SMART TABLET EDUCATION FOR HEALTHY LIVING (STEHL) FOR OLDER ADULTS

STEHL - Train the Trainer's Toolkit

Smart Tablet for Healthy Living (STEHL) Toolkit is designed to walk you through the learning needs of older adults as they learn to use smart tablets.

Goal: The overarching goal of this project is to ensure older adults have a basic comfort level with tablet technology and provide an opportunity for learners to access health information from reliable sources.

Objectives:

1. Enable STEHL trainers to learn about older adults' learning style.
2. Identify approaches that will help teach older adults to use smart tablets to access reliable online health information.

For whom

The STEHL Toolkit is a training program that includes a collection of evidence-based, adaptable resources to teach knowledge and skills needed to train older adults in the use of tablet technology to obtain reliable health information online. The ideal trainers will have qualifications and experience in healthcare, education in gerontology and aging, or be a professional working with older adults in a community setting, retirement homes, assisted living facilities, universities, and hospitals.

Purpose

This toolkit provides information and practical guidance to facilitate older adults to use digital technology in the community. It will help them plan, deliver, and evaluate their own learning programs.

How to use

The toolkit is intended to be adaptable, based on the setting and comfort level of older adults. The sections of the toolkit can be used to support existing learning programs or activities based on local or individual needs. The content will include three workshops. Each workshop has aims, activities, lesson plans, and references with links to supporting material on an established website created for this program. Although it is recommended that the three workshops are delivered as separate sessions, they can be combined into two one-day workshops or three half day workshops, preferably held within two weeks. Each section is supported by a short online module that can be found on the STEHL website under the Resources tab.

Targeted audience

The training is targeted to professionals who are involved in facilitating learning for older adults in the community with knowledge and skills in the area of health in aging and gerontology. For example:

- Allied health professionals
- Nurses
- Knowledge services staff
- Administrative and clerical staff

- Support workers
- Rehabilitation staff

The STEHL Toolkit is divided into the following sections:

1. Introduction to the STEHL project
2. The STEHL Handbook
3. The STEHL website
4. Lesson plans for workshop sessions
5. Resources
6. Conducting workshop – tips and tricks
7. Evidence-Based Learning Methods for older adults
8. Managing challenging behaviors in groups
9. Evaluation of training
10. Collection of authoritative and adaptable resources
11. STEHL training modules (optional)

1. Introduction to the STEHL project

The Smart Tablet Education for Healthy Living" (STEHL) project was created to provide educational materials and web space to improve digital literacy in older adults so they can have access to reliable online health information. We envision that this project will highlight the importance of including underrepresented communities to be active participants in their own health and improve their quality of life and wellbeing.

2. The **STEHL Handbook**

The primary purpose of the STEHL handbook is to use this as a step-by-step resource guide. A printed copy of the handbook should be provided to participants so they can have it with them through the workshops and after. They can also take notes in the space provided in the handbook, and their questions can be answered in the subsequent workshops and also be considered for future additions to the handbook. A PDF version of the handbook is also available on the STEHL website (https://www.niu.edu/stehl/).

The handbook and appendix with screenshots include the following content:

How to
- Start
- Charge the smart tablet
- Change settings
- Create password
- Connect to Wi-Fi
- Access the internet
- Access email
- Take a photo
- Access MedlinePlus for health information
- Access resources from National Institute on Aging (NIA)
- Search for health information pertaining to older adults
- Download applications (apps)
- Play games that help to improve health
- Connect with peers using health apps to improve health

3. **The STEHL website:** https://www.niu.edu/stehl/

The STEHL website is registered within the Northern Illinois University (NIU) domain and was created with the assistance of the web developer and health science librarian at Northern Illinois University. All materials (handbook, links to health-related resources such as MedlinePlus, National Institute on Aging, and marketing materials for workshops) and additional resources to support healthy living in older adults are available. During the initial training session, adding the website as an app to the home screen and as a bookmark will make it easier for the learners to access the website. As the participants get more comfortable with using the tablet, they are taught how to access the handbook from the STEHL website.

4. **Lesson plan for workshop sessions**

Objectives for 3 workshops

Upon completion of the 3 workshops, older adults will be able to

1. Understand basic structure and functions of the smart tablet.
2. Know how to hold, manage, and use the smart tablet.
3. Understand how to access the internet and reliable health information using the smart tablet.
4. Build on prior knowledge and introduce new key points to gain access to health-related information.

