

12-2023

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## Tech Support Workshops for Seniors: Bridging the Digital Divide

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November 19, 2023

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## **Abstract**

Unequal access to technology for seniors makes already-existing inequalities worse by preventing seniors from taking advantage of opportunities. A key element of Loaves, Fishes & Computers program is the digital literacy department, which assists seniors in overcoming any technological barriers. Seniors can get one-on-one help with any questions they may have about any technology device they possess. Additionally, they collaborate with other organizations to offer tools that might support the well-being of elders. For example, low-cost wifi resources. By offering workshops tailored to the needs of seniors, my project aims to contribute to ending the digital divide. I researched various subjects that would be beneficial and interesting. Since artificial intelligence is still relatively new, we created a presentation on it. The purpose of this workshop was to provide knowledge that participants could use to overcome any challenges and improve their daily lives. It is recommended that the organization keeps developing workshops that assist with everyday problems.

*Keywords:* Seniors, inequalities, barriers, digital divide, technology

## **Agency & Communities Served**

Loaves, Fishes & Computers is a non-profit organization whose stated mission is “ ... ensuring that low-income families have access to computers and computer literacy classes. By providing both hardware and software support, we are working to bridge the digital divide and empower underserved communities” (LFC, 2023). They accomplish this by offering computer literacy programs, computers at low cost, and repair services to those who are low-income, elderly, or disabled. According to an LFC report, since 2009, they have provided services to over 50,000 individuals and families since 2009. A total of 14,000 devices were given away, 2,000 people and kids received lessons, and 400 seniors were assisted (Lfc, n.d.).

## **Problem Model Background and Literature Review**

### **Problem Statement**

Many senior citizens face significant difficulties when using technology. Their lack of familiarity with digital devices and platforms is one of their main problems. As the older population grows, so does the importance of addressing their technological needs and concerns. As technology advances at such a rapid rate, the older population finds it more difficult to keep up with the pace. It is often believed that elderly individuals find new technologies uncomfortable and are less willing to use technology than younger people. According to a 2015 Pew Research Center survey, 48% of those aged 65 and older reported that the statement “ When I get a new electronic device, I usually need someone else to set it up or show me how to use it,” describes them very well. Compared to those who are 18- 29 years of age only 6% reported that the statement described them very well (Anderson & Perrin, 2017). As we can see, one of the major issues that older individuals have with technology is that many of them require help from

others to set up new devices. This is frequently due to a lack of comfort or familiarity with technology.

As we know Covid-19 was a global pandemic that had a major impact on the lives of everyone. It especially had an effect on the health and well-being of elderly individuals. During this pandemic, social distancing was put in place forcing many families to distance themselves while making digital engagement necessary. During the corona virus outbreak, the Pew Research surveyed American individuals to find out if they had used video calls to communicate with others during the pandemic. According to the survey, “about a quarter of adults ages 18 to 49 (27%) say they have connected with others on video calls about once a day or more often, compared with 16% of those 50 to 64 and just 7% of those 65 and older” (Mcclain et al., 2021). As it can be seen, the percentage of people over 65 is significantly lower than that of other age groups. As a result of being unable to communicate with friends or relatives, many senior citizens became isolated.

### **Contributing Factors**

#### **Technology changes at a fast rate**

There are many challenges that often stem from a combination of physical, cognitive, and psychological factors. The first factor is that technology is changing at a rapid pace, making it difficult for the older population to keep up and understand it. There was a study conducted by different researchers to better understand the technological challenges faced by elderly people. The study gathered 18 adults who had never used a tablet, ranging in age from 65 to 76 years. Participants in the survey indicated that one of their worries about technology was that it was very complex. One of the participants said,

Is there a very simple tablet, where you can just say I only want my tablet to do that, that and that? I don't want a million opportunities flashing up every time I touch something. It's trying to sell me something I don't want. I just want to be able to do ABCD. (Vaportizis, et al., 2017)

Having too much on a device can be overwhelming at times, discouraging beginners from continuing to learn. Additionally, older people may find it exceedingly challenging to comprehend new terms, which makes using new technology more challenging. At a nearby senior community in San Diego, California, two focus groups were organized to discuss the participants' obstacles to adoption of technology. One of the participants mentioned, “Trying to hook a printer up to my laptop—they said to put in the IPP [sic IP] address. Uhh, I can’t find it... you know, and things like that, I don’t know what they are talking about.” (Wang, et al., 2019). This is only one of many examples of how older people struggle to understand technology.

