Bridging the Digital Divide by Addressing Barriers with Digital Literacy Strategies for Older Adults

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Introduction

The COVID-19 pandemic highlighted the stark reality of the digital divide for many socially-marginalized individuals, including older adults. The digital divide, which can be defined as the disparity in access to and proficiency in digital technologies among various groups, is a pressing concern in today's digitalized world. While discussion surrounding the digital divide frequently centers on issues of internet access and digital literacy, it is crucial to recognize that this divide extends beyond connectivity and skillset issues.

Once individuals receive a device, have internet access, and learn basic digital skills, do they put this knowledge into practice? Do they continue to use the web? Do they remember most of what they have learned and perhaps gain even more new skills, particularly as technology continues to evolve? Or do they leave the device in a drawer, never to be touched again?

To truly bridge the digital divide, a sustained focus on both the development and maintenance of digital literacy skills, extending beyond the provision of initial infrastructure and training, is critical.

Within this context, Community Tech Network (CTN) explores innovative strategies to consistently develop and uphold digital literacy skills among socially-marginalized populations, placing special emphasis on older adults. This white paper seeks to uncover the challenges and barriers that older adult learners encounter in their efforts to maintain and enhance their digital competencies after completing initial digital literacy training. Through these investigations, CTN aims to illuminate effective approaches for addressing the digital divide and empowering vulnerable populations in the digital age.

Background

Home Connect Program

In today's digitally transformed society, older adults have emerged as a group which consistently faces significant challenges in obtaining the digital skills needed to confidently, safely, and independently access the internet. Yet, digital literacy proficiency is a crucial determinant of overall digital inclusion, which underscores the critical importance of providing effective digital literacy education and training programs for older adults, especially those who are low-income, disabled, and non-English-speaking.

In response to this pressing need, CTN launched 'Home Connect,' which provides personalized, one-on-one, virtual digital learning lessons for older adults in eight languages (English, Spanish, Russian, Tagalog, Korean, Vietnamese, Mandarin and Cantonese). This program was initiated in March 2020, during the height of the COVID-19 lockdown, and to date, it has successfully engaged 982 people, all aged 60 and above, residing in the City and County of San Francisco.

The Home Connect program provides a series of five, one-hour virtual training sessions in the language of the learner's choice, expertly guided by experienced instructors. Learners also receive free tablets, 45 days of internet data, and instruction booklets that provide ongoing digital support. Because the service is designed for completely unconnected learners, training modules focus on fundamental digital literacy skills, such as navigating basic features of the tablets, conducting effective internet searches, mastering email communication, understanding essential online safety practices, and utilizing the camera functions. Upon successful completion of the initial training, learners have the opportunity to continue their digital learning journey through ongoing weekly virtual Q&A sessions facilitated by instructors and dedicated volunteers in Cantonese, Mandarin, Spanish or English.

These drop-in Q&A sessions are designed to provide continuous support and enrichment, allowing older adult learners to further enhance their digital skills and explore an array of practical applications.

Digital Literacy Skill Utilization Among Senior Learners After Home Connect Training