Participants who are interested in the workshops will be first evaluated on their current knowledge of using a smart tablet by providing them with a pre-workshop assessment activity (Appendix 1) which will assess their level of knowledge as novice, intermediate or proficient. If they are able to pass the activity at a proficient level, they might be given a choice to participate as an observer or as a tutor to other participants. Tutors and observers may provide additional training support and reduce user frustration.

Workshop session 1 – 60 min to 90 min.

Aims

1. Introduce the concept of a smart tablet.
2. Discuss the importance of digital training for older adults for healthy living.
3. Highlight the ways older adults can use smart tablets on a daily basis.
4. Discuss barriers and challenges and provide resources to address these as needed.

Activities

1. Provide a brief overview of the smart tablet.
2. Discussion and group activity
   o Introduce concepts related to the importance of learning to use digital media Participants will divide into groups and brainstorm different possible uses of smart tablets.

      ○ Individuals share concerns/fears of using digital technology. Each group shares one or two of their concerns/fears with the entire class (if they feel comfortable). Remember and remind them that technology can be intimidating for everyone.

Recommended session plan

Start with the pre-survey. Give a smart tablet and printed handbook to each participant. Explain the use of the handbook. Teach the basic skills. Before moving on to a new skill, reinforce learning of the previous skill(s). Refer to the handbook as a physical and visual aid to reinforce the skill. When helping a specific individual, use the handbook as a guide to show how to do the task step-by-step.

- Switch on the smart tablet
- Switch off the smart tablet
- Charge the tablet
- Go to the home screen
- Go to settings
- Set password
- Switch on Wi-Fi

Allow extra time to practice with the device and customize the settings to their needs. If there are difficulties with vision or touching the tablet, introduce the stylus or magnifying eyewear to facilitate usage. When the session is complete, administer the post-surveys.

Workshop session 2 – 60 min to 90 min.

Aims

1. Understand basic functions needed to operate a tablet.
2. Understand how to access the STEHL handbook and website.
3. Address any frustrations or challenges and clarify any questions.

Activities

1. Discuss the STEHL project in general.
2. Gauge learners' experience and skills using applications (apps).
3. Discuss benefits of apps.
4. Train users to browse the Internet, read online news, check email, listen to music, access banking sites, shop online, play games, and send messages.

Recommended session plan
After the pre-survey is completed, review the skills learned before. Allow 30 minutes for this review. Then proceed with the handbook. Allow time and anticipate frustration. Provide additional assistance when teaching the participants how to type the URL. Teach the following basic skills:

- Access Wi-Fi.
- Connect to public Wi-Fi.
- Connect online and use the Internet.
- Use Google search engine.

- Visit the NIU website.
- Access the STEHL handbook.
- Access reliable health information through NIU website.

Reinforce previously learned skills before introducing a new skill. For each new skill, refer to the handbook as a physical and visual aid. When helping a specific individual, use the handbook as a guide to show how to do the task step by step.

Provide extra time to practice with the device and customize the settings to better suit their needs. If they have issues with vision or touching the tablet, use the stylus or magnifying eyewear to help make it easier to use the tablets. When the session is complete, administer post-surveys.

Workshop session 3 – 60 min to 90 min.

Aims

1. Discuss benefits of learning to access the Internet.
2. Understand how to use apps.
3. Discuss how to manage apps.
4. Discuss any frustrations and challenges and clarify any questions.

Activities
1. Provide an overview of STEHL handbook.
2. Introduce the STEHL webpage.
3. Lead a group on discussion on factors that might affect their ability to learn how to use the handbook and webpage.
4. Individually gather thoughts on how smart tablets can benefit older adults daily. Discuss factors that might affect their ability using a tablet.

Recommended session plan
After the pre-surveys are completed, instruct the participants to turn on the tablet to access the resources on the STEHL website. Let them use the handbook or help each other with the goal to understand how to use resources on the website during the last 30 minutes of the workshop. Then teach about apps, installing, deleting, downloading, and safety. Allow time, anticipate frustration, and offer extra assistance by reinforcing and reteaching as needed. During each new skill, refer to the handbook as a physical and visual aid. When helping a specific individual, use the handbook as a guide to show how to do the task step by step.

Allow extra time to practice with the device settings and customize the settings to better suit their needs. If they have issues with vision or touching the tablet, encourage use of the stylus or magnifying eyewear to help make it easier to use the tablets. At the end, complete post-surveys and all other surveys with participants to get their input on the workshops.

