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Older Adults' Training Preferences for Learning to Use Technology

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Abstract

Older adults may benefit from using technology in their everyday lives. However, adults over 65 may need more training than their younger counterparts given they have had less experience with technology. In this study, 113 adults between the ages of 65 and 85 participated in focus group interviews discussing their training needs and preferences for technology items used in the home. Participants expressed an interest in receiving additional training, particularly for specific tasks. Participants also discussed preferences for various characteristics of training, such as who should conduct the training and for their preferred method of training. One of the most frequently discussed preferences was for self-training using text materials, such as a manual.

INTRODUCTION

Older adults may benefit from using technology in their homes for activities such as communication, cooking, cleaning, home maintenance, healthcare, and home security. Yet, older adults are less likely to use technology than younger adults (Czaja et al., 2006). In fact, adults 65 and older are part of a demographic group that has been found to be one of the least likely to use advanced technology items, such as computers (Pew Internet and American Life Project, 2004; U.S. Bureau of the Census, 2003). Given their relative inexperience with certain technologies, older adults may have much to gain from technology training. Moreover, older adults indicate that they would be more comfortable with and willing to adopt new technologies if they received some type of formal training (Rogers, Cabrera, Walker, Gilbert, & Fisk, 1996).

To ensure optimal training for older adults several factors should be considered, such as their unique goals, abilities, and experience level (Ellis & Allaire, 1999). In particular, research has shown that older adults' adoption of technology is influenced by their cognitive abilities, such as crystallized intelligence, as well as computer self-efficacy and computer anxiety (Czaja et al., 2006). Hence, factors such as these should be addressed in the design of training programs.

In addition, research involving computer training has found that older adults make more errors, require more time to attain basic skills, and need more assistance during the training

process than their younger counterparts (Kelley & Charness, 1995). Overall, these results suggest that conducting a needs assessment prior to training (Mayhorn, Stronge, McLaughlin, & Rogers, 2004) and having ongoing training support may facilitate learning.

Understanding older adults' training preferences will also benefit training program development. It is likely that users would be more apt to participate in training that is consistent with their preferences. For instance, if people were to have a strong preference for training that takes place in the home, they may choose to have a neighbor come over to help them rather than going to a senior center where they would have access to a professional instructor. In this scenario, the cost of having to leave the home might outweigh the potential benefit of having a professional instructor.

The goal of this study was to explore the range of older adults' training needs and preferences for technologies they currently use or have used in the past in the home. We employed focus group methodology because of the wealth of descriptive data this methodology elicits. The focus group discussions provided detailed information about older adults' perceived training needs, including the types of tasks for which they would like to receive training, their preferences for whom they would like to conduct the training, where and when they would like the training to take place, and what methods they perceive as most effective.

METHOD

Participants

A total of 113 older adults participated in the focus groups, which ranged in size from four to nine participants per group. The focus groups were conducted in three cities: Atlanta (Georgia), Miami (Florida), and Tallahassee (Florida). Male (42% of the sample) and female (58%) participants ranged in age from 65 to 85 years ($M = 73$, $SD = 5.50$).

Race/ethnicity varied between sites ensuring a diverse sample. Of the total sample, 30% were Caucasian, 33% were African American, and 37% were Hispanic. We sampled according to education status, such that we had high and low education groups. Participants in the low education groups had earned less than a college degree (46% of the sample), whereas those in the high education groups had earned a college degree or higher (54% of the sample). Hence, the sample was diverse with respect to ethnicity and educational background.

Procedure

After obtaining informed consent, the moderator provided a brief summary of the study procedure and goals, as well as rules for the discussion. Participants were asked to speak one at a time and to contribute their own unique ideas and experiences. For the purpose of the focus groups, technology was defined as electronic or digital products and services.

Participants were asked to discuss their attitudes about the technology items they currently use or have used in the past and their preferences for training for those items. The present paper will focus on their training preferences. Specifically, participants were asked, "Do you

think you would like additional help with or instruction with [each technology item]? If so, what types of tasks do you think you might want help or instruction for?” and “What type of information or training do you think would help you learn how to do (each task)?”