### **Lack of confidence**

The fact that many older persons lack confidence in their capacity to understand and effectively use technology is one of the obstacles they face. According to a Pew Research Survey, only 26% of internet users who are 65 and older feel confident using electronic devices, compared to 74 % of internet users who are between 18-29 years feel very comfortable using technology (Anderson & Perrin, 2017). This may be due to the lack of familiarity or past experiences that have made them apprehensive. In the European Union (EU), 87 percent of adults 75 and older have never used the internet, according to Eurostat's 2018 data. This is because many seniors weren't exposed to technology as a regular part of their lives. When they were younger, they might not have had the chance to learn about and gain confidence with digital tools and applications. Another possibility is a fear of the unknown. Those who are new with

technology may find it to be daunting and confusing. The fear of making mistakes, breaking gadgets, or not knowing how to use them can make them less confident.

### **Memory and cognition gets worse with age**

As people age, various changes in memory processes can impact their capacity to acquire and retain new information. According to the Alzheimer Society, “Almost 40% of us will experience some form of memory loss after we turn 65 years old” (Alzheimer Society, n.d.). The majority of persons who have memory loss as they age struggle to recall specifics, words, or information from conversations that took place a year ago. While others suffer from dementia which makes it more difficult to learn new things or complete tasks they are not familiar with. Now learning new technological skills—or even mastering them—can be more difficult for people with conditions like dementia or Alzheimer's. Especially if they have had little to no technology exposure. Additionally, both dementia and Alzheimers make it harder for seniors to even remember how to use technology they have already mastered (Sometimes Interesting, n.d.). This makes it more complicated for seniors to continue learning new skills.

## **Consequences**

### **Isolation**

Seniors frequently experience social isolation and loneliness. It is crucial to suggest alternative solutions in order to reduce the negative effects of social isolation on the elderly. One method to help reduce loneliness would be to help seniors get more comfortable using their devices which can help older adults interact with other adults by participating in social media, use the internet to find information, or even using it to make video calls with friends or family members. A US Health and Retirement Study conducted in 2016, reported “Among rural older adults, those who use social technology less frequently experience greater loneliness than urban

older adults” (Chen, et al., 2023) The use of smartphones, tablets, and computers, enables seniors to communicate with family and friends, even if they are physically distant. This helps individuals stay in touch with loved ones and maintain social connections, reducing the risk of social isolation. According to the American Association of Retired Persons, “Older Americans most often sign on to social networks on smartphones (55%), followed by computers (47%) and tablets (41%). (AARP, 2020) They use these devices to connect with their friends and relatives. Also using social media sites like Facebook can assist seniors in connecting with communities where they may interact with others and share interests with other elders.

### **Limits access to resources and opportunities**

“Older adults without a high school diploma, who make under \$25,000 a year, and/or who are Black or Latine are more likely to be offline”, according to empower life (2022). This is just some evidence of the digital divide between different generations. In today's society if someone does not have access to the internet then they are missing out on a lot. For instance, social networks are frequently used nowadays to connect with family or support groups and maintain relationships. Additionally, many medical practices and government agencies are converting to virtual or remote since Covid. Access to these vital resources may be difficult for seniors who require health assistance. Seniors may face various challenges when it comes to using telehealth services. While telehealth can offer numerous benefits, it's important to address these issues to ensure that seniors can access and utilize healthcare services effectively. Limited technology access is one of the biggest challenges seniors may encounter with telehealth services. After the pandemic struck, SCAN Health Plan, a Medicare Advantage plan with 215,000 members in California, conducted a survey of its and found that around one-third lacked access to the technology required for a telemedicine session (Graham, 2020). Many seniors may

not have access to smartphones, tablets, or computers, to participate in telehealth appointments. They may also lack reliable internet connectivity, which can complicate their ability to use video conferencing platforms. Making it harder to have access to different services.