Surveys conducted at three stages, pre-training, immediate post-training, and a six-month follow-up, revealed four intriguing patterns of digital literacy skill usage among the 274 learners who participated in the Home Connect program: (A) growing pattern, (B) initially growing-but-not sustaining pattern, (C) non-changing pattern, and (D) decreasing pattern.
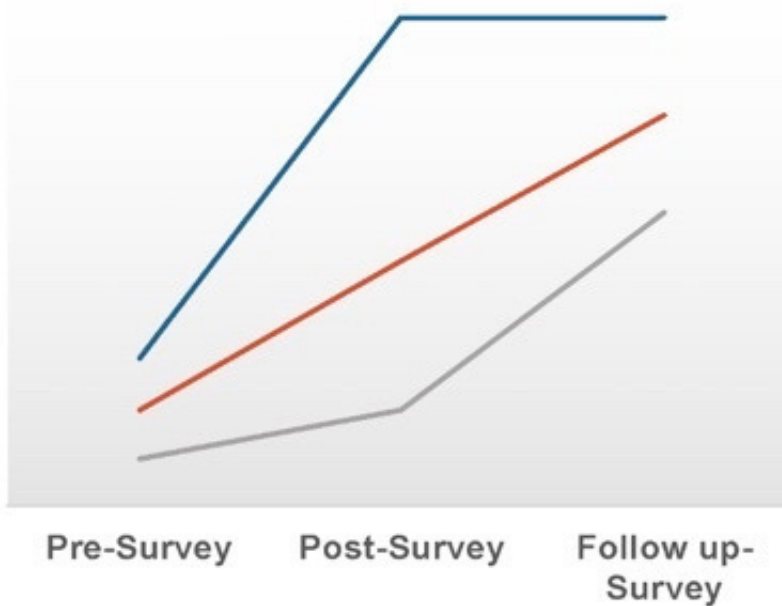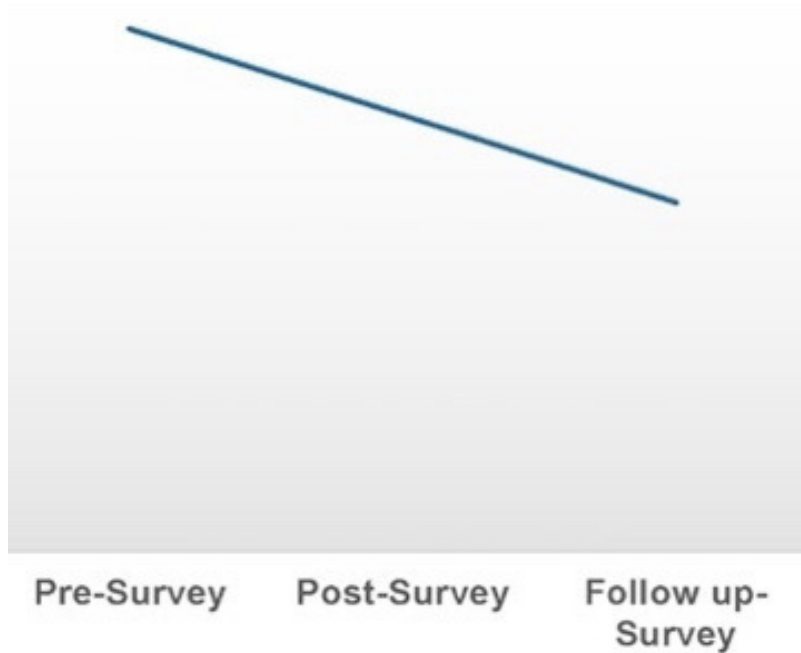

(A) Growing Pattern: This pattern consists of the participants who showed consistent improvement in their digital literacy skills throughout the training program.

Pre-Survey   Post-Survey   Follow up-Survey

Pre-Survey Post-Survey Follow up-Survey
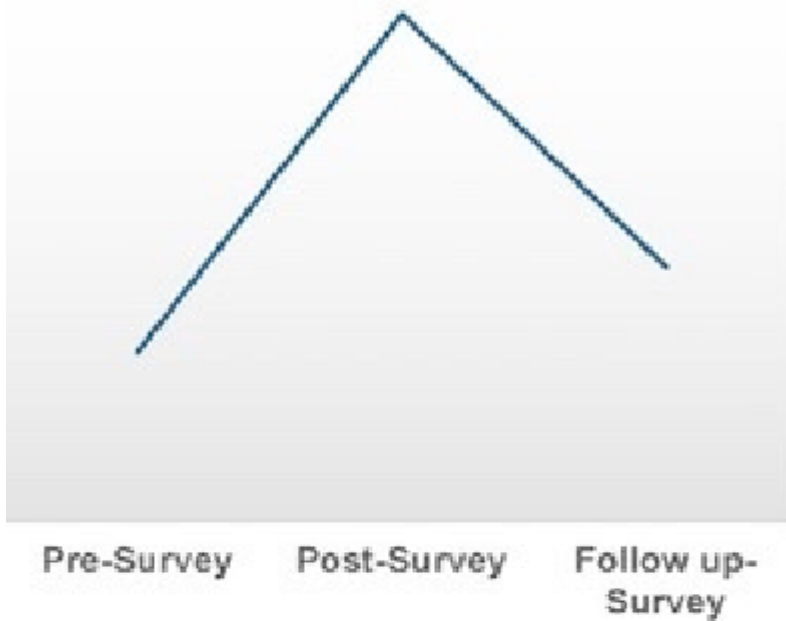
(B) Initially Growing-but-Not Sustaining Pattern: This pattern includes the participants who initially demonstrated improvement in their digital literacy skills but failed to sustain or further enhance their skills over time.

Pre-Survey Post-Survey Follow up-Survey

(C) Non-Changing Pattern: This pattern comprises participants whose digital literacy skills did not significantly improve during the training program.

(D) Decreasing Pattern: This pattern consists of participants who experienced a decline in their digital literacy skills over time.

Table 1 Digital Literacy Skill Usage Patterns of the Home Connect Learners

Patterns	N	Percent (%)
Growing Pattern	173	63.1
Initially-Growing Pattern	23	8.4
Non-Changing Pattern	42	15.3
Decreasing Pattern	35	12.8
Total	274	100.0

Notably, 63.1% of the learners fell into the category of a growing pattern. However, it was evident that some learners encountered challenges in sustaining or further developing their digital literacy skills, with certain individuals experiencing a decline in their skills over time. The question arises: What barriers hinder these learners from maintaining their digital literacy skills and continuing their digital journey?

