SENIOR CITIZENS AND TECHNOLOGY:

HOW TO HELP BRIDGE THE GAP OF LEARNING

Approved by Richard Rogers on December 17, 2011
Project Advisor

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An Educational Project

Presented to

The Graduate Faculty

University of Wisconsin-Platteville

In Partial Fulfillment of the

Requirement for the Degree

Master of Science In Education

With An

Adult Education Emphasis

By

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2011

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HOW TO HELP BRIDGE THE GAP OF LEARNING

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Abstract

In today's world of technology, the senior citizen population is being left behind. This study was conducted to find the areas of need and to supply support to those senior citizens who desire to become users of current technology. It is important to educate the senior citizen population regarding technology to increase the use of technology in everyday life.

Senior citizens could benefit from knowing how to use and how to search the Internet for information ranging from recipes to hotel reservations. If all senior citizens knew how to use various and emerging technologies, their life styles would be enriched and better meet the demands and opportunities provided by technology.

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CHAPTER I

INTRODUCTION

This research is based on the desire to execute an educational project and is inspired by the senior citizens in the City of Janesville. This researcher has received many calls during the course of a week to help fix problems, help with cellular telephone issues, or answer digital camera questions. The researcher's goal for this educational project was to help not only the senior citizens in Janesville but to help other senior citizens as well. The design of the completed educational project was intended to help make the learning process easy, practical, and fun for each participant.

Statement of the Problem

At the time of this study and with technology growing at such a fast rate, the average person found it difficult to keep current with new knowledge and application of technology. Many senior citizens had great difficulty understanding the basics of technology. One aspect that affected many senior citizens was fear of technology. Many people feared what they did not understand. How could educators help the senior citizen population understand basic technology?

Purpose of the Educational Project

The purpose of this educational project was to establish the need for instruction for senior citizens in specific area(s) related to technology. Individuals who participated would have the opportunity to complete a questionnaire about what they believed to be their learning needs. The goal of this educational project was to use questionnaire responses to develop a course of study facilitating awareness and skills in the area of basic technology for senior citizens. The primary delivery approach was direct

instruction, either individual or group. Topic basis was used for the method of group instruction. For example, sessions could include topics such as browsing the Internet, taking pictures with a digital camera, sending s, adding names and phone numbers to a cellular telephone, and saving a Web site to favorites. Areas included in the course of study might not be limited to the questionnaire responses.

Delimitations of the Educational Project

The research was conducted with the assistance of the Janesville Senior Center (Janesville, WI); Blackhawk Technical College (Janesville, WI) ; Karmann Library (University of Wisconsin-Platteville) ; and the Internet over a period of two and a half years (beginning June 2009 and concluding December 2011). Primary searches were conducted via Internet through various Web sites. Key search topics included key words that involved "technology, senior citizens, various methods of teaching technology," and other various combinations of the words "technology," "teaching," "senior citizens," etc. Results and conclusions drawn applied only to participants in Janesville, WI. However, this information might be useful to senior citizens and educators in a larger area.

Method of Approach

This educational project was conducted by using the Action Research method. Permission was sought from the University of Wisconsin-Platteville, various agencies, and individuals. Each senior citizen participant was asked to complete a short questionnaire, so the needs of each individual could be assessed. The questionnaire was a combination of open-ended and closed questions. The questionnaire was developed by the researcher based on personal experience working with senior citizens to discover the basic needs of senior citizens related to technology. A curriculum was developed for each

individual based on needs indicated in the questionnaire. The researcher selected basic aspects in the areas of computers, digital cameras, cell phones, and documents for the question content. The questionnaire was administered by the researcher.

After the questionnaire responses were recorded and compiled, a program of study was developed based on the needs identified. A class discussion session was conducted to solicit information regarding any further learning needs.

Definitions

Various definitions of the term senior citizen were operative at the time of this research. Several are listed below. At what age does a person become a senior citizen? "In America, the official age is 65 years" (*Official age*, 2008).

People lived longer than in the past. In the United States, "Life expectancy for the white population was 78.3 in 2005, unchanged from the record high of 2004. Life expectancy for the black population increased slightly from 73.1 years in 2004 to 73.2 years in 2005" (*U.S. life expectancy*, 2008).

One definition of senior citizen is "A person of relatively advanced age, especially a person at or over the age of retirement" (*Senior citizen*, 2009).