Each focus group discussed technology use in the context of two of three domains (Home, Work, Health); data from the home domain will be discussed in the present paper because participants reported the widest range of technology items in this domain relative to the work and health domains. Participants were debriefed and paid 25 dollars for participation. Discussions were audio recorded for later transcription.

RESULTS

Segmenting and Coding

The audio recorded focus group discussions were professionally transcribed, then segmented by four independent coders. A segment was defined as a unique idea in a single, uninterrupted speaker turn, related to training. The coders identified 665 segments related to training in the transcripts. Segmenting reliability was calculated for a sample of the transcripts and ranged from $r = .92-.97$. The coding scheme dimensions were designed to capture training needs, as well as preferences for various characteristics of training: the person to conduct the training (i.e., who), place of training (i.e., where), time of training (i.e., when), and method of training (i.e., how). Three independent coders applied the coding scheme to all segments and each segment was coded on all dimensions. Coding reliability was calculated for a sample of the transcripts and ranged from 86–88 percent agreement.

Perceived Training Needs

The first dimension of the coding scheme related to the question, “*Do you think you would like additional help with or instruction with [each technology item]?*” and “*If so, what types of tasks do you think you might want help or instruction for?*” Participants reported wanting additional training for many technology items (78% of the segments related to perceived training needs). When participants did report a need for additional training, 20% of the time they specified the content of the desired training, which focused on specific tasks (56% of the segments) more so than general training (16% of the segments).

Specific tasks discussed included, “*I’d like to know how to have the caller ID on my cell phone,*” “*I’d like to learn how to do a power point presentation,*” “*cut-and-paste,*” “*I’d love to make films,*” “*It would be helpful to know how to program your TV to block out whatever you don’t want your young children watching,*” “*the timer for my coffee pot,*” and “*I’d like to learn how to download the pictures to the computer and send them to people.*” Needs for general training included comments such as, “*I don’t know how to use the basic system on the computer*” and “*I would just like to learn the computer, in general.*” These data suggest that older adults use many technology items to some extent; however they may underutilize the full benefits of these systems and would like additional training, especially for specific tasks.

Training Preferences

The other dimensions of the coding scheme addressed the “who”, “where”, “when”, and “how” aspects of training preferences. Discussions centered on “who” (41% of the segments) and “how” (68% of the segments) characteristics of training more so than “where” (5% of the segments) and “when” (5% of the segments). Indeed, older adults may have stronger preferences for the person conducting the training and the method of training than for the location and time of training.

When discussing preferences for instructors, participants mentioned a variety of people, including themselves (see Figure 1). The top three categories in the “who” dimension were self (32%), family and peers (24%), and domain professionals (23%). People in the family and peers category included spouses, children, grandchildren, neighbors, and colleagues. The domain professionals category encompassed salespeople, customer service representatives, vendors, and service providers. An unspecified person (e.g., “*someone*”) was mentioned 15% of the time.

Participants discussed a wide variety of preferred methods for learning to use technologies (see Figure 2). The top three categories were text (33%), one-on-one (18%), and trial and error (17%).

Comments about text training materials included, “*Read the manual,*” “*I depend heavily on manuals,*” “*Follow the directions,*” and “*You’ve got to look at the instructions.*” A comment that provides some insight into one of the perceived benefits of one-on-one training was “*I like one-on-one...because...in a class you have some people more advanced than others. Like, in a class that I would be in, the beginners would come in there. It would be boring to me because then he’s teaching them things that I’ve already been through. So, I like one-on-one [sessions] so that way you know where you are and you can tell them you know where you want to go.*” Another comment about the preference for one-on-one training was “*Well, in my case one-on-one because I need to be able to ask instant questions and get instant answers.*” Participants also discussed their preference for learning through trial and error, such as starting to use the technology item and learning by making mistakes.

