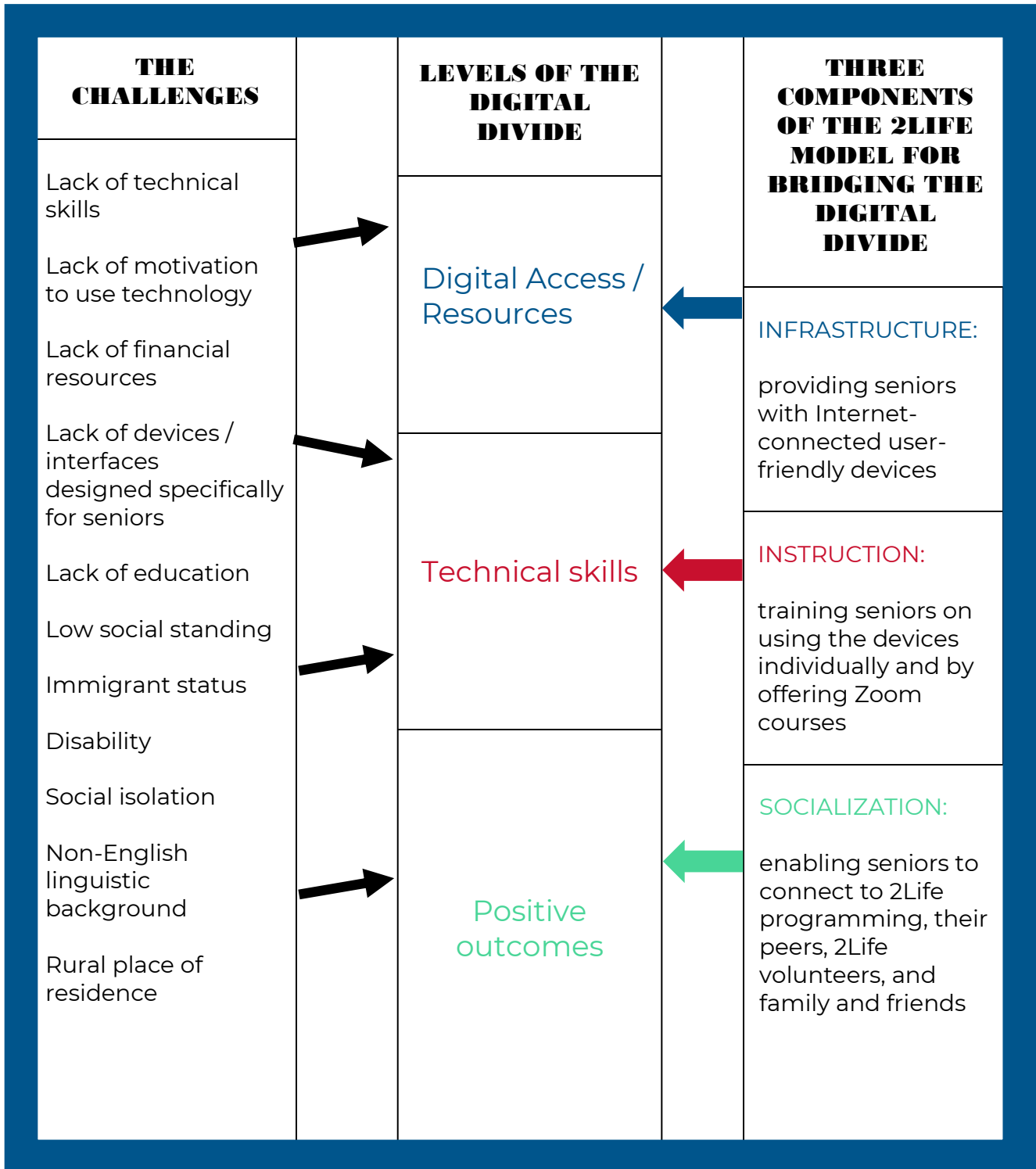


Table 1. THE 2LIFE MODEL FOR BRIDGING THE DIGITAL DIVIDE FOR OLDER ADULTS



The Digital Device Lending Library Program

Harnessing the power of technology to foster and bolster community bonds, 2Life staff pioneered the DDLL and created a replicable model for effectively connecting linguistically diverse, low-income older adults to services, programs, and each other through technology.