No matter what the full retirement age (also called "normal retirement age") is, a person may start receiving benefits as early as age 62 or as late as age 70. (*Retirement benefits*, 2009).

CHAPTER II

REVIEW OF LITERATURE

In the opinion of this researcher, senior citizens needed to learn about technology because technology was all around; it had become the way of the world. People cannot go anywhere and not have technology touch their lives. At the time of this study, people used technology daily from the time they woke up to the alarm clock until the time they went to bed after watching the news on television. The younger generations grasped technology easily, but some senior citizens had a difficult time with technology. "Until recently, older people tend to view themselves as 'non-technology users.' " (*Impediments to*, 2010). Although it was not what senior citizens learned growing up, senior citizens are capable of learning technology.

In preparation for this educational project, the researcher drew information from past experience as an educator of senior citizens. Three of the best tools educators needed to demonstrate were patience, knowledge, and respect. Teachers of adults especially needed to display these tools, as these were especially needed when educators worked with senior citizens. During implementation of this educational project, instructors needed to understand that not everyone had the same knowledge base, learning style, or speed of learning. Senior citizens grew up in an era that did not include instant messaging and all the devices that store information. They grew up on letter writing (by hand) and address books - not Microsoft Word and "my contacts" in cellular telephones. They grew up memorizing information, not just storing it in a computer or cellular telephone.

Senior citizens learned in different ways. To build on this knowledge, teaching had to appeal to visual, auditory, and kinesthetic/tactile learning styles. "Knowing the

learning style of one's students can be beneficial in several ways" (Bell, 2011). First, educators had them use the mouse and keyboard (kinesthetic/tactile) for themselves; they did not do the "clicking," the senior citizens did it for themselves. Educators then explained the steps and what each screen meant (auditory) while they looked at the screens (visual). All three steps were done at the same time, so this process happened rather quickly. By integrating all three of these styles, educators provided as many opportunities of learning as possible for senior citizens.

Needs in Health Care

Technology played an important role in healthcare at the time of this study. The days of taking a hand-written prescription were gone. The "clinic" faxed or e-mailed the prescription to Walgreens (or local choice of pharmacies). In some situations the prescription was filled by the time the senior citizen drove to the drive-through. Senior citizens could also order prescription refills online. By just making a couple of clicks of the mouse on a Web site, senior citizens had medication mailed directly to their residences. Complete health-related paper files were on centralized electronic databases. This was a positive for senior citizens as sharing of vital information was much easier and convenient for the medical personnel involved.

Many health care systems allowed, even encouraged, patients to use the Internet to view medical history and other important medical information. An example was the Web site for the Mercy Health Care System, My Chart Web site (*Mercy health*, 2011). To access medical records, a patient only needed an identification name and password the patient created. Once a patient logged in, he/she could view all medical records, appointments, and family medical records, just to name a few items. This improvement in

the health care field allowed patients more independence and responsibility for medical information.

Technology and Opportunities for Senior Citizens

The cost of technology improved daily. Computers and laptops could be purchased for a fraction of what they were just ten years ago. Digital cameras and cellular telephones were also more reasonably priced. Most senior citizens were on a fixed income, but with the lower costs of technology, it was easier for them to obtain technology items.

The Internet had opened up many opportunities for senior citizens. They could use the Internet to stay connected with family and friends via e-mail as well as see their financial information online. This researcher found most senior citizens just wanted to know the basics of technology. For some senior citizens, too much information was not a good thing.

Senior citizens could e-mail family and friends--daily if they wanted. They enjoyed receiving updates from others (especially about grandchildren). The words were great, but the pictures were the best. Most senior citizens could understand the basic concept and functions of e-mail, and that was enough for most of them. Senior citizens loved to get e-mail because it made them feel in touch with others no matter where family and friends were.

The Internet was also a great shopping tool. Many senior citizens were unable to get out and about. If they wanted to go shopping, they would need to rely on others to drive them. The Internet opened up a door for them to order items they needed or wanted. Senior citizens could order anything from groceries to medication to clothes

online. Ordering and paying for items ordered from the Internet was easy as well. Most venders had it set up that once one created an account and purchased an item, payment method and information was stored and the information did not have to be reentered.