### **Exposed to online threats**

Exposure to online threats and technology can be a concern for individuals of all ages, including seniors. “About 63% of adults age 50 and older in the United States experience at least one form of cyber abuse in their lifetime” (NORC, n.d.). Seniors may be particularly more vulnerable to online threats due to limited experience with technology and potential cognitive decline. One of the most common types of threat among the senior population is financial threats. 37% of older adults who have experienced cyber abuse say they have experienced financial threats (NORC, n.d.). Seniors are frequently the victim of scams and phishing attempts, where cybercriminals try to acquire personal and financial information through email, phone calls, or false websites. According to data from the USA Today, the average loss for victims in their 20s was \$324, but this amount rises to \$426 for those in their 60s, \$635 for those in their 70s, and \$1,300 for those in their 80s (Saltzman, 2022). It's alarming to see how the amount increases as older individuals age, which is why it's so important to teach seniors how to safeguard their personal information, conduct safe internet transactions, and adhere to other crucial safety precautions when using technology.

Contributing Factors	Problem	Consequences
Technology changes at a fast rate	Senior citizens struggle with new technology	Isolation
Lack of confidence		Limits access to resources and opportunities
Memory and cognition gets worse with age		Exposed to online threats

### Project Description

**Working Title:** Tech Support Workshops for Seniors: Bridging the Digital Divide

#### Project Description

A workshop on “Artificial Intelligence” will be conducted where it introduces participants to the basics of Ai. For instance, how it works or ways it can be incorporated into their daily lives. It is crucial to discuss the advantages and disadvantages of artificial intelligence to be better educated on this topic. Additionally, to gain a deeper understanding of AI, participants will have the chance to get hands-on with different applications.

#### Project Justification

The aim of the initiative is to create an inclusive atmosphere by assisting the senior population in becoming more comfortable with technology. Given that "artificial intelligence" is a relatively new concept and can provide seniors useful capabilities, teaching them about it can be quite beneficial. For example, elderly can check their health with the use of AI programs for health monitoring and support. These applications can assist with dosage monitoring and drug reminders. Additionally, artificial intelligence (AI) apps like brain games and cognitive training

programs might assist seniors retain their intellectual capacity and possibly lower their risk of cognitive decline. By utilizing artificial intelligence (AI) technology, it is possible to solve the unique needs and difficulties that older people have, encouraging their independence, general health, and well-being as they age.

### **Benefits**

This project will help provide tools that can help seniors stay connected and have access to more opportunities. As well, as improve their social wellness, help individuals feel more comfortable with technology, and encourage others to join.

### **Implementation Process**

In order to promote a more inclusive environment, this project entails a workshop where seniors will be taught different subjects they might find interesting or helpful. For instance, an informative presentation on Artificial Intelligence will be created to keep seniors connected with society. The purpose of this project is also to get seniors engaged with utilizing technology and to make them feel more comfortable with it. With the assistance of my mentor and the digital literacy team, I will complete this project. For instance, I'll talk to my mentor and the digital literacy team about some of the technological issues that seniors are more likely to face. Then I would create the pre- and post-questionnaire for the workshop. The purpose of this questionnaire is to get an idea of how familiar the participants are with AI and then evaluate how effective the presentation was on introducing them to AI and getting them more comfortable with this new type of technology. Overall, the goal of this project is to reduce digital disparities among elders.

### **Assessment Plan & Expected Outcomes**

The workshop will be attended by about ten participants. Each participant will get a pre- and post-questionnaire for the project's assessment component. Basic questions will be asked in the

pre-questionnaire to evaluate the respondent's level of knowledge with the subject. After the workshop is over, a post-questionnaire will be given in order to evaluate how effective the training was overall and indicate any areas that need improvement. After the session, the objective is to have at least 70% of the participants report some improvement.

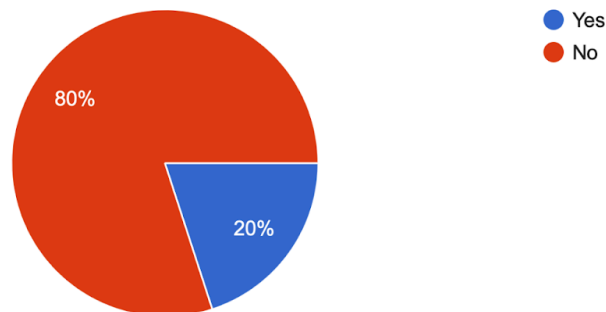
### **Project Results**

As a result of the project, it was expected that after the workshop about 70% of the participants became more familiar with artificial intelligence and felt more comfortable with this type of technology. To assess the effectiveness of the workshop, a pre- and post-questionnaire was developed. One of the questions of the pre-questionnaire was about the familiarity each participant had with the term "Artificial Intelligence". Approximately 80% of participants indicated that they were unfamiliar by answering "no" and 20% answered "yes".