THE DDLL PROJECT IN NUMBERS

The DDLL is currently comprised of 105 devices:

- 73 Chromebooks
- 15 Samsung Tab A's
- 17 amplifiers

Internet Connectivity

Connecting the DDLL devices to the Internet is a prerequisite for enabling our residents to have Internet access at home regardless of their ability to afford Internet service.

- The 2Life IT team created a Wi-Fi network that is dedicated to the DDLL, and our devices are automatically connected to this network.
- 2Life seniors who borrow the DDLL devices take advantage of having unlimited Internet access and participate in 2Life programming, including intergenerational programming, over Zoom as well as socialize with their loved ones using a variety of video-conferencing programs.

Configuring the Devices

Configuring Chromebooks to be Used in the Personalized Mode

Because the primary purpose of lending seniors computers is enabling them to socialize and feel connected to their loved ones, 2Life community, and community at large, we configure the devices to be used in the personalized mode, which is significantly more user-friendly than the guest mode. We configure the following settings and applications in the personalized mode for each device borrower:

- accessibility settings,
- language settings,
- bookmarks,

- Gmail account,
- applications requested by a particular resident.

Changing the Language Settings

In the spirit of inclusivity, we go the extra mile in accommodating the needs of our multilingual residents.

- We switch the language of the operating system to the resident's native language.
- We enable an onscreen keyboard with the user's native language.
- For Chinese speakers, we activate the option to write hieroglyphics on the screen with a stylus.
- We enable the option to use speech-to-text (dictation) in their native language for all users.

Installing the Applications

Prior to lending a Chromebook to a senior, we preload it with the following applications and bookmarks:

- The Chrome Remote Desktop application that enables a staff member to remote into a senior's computer for training purposes.
- Bookmarks with useful websites in the senior's native language (e.g., places of worship where seniors virtually attend services and more informal Zoom meetings).
- Zoom, Gmail, Kindle Cloud Reader, Chrome, Files, Docs, Slides, Sheets, Google Drive, Google Keep, YouTube, Camera, and Google Photos.

We also install other apps, such as Skype and WeChat, for users who request them. Skype is popular with Russian-speaking older adults, and WeChat is used by Chinese-speaking senior adults. Our residents use Skype and WeChat to connect with their families and friends face-to-face; these joyous experiences boost their overall emotional well-being.

Training Residents on Using Their Devices

We use the following method for training residents who borrow the DDLL devices.

- We train each senior on using the device individually.

- We furnish each senior with a detailed handout on how to use the device.
- For users who speak languages other than English, the handout is provided in the user's native language.
- The handout contains
 - a step-by-step description of how to use the device,
 - how to connect to Zoom meetings,
 - how to browse the Internet,
 - an index of commonly used technical terms,
 - numerous screenshots of the device screen and the device itself.
- We practice various computer skills with the senior during the training session.
- We schedule additional training sessions as needed.

Coursework and Activities Offered over Zoom Focused on Promoting Socializing

Since the summer of 2020, 2Life staff and Little Brothers – Friends of the Elderly (LBFE) have been offering weekly classes over Zoom to 2Life residents in order to enable them to be connected to their fellow residents and their families, and to teach them technical skills that would allow them to participate in virtual 2Life programming. 2Life staff have designed and taught over Zoom a comprehensive curriculum of courses tailored for 2Life seniors residing across five campuses.

THE DDLL PROJECT IN NUMBERS

We have offered **27** Zoom courses, most of them on the rolling basis, to our seniors.

Below is a sampling of courses we have offered to 2Life residents over Zoom; many of these courses have been developed and taught in partnership with LBFE.