5. Resources

- Training personnel – (team including lead, librarian, community staff) to take the lead; at minimum, one person to take the lead.

- Student / qualified assistants' workers to implement the training (undergrad and grad students) who have interest, passion, good communication skills, and familiarity and comfort with technology.
- Smart tablets for each participant to use and one for the trainer during sessions.
   Note: Provide tablets for check out and practice after workshops.
- Stylus for each smart tablet.
- Magnifying glasses/ visual assistive devices.
- Internet access/Wi-Fi.

Cost

- Personnel time
- Smart tablets
- Stylus for each smart tablet
- Space rental/use to conduct the workshops
- Cost for online training modules

Time for personnel

- Thirty minutes to prep for the workshops by printing out all the pre- and post-surveys and any consents.
- Schedule 2.5-3 hours to give time for instructions, to do the surveys, and allow extra time for each task.
- Plan 10-15 minutes after each workshop cleaning up and organizing all the surveys by each unique number given to each participant.
- To search for and purchase smart tablets.
- Coordination time spent with facilities and participants.

Space to conduct the workshops.

- Space to hold the workshop, necessary bandwidth/internet access, with required furniture/seating.
- Suggested spaces:
   o Assisted living facilities, public library in a conference room, any large public space that would be accessible to the population.

6. Conducting workshop – tips and tricks

Before pre-workshop

- Encourage older learners to bring a younger family member to decrease anxiety and increase confidence and willingness to learn.
- If possible, plan to have a tutorial or video and plan to ask questions to promote engagement.
- Some participants only use technology to play games, but never use it to get health information.

During pre-workshop

- Begin by explaining how technology has evolved and is becoming more common in everyday life.
- Discuss how accessing medical information online has been more difficult because of the fake/ inaccurate information.

- Enable users to learn about older adults' learning methods based on evidence.
- Provide written instructions from previous workshops.

During each workshop

- Be patient as older adults may need a longer time to become familiar with new information.
- Refrain from being critical but provide constructive feedback and lots of encouragement.
- If a person is struggling, assist them early on and allow time to practice the skill.
- Remember to be mindful of the participant's hearing or visual challenges.
- Allow extra time if needed to perform each task and offer help to those requiring extra assistance.
- Include discussion groups to share experiences and feedback.

7. Evidence-Based Learning Methods for older adults

Getting to know older adult learners is the first step to success in the STEHL program. Adults respond best to learning experiences that meet certain needs. Researchers have identified several conditions that meet those needs and play a role in successful adult learning. Some key points are listed here based on the current literature.

- Older adults are motivated with encouragement.
- Collaborative learning is helpful.
  - Engagement: Group discussions help older adults retain information and promote participation.
    - Use online quizzes, games, tutorials, chats, etc., as interactive lessons.
    - Gameplay keeps learners engaged and focused as well as helps them build self-confidence. This motivates them to further enhance their knowledge.
      - Gameplay is effective for learners with dementia.
  - Participation: stimulates creativity and encourages older adults to share their experiences.
    - Older adults are experience-based learners. Sharing experiences helps them reflect and learn from their experiences as well as those of their peers.
    - Preferred method: online content sharing on an online learning platform (ex: discussion group.
  - Cooperative learning: community groups boost motivation. Feeling linked to each other is important for adult learners.
    - An effective learning method is gameplay.
    - Cooperative & collaborative learning also helps learners with dementia retain information and exchange knowledge.
  - Intergenerational learning: young adult mentors can help answer questions.
    - Promotes confidence and eases anxiety.
    - Family and grandchildren' assistance helps to ease anxiety and increases motivation to learn.
- An informal learning setting promotes independence and confidence.
  - Experience-based learning: learners share experience and learn from each other's mistakes.
    - Intergenerational + online learning platform (chat group)

- o Flexible learning design because older adults need more time to become familiar with the information.
- Teaching aids
  - o Audiovisual: videos should have large text and clear images; videoconferences allow live communication!
  - o Reading: Use simple graphics, pictorial handouts, bold characters, and colors. Avoid excessive graphics. Best practices (or Tips) include:
    - ▪ Keep everything concise. Use as little text as possible.
    - ▪ Avoid irrelevant content (distracts older adults).
    - ▪ Include game-based aids (ex: Kahoot)
    - ▪ Maintain positive experiences, which lead to faster digital skills adoption and increased confidence.
    - ▪ Offer helpful to keep players engaged.
  - o Effective in learners with dementia
- Repetition! (effective in learners with dementia)
  - o Functions as memory aids, method = online games.
- Feedback –active learning environment and experience-based learning approach
  - o Older adults do not like to be graded by the instructor.
  - o Learners prefer online quizzes and games.
    - ▪ Help identify weaknesses and improve confidence.