After the workshop was conducted, one of the questions asked was asking participants to rate on a scale from 1 to 5, how familiar did they feel with understanding the basics of "artificial intelligence". About 70% of the participants responded with "somewhat comfortable" compared to 10% who responded with "not very comfortable". The survey findings indicate that the workshop was beneficial in increasing people's familiarity with artificial intelligence. Also demonstrated a greater level of understanding regarding the basics and potential uses of artificial intelligence. By the end of the study, most of the participants felt they got more familiarized with this term.

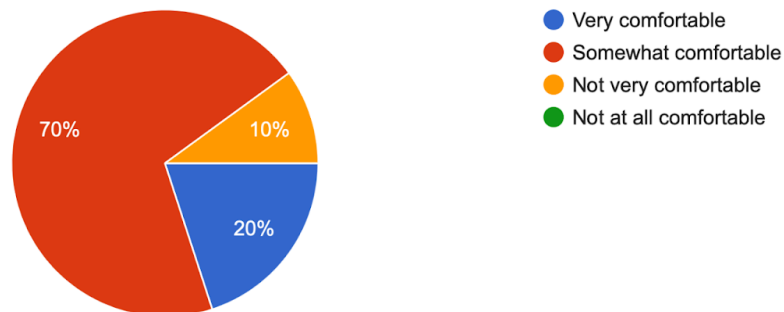
Are you familiar with the term "Artificial Intelligence"?

10 responses



On a scale of 1 to 5, how confident do you feel about your understanding of the basics of artificial intelligence?

10 responses



## Conclusion & Recommendations

In conclusion, this project's aim was to reduce digital disparities among the senior population. A few of the main obstacles seniors encounter when using technology include the rapid changes in technology, their lack of confidence, and the difficulties of picking up new skills because their memory and cognitive abilities deteriorate with age. In an era where technology plays a significant role, having an artificial intelligence workshop was useful in promoting digital

inclusion and making sure seniors are informed and not left behind. It facilitates seniors' easier access to resources and information and can offer cognitive stimulation to keep them mentally engaged. Based on the findings, the organization should continue informing and updating seniors about new technology, in order to maintain an inclusive environment. Educating the elderly population about AI is a step toward establishing an inclusive and encouraging environment that recognizes the potential and important contributions that seniors can contribute in today's technological world.

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## Appendix A

<b>Task</b>	<b>Timeline</b>	<b>Parties Involved</b>	<b>Deliverables</b>
Shadow mentor/digital literacy team with appointments they have seniors	By October, 2023	Mentor, Seniors, Digital Literacy Team	Notes
Discuss with mentor possible topics for the workshop	By October, 2023	Mentor	Notes
Began an outline for possible presentations	By October 17, 2023	Mentor	Presentation outline
Begin researching topic and create presentation	By October 19, 2023	Mentor	Presentation slides
Create an agenda	By October 24, 2023	Mentor	Checklist
Create pre-questionnaire	By October 26, 2023	Mentor/Digital Literacy Team	Pre-questionnaire form
Create post questionnaire	By October 31, 2023	Mentor/ Digital Literacy Team	Post-questionnaire form
Conduct Workshop	By November 14 , 2023	Mentor	Survey

## **Appendix B**

### **Pre-questionnaire**

[https://docs.google.com/forms/d/e/1FAIpQLSexwYZjnuWhnXP4fOYg\\_cbA8916VxtXnA\\_GuWJliBFDPL-30g/viewform?usp=pp\\_url](https://docs.google.com/forms/d/e/1FAIpQLSexwYZjnuWhnXP4fOYg_cbA8916VxtXnA_GuWJliBFDPL-30g/viewform?usp=pp_url)

### **Post-questionnaire**

[https://docs.google.com/forms/d/e/1FAIpQLSebjfoj digo-XRVXTyjdBuYQxnbEYx7TVdAUmiJJGhV2SQoTw/viewform?usp=pp\\_url](https://docs.google.com/forms/d/e/1FAIpQLSebjfoj digo-XRVXTyjdBuYQxnbEYx7TVdAUmiJJGhV2SQoTw/viewform?usp=pp_url)