- *Learn to Zoom* offered to English, Russian, Chinese and Korean speakers
- *Zoom+*
- *Virtual Armchair Travel Series*
- *Podcasts*
- *Intergenerational Classes* offered in partnership with a local synagogue

- *How to Read and Listen to Books Online*
- Exercise classes

In each of these courses, special attention has been paid to the social component. In order to engage seniors and create opportunities for socializing, we have used

- ice-breakers,
- discussion questions,
- joint activities,
- games,
- break-out rooms.

Our virtual programming has been supported by volunteers, who serve as virtual course instructors and technology tutors. Intergenerational connections with college students and connections with volunteers have greatly benefited 2Life seniors.

In addition, 2Life campuses have been offering a variety of events and activities to our seniors virtually – they have organized

- intergenerational reachout sessions,
- social hours,
- game nights,
- birthday parties,
- holiday concerts,
- holiday celebrations.

These events have been hosted on individual 2Life campuses and across the campuses. All of our virtual programming was designed to provide seniors with rich and varied opportunities for socializing and engagement.

Employing Zoom as a tool for facilitating socializing, we have built a vibrant, joyous, and inclusive virtual community of 2Life older adults.

Resident Feedback to Coursework Offered over Zoom

"Learn to Zoom" class / borrowed Chromebook

I use the Chromebook that I borrowed from 2Life to email my family and to have Zooms with them. I also go to 2Life virtual programs, which are fun! I'm not an expert, but I think I've gotten what I needed from practicing in the classes, which was very helpful!

"Learn to Zoom class" / borrowed Chromebook

"Since I borrowed a computer from 2Life, I've been able to join Zooms that have been organized by my family, which is so nice. It makes a difference to see their faces and not just hear their voices on the phone."

"Learn to Zoom" class / borrowed camera

"Being able to use the webcam from our campus device library lets me stay connected after my surgery and I couldn't be around people. I use it [the device] to talk to family and my doctors sometimes, even though I am at home in my apartment. I really liked the classes too, I wish I could have attended more!"

"Russian Zoom Academy" class

"I liked it very much, just started using computers, Google Translate was especially useful. Very grateful!"

"Russian Zoom Academy" class

"Magnificent! I am very, very grateful!"

"Zoom+" class

"I really like it! I learned a lot! The organization of everything and the presentations were good. You all covered topics we wanted. You were all very sensitive to how seniors learned and always gave emails with the instructions on how to get us there."

"How to Read and Listen to Books Online" class

"Excellent class today on Libby and Project Gutenberg. It was very detailed and went slow enough for new people. I learned a lot."

Volunteer Support

2Life has a volunteer department that recruits, trains, and matches volunteers with opportunities aligned with the volunteer's interests, availability and expertise. 2Life's volunteer opportunities are primarily determined by resident needs and interests. The DDLL is supported by several groups of volunteers - tech tutors, volunteers who offer coursework over Zoom, and Computer Center support.

Training

Each volunteer is trained on general 2Life policies; they are also required to go through a training on working with older adults and be trained on how to use technology in the Computer Centers and the DDLL devices.

Language Support

Given the linguistic diversity of 2Life campuses, where Russian and Mandarin are spoken by hundreds of residents, it is crucial to have volunteers who are able to communicate with these populations. We have employed volunteers who speak Russian, Mandarin, and Cantonese.

Technical Tutor Volunteers

Technical Tutors were needed at the DDLL's launch. It became clear that 2Life staff could not meet the new demand of providing remote tech support to residents. We recruited volunteers to be matched with a resident who has indicated an interest in receiving one hour of remote tech support every week for (at least) 8 consecutive weeks. Technical Tutors shared a language with the resident we matched them with and were not expected to be experts in technical support. The most important attributes were an understanding of how frustrating technology could be for older adults, patience, and a good sense of humor.

Evaluation of the Technical Tutor Program's Successes and Challenges

We asked our Technical Tutors to submit a "Resident Tech Encounter" form each time they provided technical support. This was primarily to ensure we were documenting the volunteer's efforts and meeting the resident's needs through this program.