APPENDICES

1. Sample Flyer
2. STEHL Pre-workshop Assessment
3. Workshop Agenda sessions 1-3
4. Pre-post evaluations for workshop session 1-3
5. Evaluation of STEHL program, handbook and webpage
6. STEHL Workshop participant survey
7. STEHL Handbook

Appendix 1
Sample Flyer

DIGITAL Health and Bingo- Free Snacks and Raffles

Do you want to learn about healthy living in the digital era?

Please join us for the Smart Tablet for Healthy Living (STEHL) Program

Date and Time_____

A raffle will be available where you will be entered to win a gift for those who attend the session.

Popcorn, cookies, candies, and other delicious snacks will be provided for all attendees!

Asking questions can earn you more raffle tickets, which will increase your chances of winning a prize!

Appendix 2

STEHL Pre- workshop Assessment

On a scale of 1 to 5 with 5 being the highest, how comfortable are you with the following activities on your smart tablet.

		1	2	3	4	5
1	Start the smart tablet					
2	Charge the smart tablet					
3	Change settings in the smart tablet					
4	Create password					
5	Connect to Wi-Fi					
6	Access the Internet					
7	Access emails					
8	Take a photo					
9	Access Medline Plus for health information					
10	Access resources on National Institute for Aging					
11	Search for health information pertaining to older adults					
12	Download apps					
13	Play games that help to improve health					

Appendix 3

STEHL - Workshop Agenda

Learning Goal(s)	Details of activities	Time
Workshop session 1 – Introduction and Basics 1. Introduce the concept of Smart tablet 2. Discuss the importance of digital training for older adults 3. Clarify the ways in which older adults can use smart tablets daily 4. Discuss barriers and challenges and provide resources to address these	 1. Provide a brief overview of the smart tablet. 2. Discussion and group activity that brings concepts related to the importance of learning to use digital media. 3. Individuals gather thoughts on how smart tablets can benefit older adults on a daily basis. 4. Group discussion on factors that might affect their ability to learn how to use a Tablet.	Pre-survey – 5 min 10 min 10-15 min 10 - 15 min 10 – 20 min Post-survey – 5 min.
Workshop session 2 – Basics and STEHL access 1. Understand basic functions needed to operate a tablet 2. Understand how to access the STEHL handbook and webpage 3. Discuss any frustrations and challenges and clarify any questions	 1. Provide an overview of STEHL handbook. 2. Introducing the STEHL webpage. 3. Group discussion on factors that might affect their ability to learn how to use the handbook and webpage.	Pre-survey – 5 min 10- 20 min 20 - 25 min 20 - 25 min Post-survey – 5 min.

Workshop session 3 – STEHL access and Health		Pre-survey – 5 min
1. Discuss knowledge of being able to access the Internet	1. Discuss about if they have used the Internet in the past and if they have Wi-Fi at retirement home.	10-20 min
2. Understand how to use apps	2. Gauge learners' experience and skills using apps.	10 min
3. Discuss how to manage apps	3. Discuss benefits of apps.	15 min
4. Discuss any frustrations and challenges and clarify any questions	4. Provide firsthand experience browsing the Internet, reading the news, checking emails, listening to music, banking, shopping online, playing games and sending messages.	10 min
		Post-survey – 5 min.

Appendix 4

Workshop Session 1 – Pre-test

Please answer the following questions to your best ability.

	Yes 1	Neutral 2	No 3
I can turn on and turn off the smart tablet.			
I can charge my tablet.			
I know the home screen and it's use			
I can go to settings.			
I can set password for the smart tablet.			
I can switch on Wi-Fi.			
I know where the camera is located.			

Workshop Session 1 – Post-test

Please answer the following questions to your best ability.

	Yes 1	Neutral 2	No 3
I can turn and turn off the smart tablet.			
I can charge my tablet.			
I know the home screen and it's use.			
I can go to settings.			
I can set password for the smart tablet.			
I can switch on Wi-Fi.			
I know where the camera is located.			

Workshop Session 2 – Pre-test

Please answer the following questions to your best ability.