The Internet was also a great source for entertainment. Senior citizens could play "Sudoku" or watch movies online. This researcher knew some senior citizens who had three Web sites bookmarked as favorites. The Web sites were "Martha Stewart," "As the World Turns" (soap opera) , and Internet solitaire. They spent one to two hours a day on these three Web sites. Games and puzzles were good for senior citizens as it made the right part of the brain think and kept them sharp.

Online banking was helpful for senior citizens. If they needed to pay bills, check account balances or make mortgage payments, they could do so online. Banks were willing to provide assistance by providing 800 phone numbers and specialists had the knowledge to help senior citizens through the process. It could be confusing, but the telephone banking staff was usually patient and helped senior citizens.

Digital cameras had become a blessing for senior citizens. This researcher knew senior citizens who had taken a picture (using the "old" 35 mm camera), had the photographs developed, and discovered the forehead on up has been cut off the subject. Now that senior citizens had basic digital cameras, they took pictures, reviewed them, and took them somewhere to be developed. They did this independently with only minimal help from the employees from where they purchased the camera. If they took a bad picture, they just deleted it. Not only did they get only the pictures they wanted, but they saved money by not getting bad pictures developed.

Cellular telephones improved the ability to stay in touch with others. Not only was a cellular telephone convenient to carry, but the price of plans was very reasonable (This researcher saw an ad on television for $20 for the year). The trend was going to disconnect LAN lines and just go with cellular telephones. Calling people could not be easier. With speed dial and "my contacts" in cellular phones, all senior citizens needed to do was press a couple of buttons to complete a call. The cellular telephone was also useful in emergency situations. If a senior citizen was in an accident or needed help, they could just dial emergency personnel or family members for help.

Many new vehicles came equipped with the ability to make telephone calls by using OnStar. Learning this was difficult, but was beneficial. This researcher received telephone calls from senior citizens who had this option on their new vehicle. All senior citizens needed to do was to say the command and the telephone call was made without hands leaving the steering wheel. OnStar had an impact on communication. This option allowed senior citizens the opportunity to communicate directly with someone from getting directions to needing emergency help. With one push of a button, a senior citizen had a connection that could save a life.

Going to the bank to get cash had become obsolete for many senior citizens. Senior citizens had the option of visiting their banks, but using an ATM machine was more accessible and convenient. Many ATM machines were accessible 24 hours a day, 7 days a week and might not charge for service. The procedure to get money was as simple as inserting a debit card, entering the PIN, and entering the amount of cash desired. This piece of technology revolutionized the accessibility to money.

Technology had the greatest impact for senior citizens by helping them stay in the workforce. Many senior citizens who retired had discovered they needed to go back to work to make ends meet. By learning technology they could be vital, contributing assets in the workforce. Tech savvy senior citizens could seek jobs from store greeter to cashier to manager. Learning technology in a variety of careers could be easy with the proper amount of training.

This researcher believed fear was the biggest contributing factor as to why most senior citizens did not use or like technology. The fear ranged in severity from the unknown to fear of HAVING TO learn something new. The job of educator was to try to reduce and even eliminate these fears. The more knowledge senior citizens had of technology, the more empowered and independent they could become.

Education and Senior Citizens

Educators needed to possess high-quality technical knowledge as well as have the ability to understand and translate various equipment manuals. Each senior citizen had unique technology needs, and educators met their needs.

Educators, who worked with senior citizens, also needed to have excellent soft skills.

> A soft skill is a sociological term which refers to the cluster of personality traits, social graces, facility with language, personal habits, friendliness, and optimism that mark people to varying degrees. Soft skills complement hard skills, which are the technical requirements of a job. Some examples of soft skills: Personal qualities (responsibility, self-esteem, sociability, self-management, integrity/honesty); Interpersonal skills (participates as a

> member of the team, teaches others, serves client/customers, exercises leadership, negotiates, works with cultural diversity). Soft skills can also be an important part of the success of an organization. Organizations, particularly those frequently dealing with customers face-to-face, are generally more prosperous if they train their staff to sue these skills. For this reason, soft skills are increasingly sought out by employers in addition to standard qualifications. (*Soft skills*, 2008)

There were some aspects of teaching to remember when working with senior citizens. Some of the aspects were to write big, provide contrast (white paper with black ink), talk loudly and slowly, keep training sessions short (30 to 90 minutes), and/or have adaptive equipment ready (Internet sites or contacts such us ADA representatives). The most important aspect to remember was patience. Educators needed to remember everyone learned in different ways and speeds, and technology could be overwhelming and confusing.