Pitfalls of the Technical Tutor Program

Despite our best effort to offer a clear explanation, oftentimes the resident misunderstood how a Technical Tutor would be supporting their technical needs. Residents sometimes assumed they would be meeting with the Technical Tutor in person. Some residents resisted help from a younger volunteer or a volunteer with an accent they were unfamiliar with. Other times residents were difficult to get a hold of and Technical Tutors became frustrated. This is a volunteer opportunity for someone who wants to connect with a resident one-on-one.

Volunteers Who Offer Coursework Over Zoom

The LBFE cohort of Northeastern University Co-op students and college volunteers worked closely with 2Life staff to develop a new 8-week curriculum for teaching English-speaking senior adults how to connect with one another over Zoom. Volunteers have also been teaching virtual Tech Café courses on a quarterly basis; these classes focus on more advanced technical skills and addressing the residents' technology-related questions. Volunteers who have been designing and offering coursework to 2Life residents over Zoom have made a significant contribution to making the DDLL Program a success.

Technology volunteers are an integral part of the 2Life community. 2Life seniors greatly benefit from socializing and forging connections with our volunteers.

Keeping Track of the Digital Devices

We devised a system for tracking the DDLL devices both electronically and physically.

- We created a *Campus Master Device Library Spreadsheet* that contains information about devices that were allocated to each of the participating 2Life campuses.
- When a resident checks out a device, a staff member presents him or her with a *Borrowing Agreement* in the resident's native language, which the resident is required to sign.

- To ensure that the DDLL devices do not get damaged, we provide a protective sleeve and a tote bag with each device and affix laminated labels with the device number and contact information of technical support to the device and packaging.
- The devices are stored in locked cabinets.

Program Evaluation

An overwhelming majority of 2Life residents who borrowed the DDLL devices have participated in 2Life programming and connected with their families and friends over video-conferencing platforms. We have conducted a survey with 34 seniors who borrowed a 2Life device for at least a month. Below is a summary of the survey results.

Survey Question	% of seniors who agree or strongly agree
I am able to receive support with using technology at 2Life when I need it.	96.9%
Borrowing a 2Life device has made a positive difference in terms of my independence and mastery in using technology.	88.2%
Borrowing a 2Life device has made a positive difference in terms of helping me socialize with family, friends and others.	76.4%
Borrowing a 2Life device has made a positive difference in terms of helping me socialize with the 2Life community.	73.5%
Borrowing a 2Life device has made a positive difference in terms of helping me socialize with the greater community at large.	70.5%
Borrowing a 2Life device has made a positive difference in terms of helping me access healthcare services remotely.	50%

Providing our seniors with social opportunities through technology has helped reduce social isolation and feelings of loneliness, increased resident engagement and satisfaction as well as seniors' social networks. Moreover, the Program has significantly improved seniors' mastery of technology, providing them with essential life skills and feelings of empowerment. The DDLL program has improved seniors' overall quality of life. Moreover, the program has increased staff efficiencies by enabling 2Life staff to offer residents a variety of high-quality virtual programming created by 2Life and its community partners.

Summary

Our mission has been to build a vibrant, joyous, and inclusive virtual community of 2Life older adults. The main measure of success of the DDLL project at 2Life has been providing our seniors with access to technology as a means to facilitate socializing and community-building. The DDLL project has enabled our seniors to participate in 2Life and our partners' programming, forge relationships with their peers and 2Life staff, establish intergenerational connections with members of the larger community, and stay in touch with their families and friends.

The 2Life Model for bridging the digital divide for older adults is based on creating a symbiotic relationship between technology and socialization. We have employed technology as a tool for facilitating socialization, which is crucial to seniors' emotional and physical well-being. We have created rich and varied opportunities for socializing virtually during COVID-19 and beyond. At the same time because for older adults, opportunities to socialize are the main motivation for mastering technology, 2Life seniors have felt impelled to invest their time and energy into mastering technology in order to be able to connect with their loved ones, the 2Life community, and the community at large.

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