	Yes 1	Neutral 2	No 3
I can access Wi-Fi.			
I know how to connect to public Wi-Fi.			
I am comfortable going online and using the Internet.			
I can log on to the Internet on the tablet.			
I can search the Internet on the tablet.			
I can visit the STEHL website on the tablet.			
I can access the STEHL handbook on the tablet.			
I can access reliable health information through STEHL website.			

Workshop Session 2 – Post-test

Please answer the following questions to your best ability.

	Yes 1	Neutral 2	No 3
I can access Wi-Fi.			
I know how to connect to public Wi-Fi.			
I am comfortable going online and using the Internet.			
I can log on to the Internet on the tablet.			
I can search the Internet on the tablet.			
I can visit the STEHL website on the tablet.			
I can access the STEHL handbook on the tablet.			
I can access reliable health information through STEHL website.			

Session 3– Pre-test

Please answer the following questions to your best ability.

	Yes 1	Neutral 2	No 3
I can identify basic pre- installed apps in the smart tablet.			
I can find, move, and delete apps on my tablet.			
I can search for an app.			
I can download a new app from the Play Store on the smart tablet.			
I have a general understanding of app safety.			
I have some knowledge of using social media such as Facebook/Instagram.			
I can access my health record e.g., mychart or NM chart, etc. on my smart tablet.			

Workshop Session 3 – Post-test

Please answer the following questions to your best ability.

	Yes 1	Neutral 2	No 3
I can identify basic pre-installed apps in the smart tablet.			
I can find, move, and delete apps on my tablet.			
I can search for an app.			
I can download a new app from the Play Store on the smart tablet.			
I have a general understanding of app safety.			
I have some knowledge of using social media such as Facebook/ twitter/ Instagram.			
I can access my health record e.g., mychart or NM chart, etc. on my smart tablet.			

Appendix 5

STEHL program – Usability and Acceptability

	Yes 1	Neutral 2	No 3
I think the STEHL program was meaningful.	1	2	3
I think the STEHL program was successful in improving my knowledge on using the smart tablet.	1	2	3
I would recommend the STEHL program to someone in the same situation as me.	1	2	3
I think the STEHL program was emotionally demanding.	1	2	3
I think overall the program was challenging.	1	2	3
If I had known as much about the program before starting as you know today, I would still have participated.	1	2	3
I feel that my ability to learn using the tablet has increased during the program.	1	2	3

STEHL Program - Smart tablet and Handbook

	Yes 1	Neutral 2	No 3
I liked using the smart tablet.	1	2	3
I found the handbook useful.	1	2	3
I think the handbook was easy to use.	1	2	3
I think that most people would learn to use the smart tablet using the handbook very quickly.	1	2	3
I found the STEHL handbook awkward to use.	1	2	3
I used the STEHL handbook in an online format.	1	2	3

STEHL Program - Webpage and Accessing Reliable health information.

	Yes 1	Neutral 2	No 3
I liked using NIU STEHL webpage.	1	2	3
I found the NIU webpage useful to access the handbook.	1	2	3
I think the NIU STEHL webpage was easy to use.	1	2	3
I think that most people would learn to access the NIU webpage very quickly.	1	2	3
I found the NIU STEHL webpage awkward to use.	1	2	3
I found the NIU webpage useful to access reliable online information.	1	2	3

Appendix 6

Workshop Participant Survey - optional

This survey is intended to evaluate your knowledge and skills related to health literacy, and digital literacy. The purpose of this survey is to measure the effectiveness of the STEHL project.

1. Have you used a handbook as a resource guide to help you with a smart tablet before this workshop?
   a. Yes
   b. No
   c. Not Sure
   d. I am already participating in the All of Us Research Program.

2. After completing the training, do you know more about how to use a smart tablet NOW?
   a. Yes
   b. No
   c. Not Sure

3. After this event, I might continue to use the STEHL resources to (Check all that apply).
   a. Understand how to use my smart tablet.
   b. Access reliable health information.
   c. Talk to my family or friends about the STEHL project.
   d. Go to the website on STEHL to access reliable health information.

4. As a result of participating in this STEHL workshop today, I know more about resources on self-care for older adults available on Medline plus website and NIH wellness tool kits.
   a. Yes
   b. No
   c. Not Sure

5. As a result of participating in this STEHL workshop today, I understand how to access self-care topics for older adults on Medline Plus and NIH wellness toolkits.
   a. Yes
   b. No
   c. Not Sure