CHAPTER III

SUMMARY AND CONCLUSIONS

Importance of the Educational Project

This Educational Project is important due to the lack of education for senior citizens in the area of technology. There is a population of senior citizens who may want or need to learn about certain aspects of technology. By having senior citizens complete a brief questionnaire to obtain their individual needs, an educator can tailor a curriculum to each individual. This gives the senior citizens the personal contact and education they desire and deserve. (See Appendices A and B)

Need in the City of Janesville

This researcher believed there is a need for technology support for the senior citizens of Janesville. This study briefly researched the need; and the only support found was at the Janesville Senior Citizen Center on a limited group basis, and only during the day. Related research checked the local library and found resources for senior citizens were also very limited. The findings of this research indicated that a need existed in areas of both resources and classes. In addition, there was a need for one-on-one sessions to make individuals feel more comfortable when asking questions and completing tasks.

Because most senior citizens were on a fixed income, this service needed to be either on a volunteer or minimal cost basis. Senior citizens needed to have quality instruction available to them, but not at "consultant" cost. The needs of senior citizens related to technology use. Some senior citizens did believe technology did not affect them on a daily basis. They did not realize technology touches all aspects of life from communication to food. If senior citizens want to communicate with people of the

younger generations, it would benefit them to understand how to make a cellular telephone call and learn how to send an e-mail.

There were instructional courses that have been developed to help technology skills and awareness for senior citizens. There were many reliable instructional resources available. One resource was the use of the local library. Another resource was AARP. A third resource was the Microsoft Web site providing a wealth of information.

Technology could help senior citizens communicate with friends and family around the world through e-mail and Web sites. Technology could also provide a means of tracking finances from paying bills to checking stocks. Technology could be a tool of great entertainment. There were so many choices for puzzles and games; it could keep one busy for hours.

Budget

For implementation of this educational project, the following would have an impact. The budget for training sessions (both individual and group) would be minimal. There would be no cost for the facilities as instruction would provided on site of where the person was, or other locations could be used (local public libraries, coffee shops, etc). Equipment would whatever the clients brought to class. Equipment could range from cellular telephones to computers. There would not be any cost for training as the instructors would be providing instruction on a volunteer basis. The supplies would be provided by the agency requesting the instructional services. Any financial support might be provided by local and/or national agencies.

Marketing

When creating flyers, the following guidelines should be used: 1) use color, friendly, large print, single-focus sessions, change out posters every week; 2) describe each session in detail; 3) direct materials toward results--personalize posters with pictures, names, and what was learned; 4) display marketing materials on table tops, posters, and bulletin boards (see Appendix B).

Training Sessions

Conduct training sessions for senior citizens. Sessions should include the following:

- A brief description of what will be learned
- Supplies
- Core Abilities
- Competencies
- Step-by-step instructions

Results of the Questionnaire

Results of the questionnaire indicated what each participant needed or wanted to learn (see Appendix C).

In this researcher's experience of working with senior citizens and technology, the most important aspects to remember when teaching them is to have a great deal of patience and respect for each of them. Instructors need to remember that people have all different kinds of history and that people learn in difference ways.

One recommendation is to have all printed literature in an appropriate font type and size for senior citizens. The following guidelines should be used:

> Large print is generally defined as print for text passages that is larger than the print used by that segment of the population with normal vision. The size of print most commonly used by the sighted population range from eight to twelve points in size. The American Printing House for the Blind takes the position that large print for use by the low vision population is printed that is eighteen points in size or larger. (Kitchel, 2008)

In addition, each large print user would benefit from having access to materials with the following characteristics:

1. Font that is at least 18 points in size
2. X-height and t-heights of at least 1/8 inch
3. Typeface without serifs
4. Spacing between lines of print of at least 1.25 spaces
5. Headings and subheadings larger and bolder than regular large print text
6. Paragraphs in block style, 1-inch margins, left margin justified, right margin not justified, no first-line indentations to delineate paragraphs
7. No columns or divided words
8. Black print on white, ivory, cream, or yellow paper with dull finish to reduce glare
9. No print over a background design or other graphical material
10. Graphics enlarged, but maintain the same contrast, clarity, and appropriate coloration

11. Graphic materials, such as maps, graphs, and charts, adhere to type size, font, and other large print guidelines (Guidelines for maps are under development.)
12. Full-color or high-quality black line art rather than gray-scale or shaded drawings
13. Books that weigh no more than 32 ounces and are no larger in dimension than 9 inches x 12 inches x 2.5 inches (Kitchel, 2008)

Once individual needs are assessed, an individualized self-help guide would be created for each senior citizen. After the manual was created, the educator could review individual manuals with each senior citizen.