Together, the “who” and “how” data suggest a strong preference for self-training through methods such as reading a printed manual and learning through trial and error. Older adults expressed preferences for when and where they would like training to take place as well, albeit less frequently. When participants expressed preferences for when they would like training, they mentioned trouble-shooting (i.e., when a problem arises) (56%), at purchase (22%), and upon first use (19%). When they expressed preferences for where they would like to be trained, older adults discussed store and company locations (e.g., “*go to the Sprint store*” and “*the store where I bought it.*”) most frequently (43%). However, senior center, library, home, and school were mentioned as well, each capturing 11% of the total “where” comments. These results demonstrate that older adults have a wide variety of preferred training locations.

DISCUSSION

In this study, older adults reported a desire for additional training for the technology items they use in the home. The findings demonstrate that older adults who are currently using technologies continue to have training needs, and these needs are quite varied depending on their goals. The present findings are consistent with other research reporting that older adults' do, indeed, have an interest in training for technology adoption (Czaja, 1997; Morris, 1994) and they have a preference for receiving training before using new technologies (Rogers et al., 1996).

Participants expressed an interest in training particularly for specific tasks rather than general or basic training. This finding may reflect the fact that we asked about technologies they were currently using, items for which they may have already obtained general training. Perhaps general training would be preferred for learning to use new technologies. However, it is possible that the preference for specific over general training reflects a preference for procedural over conceptual training. This idea would be consistent with previous research that found older adults benefited from procedural (i.e., "action") training to a greater extent than conceptual training for training on automatic teller machines (Mead & Fisk, 1998).

When discussing their training preferences, older adults focused on "who" and "how"; that is, the person whom they would like to train them and the method perceived as most effective. The most frequently reported categories of people preferred for conducting the training were self, family and peers, and domain professionals. The convenience afforded by self-training, or contacting a family member or customer service representative may make these people more preferable trainers than professional instructors, albeit in some cases the professional instructors may be more qualified. It is also possible that older adults are unaware of the options for receiving training from a professional instructor.

These findings demonstrate that older adults' preferences are varied; they perceive many people, not only professional instructors, as being effective teachers. The benefit of viewing more people as potential teachers is that the learner has more options available. The potential cost is that unless the trainer is "trained" a downward spiral may occur: the teacher is ineffective causing the learner to have performance difficulties, which impacts their self-efficacy and attitudes about the technology (Czaja & Sharit, 1998). Furthermore, negative attitude and low perceived self-efficacy are likely to impact learning proficiency in the future (Czaja et al., 2006).

Older adults mentioned specific training methods frequently, such as reading manuals, one-on-one interactions, and trial and error, when discussing training preferences. Interestingly, these findings suggest older adults have a strong preference for self-training by reading manuals and other printed instructions and by hands-on learning through trial and error. On-line and multimedia instruction were mentioned relatively infrequently as preferred training methods. These preference data are consistent with performance data showing that manual-based training facilitates learning to a greater extent than on-line instruction (Czaja, Hammond, Blascovich, & Swede, 1989). However, it may well be that the participants were

unaware of the myriad of technology training options that are currently available, or have less experience with these alternatives.

Implications

Training interventions and training programs offered outside of the home (e.g., senior centers) tend to utilize small classes. The findings from the present study show that older adults would prefer if the training program included text-based instruction or note-taking (e.g., provisions encouraging learners to take notes while learning), which could be used during the training program as well as a reference when practicing on their own. Manuals provided by the technology manufacturer may not be optimal because they contain technical jargon (Morrell, Park, Mayhorn, & Kelley, 2000). Hence, there is a need to focus design efforts on developing effective printed material for older adults to realize optimal benefits from text-based instruction.

It is important to note older adults' preferences for training may not always be consistent with training characteristics that optimize their actual performance. Further research is needed to investigate the relationship between training preferences and performance when using technology. An optimal training program would meet user preferences without sacrificing quality of training as reflected by learning performance.

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Figure 1.
Preferences for who should conduct the training.

Figure 2.
Preferences for how the training should be conducted.