This white paper aims to delve into precisely this question, focusing on the barriers that learners encounter as they navigate their digital literacy skills during and after their training experiences. Three CTN staff members conducted in-depth interviews with ten selected learners who did not show growth patterns in using digital literacy skills during and after the Home Connect training. CTN hopes to identify effective strategies and interventions to ensure a more inclusive digital landscape for older adults by recognizing and addressing the barriers and challenges that older adults encounter.

Barriers to Sustaining Digital Literacy Skills

Physical Challenges in Using Digital Devices

Learners disclosed persistent daily challenges from physical limitations in their use of digital devices. In particular, memory issues emerged as their most significant hurdle. They struggle to retain and apply previously-learned digital skills, seeking resources and strategies to support their continued use of digital devices.

"I don't even remember how to turn on/off my device. I always ask my son for help."

"I like to learn new things when I have time. I know how to buy things online, play games, look things up on the internet. But the biggest issue is my poor memory. I always forget things that I learned. Need to write them down."

Technical Troubles in Using Digital Devices

Learners encounter consistent technical issues when using their digital devices. Even though they remember how to use the devices, they experience frustration when unexpected technical challenges arise.

"Sometimes the Home Button on the touch screen disappears"

"I can use the device to watch YouTube and play games. But perhaps due to unstable Wi-Fi, the connection drops quite often. It's rather frustrating sometimes."

Rapidly Changing and Updating Systems

Learners face challenges in keeping up with the rapidly-changing and updated information on their digital devices. Digital devices frequently demand system updates and change interfaces. Unless users update the systems, the software may slow down or experience functionality issues. Furthermore, older devices may not be compatible with the newly updated software. Due to lack of skills in adapting to changing systems, older adults continually face this ongoing issue to use their digital devices actively.

"There are system updates and I sometimes get confused."

"The device is getting slow and the battery goes very quickly."

"Sometimes it's very slow. I want to play the mahjong game but it is so slow that I cannot play."

No One Who Helps Them When Facing Challenges

Lack of available ongoing technical assistance for the learners is the final barrier in their utilization of digital literacy skills. Without a trusted advisor, they restrict themselves to familiar features and refrain from exploring new functions.

"I don't have questions because I only use it for what I know. There's no one to ask."

Some individuals proactively seek out resources, information, and assistance independently, managing to overcome their challenges and maintain consistent usage of their digital devices. This process has its challenges, too, including requiring older adults to establish and confirm schedules for receiving help.

"I try to troubleshoot the problems myself first, google about it. If I cannot find a solution by myself, I ask CTN during Q&A, or go to the community center to ask the volunteers, or staff at the library. I need to make an appointment with the case managers at the community center if I want to get help from them because they are not always in their office."

A learner actively participates in CTN's virtual Q&A session for ongoing digital literacy learning.

"I attend CTN's Q&A sessions on Zoom. But I probably need more one-on-one help. I cannot articulate my questions well so sometimes it's hard for the instructors to answer my questions in the Q&A. I enjoy the Q&As because I can listen to other people's questions and get the answers. I still learn a lot that way."

As a learning community, CTN's virtual Q&A sessions help the participants feel connected with others, gain resources, and develop their digital literacy skills.

Conclusion

This white paper delves into the barriers faced by older adult learners in developing and maintaining their digital literacy skills. Older adult learners grapple with difficulties stemming from memory challenges associated with aging, which hinder their ability to effectively utilize digital devices. Even after successfully completing lessons, many learners struggle to retain the knowledge acquired during these sessions, prompting them to seek additional resources and strategies to support their ongoing use of digital devices. Additionally, they encounter significant obstacles when attempting to address technical issues with their digital devices. The rapid pace of technological change, marked by frequent system updates, often leaves older adult learners feeling overwhelmed and frustrated. Insufficient access to essential resources, information, and assistance worsens the challenges faced by older adult learners in maintaining their digital literacy skills. It is critical that learners receive ongoing and repetitive support in their pursuit of digital skills.

In today's digital society, the digital divide is not solely a consequence of inadequate material resources, such as limited broadband access and insufficient digital literacy education. It is also a byproduct of the lack of interpersonal assistance, relevant resources, and pertinent information. This deficit exacerbates the difficulties older adult learners encounter in utilizing and preserving their digital skills.

Consistent support and access to appropriate resources are important for learners to develop their learning and proficiency. Better support for older adult learners will help enhance and maintain emerging digital literacy skills. CTN's Q&A sessions are an exemplary model of this ongoing support by facilitating learners' continuous learning and utilization of digital devices. By providing places to interact and connect with others, learners can consistently improve their digital literacy skills.

In summary, addressing the challenges faced by older adult learners in the digital age necessitates a comprehensive approach that combines ongoing support, relevant resources, and opportunities for connection and continuous learning.

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