The results would not only be shared with each individual, but a copy would also be provided to the cooperating agencies for future reference. Each cooperating agency would have the choice to share the information with others.

Curriculum

Based on the review of literature, survey results and this researcher's experience, a curriculum was developed to meet the needs of senior citizens (see Appendix D). If a student completed a questionnaire, instruction was delivered on an individual basis. If instruction was delivered in a group setting, curriculum would be created for each session.

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Appendix A

Technology Wants and/or Needs Questionnaire

I want to learn how to: Name: _____

Computer

- ☐ Send e-mails to my family and friends
- ☐ Save important e-mails
- ☐ Browse the Internet
- ☐ Save a Web site
- ☐ Save pictures on my computer
- ☐ Send pictures to my family and friends

Camera

- ☐ Take pictures
- ☐ Set the date on my camera

Cell Phone

- ☐ Add names and phone numbers to my phone
- ☐ Set up speed dial phone numbers on my cell phone

Documents

- ☐ Write Holiday letters
- ☐ Create mailing labels
- ☐ Create return address labels

Other:

- ☐ _____
- ☐ _____
- ☐ _____

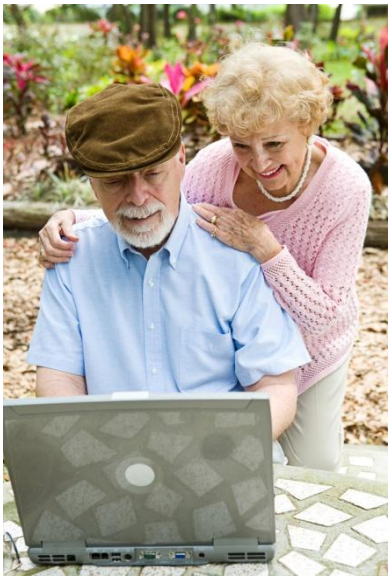
Appendix B

Sample of a promotional flyer

Technology Made Easy for You!

Learn How To:

- Send an e-mail
- Take a picture with your digital camera
- Save a “Contact” on your cell phone
- And More!



Register at the Front Desk for your personal one-on-one session!

Appendix C

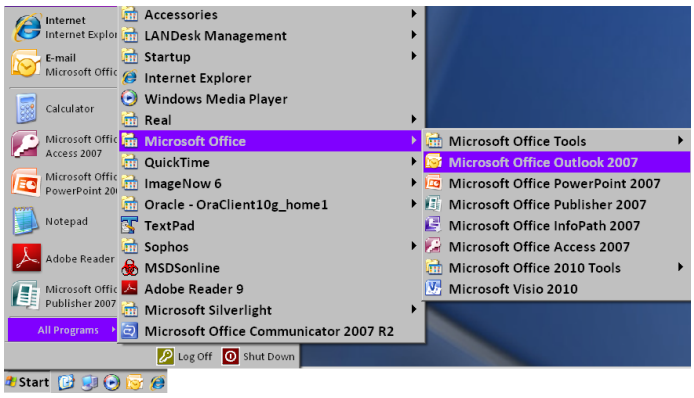
E-mail through Microsoft Office Outlook 2007

(Windows XP Professional Operating System)

Turn on the computer:

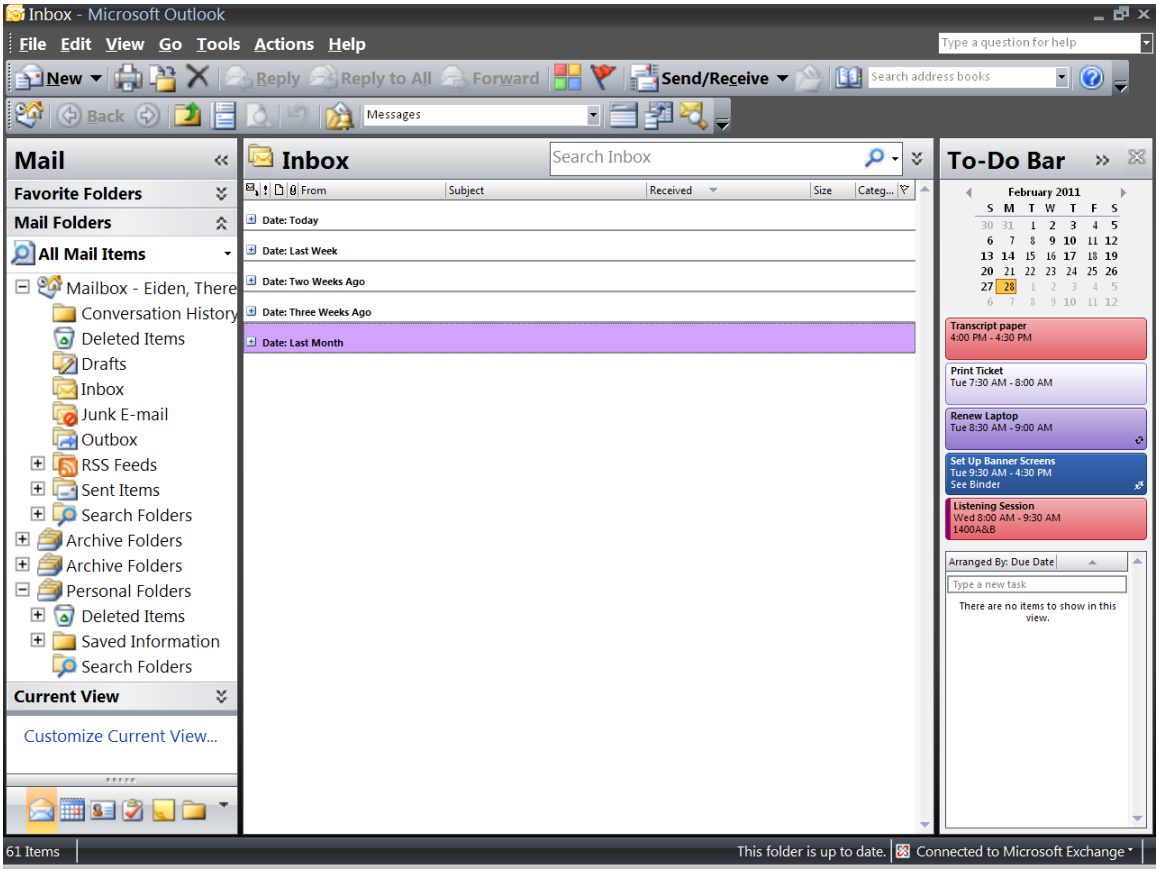
Click on the Start key located in the lower left corner of the screen

1. Hover over All Programs
2. Hover over Microsoft Office
3. Click on Microsoft Office Outlook 2007



This will go to Microsoft Outlook

You may receive a screen that looks like this



Appendix D

Results of Questionnaire

Responses

Computer

3	Send e-mails to my family and friends
2	Save important e-mails
5	Browse the Internet
3	Save a Web site
5	Save pictures to my computer
5	Send pictures to my family and friends
4	Other
1	J-Peg
1	Send attachments from scanner
1	Put e-mail addresses in file
1	How to alter pictures

Camera

4	Take pictures
3	Set the date on my camera
1	Other
1	What cameras are capable of doing

Cell Phone

6	Add names and phone numbers to my phone
3	Set up speed dial phone numbers on my cell phone
3	Other
1	Set vibrate and flip open to answer
1	Know how to use, purchase, etc.
1	Get voice-mail

Documents

2	Write Holiday letters
2	Create mailing labels
2	Create return address labels
0	Other

3 **Other**

1	PowerPoint-how to open, show and view
1	Does not want to learn any new technology
1	Does not see the need for learning anything with the computer, doesn't like technology

Appendix E

Participants

#	Age
0	M-50 to 55
0	M-55 to 60
0	M-60 to 65
1	M-65 to 70
1	M-70 to 75
0	M-75 to 80
1	M-80 to 85
1	M-unknown
0	F-50 to 55
0	F-55 to 60
0	F-60 to 65
3	F-65 to 70
3	F-70 to 75
2	F-75 to 80
2	F-80 to 85
14	Total