OLDER ADULTS’ EXPERIENCES WITH COMPUTER TECHNOLOGY

by

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(Under the Direction of Douglas A. Kleiber)

ABSTRACT

This study examines older adults’ experiences with computer technology. It is proposed that computer use may help older adults age successfully with regards to subjective well-being, Erikson’s stages of generativity and ego-integration and the developmental tasks of later life. Selective optimization with compensation (SOC) acts as a framework for understanding seniors’ motivations for computer use and their negotiation of the obstacles faced in learning to use computer technology.

Case study methodology was used to understand seven older adults’ experiences with computer technology. The research setting for the study was a municipal senior center SeniorNet Program in Northeast Georgia. The final report shares the experiences of these seniors concerning their involvement with SeniorNet, experience with computers, how they learned to use computers, how they currently use computers, and how they plan to use computers. Further, the treatise tells of the problems or negative experiences they have had with computer technology, how relationships were affected by computers and what impact computer technology has had on their later lives.

The study found that the older adults in this study used the processes of selective optimization and compensation in learning to use computers. Their attitudes and beliefs largely determined how active they were in using and learning to use computer technology. Further, they used SOC processes to negotiate the problems they faced in learning to use computers. Similarly, they used SOC processes and computers as a tool to negotiate later life tasks. Thus, computer use in the lives of these seniors contributed to their sense of successful aging.

The findings of this research have implications for seniors and for those who provide computer education to them. It is essential to match the skill level of the learner to the learning activity’s challenge in providing computer education. Providing choice and meaningful activities can also increase learner motivation. Further, senior centers should provide free access to computer labs for seniors and develop programs that are developmentally beneficial. Finally, although computer use can be used maladaptively, the participants in this study used computer technology mostly for benefit in their lives. Therefore, we can learn from their lives and experiences.
INDEX WORDS:  Older adults experiences with computer technology. Computer technology and successful aging. SeniorNet computer education program. Senior center computer education programs. Motivation and computer technology. Seniors learning to use computer technology. Obstacles to computer education.
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For Abigail – your patience, goodness, caring, concern and love inspire me daily. To Rebekah, Spencer, Hunter, Mom, Dad, and children unborn. Without your prayers, encouragement, assistance and prodding, we would have never seen this dissertation completed.

To Gwynn – my guardian angel, and Doug – my Wise mentor.
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CHAPTER ONE
UNDERSTANDING AND FACILITATING COMPUTER USE IN OLDER ADULTS

Introduction

The 2003 Current Population Survey (CPS) indicates that computer ownership among adults 65 years and over in the U.S. is 34-35.4%. The same survey shows Internet access among the same population is 28.7-30.1%. Surprisingly, Adler’s (1996) decade-old survey found that computer ownership among adults age 55 to 75 was 30%, suggesting that computer ownership of this demographic has only slightly increased in a decade. The 2003 CPS also indicates that of those adults age 65 and over who have a computer in their home, 63.9% use the computer and 63.7% use the Internet. Responses regarding how the computer is used include Internet and e-mail, word processing, spreadsheets, playing games, graphics or manipulation of audio, and managing household finances. For those who do not have Internet access in their homes, reasons given were lack of need, no interest, high costs, no computer, or an inadequate computer. Adler’s survey reports that when older adults who do not own a computer were asked what would entice them to purchase one, they responded that if computers came with easy-to-understand materials that could be used at home, they would buy a computer. Other responses regarding enticements include using a computer to research health issues and writing letters to children, grandchildren and friends.
Much of the research in the area of older adults and computer use fails to cover the contextual conditions surrounding the phenomenon. Similarly, current research fails to address the actual experience older adults have with computers – both those who use computers and those who find them unappealing. Further, little has been done to reveal what the computer means in their lives, how they use it, and what limits their use. The research advanced here considers older adults’ experiences with computers as both intrinsically and extrinsically motivated (i.e. seeing computer as enjoyable in its own right or as a means to other ends). After addressing this issue in a preliminary way, this chapter will proceed with a discussion of how computers have the potential to help older adults age successfully by helping them deal with the gains and losses of old age. However, due to obstacles faced by older adults in learning to use and using computers, the potential benefits of such use are often unrealized. The possibilities for overcoming these obstacles will then be considered, both with respect to work on the plasticity of older adults and in terms of available resources. Finally, a research approach for examining older adults’ experiences with computer technology (software and hardware associated with computers) will be briefly outlined.

Computer Use for Enjoyment (Intrinsic Motives) and Profit (Instrumental Motives)

Older adults’ experiences with computers can translate to both leisure and non-leisure uses. The term ‘leisure’ tends to have a different meaning when associated with older adults, particularly because leisure is often defined in opposition to work. Because many seniors are retired and not working for wages, much of their time is what could be called ‘free time’ – time free from work or obligation. However, when an older adult
uses discretionary time to go online for financial or medical advice, he or she is not likely to classify that activity as leisure. In contrast, using the computer to collect digital photographs of grandchildren would likely be viewed as leisure. Learning to use computers and using computers could be both enjoyable and useful for older adults or it could merely be a task or chore. In all instances, motivation and experience are essential to understanding the phenomenon. Finally, it is necessary to understand motivation and experience with computers to better understand how computer use can contribute to successful aging.

Prospects for Helping Older Adults Age Successfully

Learning to use computers has the potential to help older adults age successfully. A comprehensive examination of successful aging is provided in chapter two. Sufficient for the discussion here is understanding successful aging in terms of personal growth, generativity, ego-integration and successfully negotiating developmental tasks. Let us examine each of these concepts in turn, with a focus on how computers can play a role in each.

The Ulyssean lifestyle, as proposed by McGuire, Boyd, and Tedrick (1999), calls for older adults to seek Victor Logan’s second level of meaning – “devotion of time and energy to the realization of our potential” (p. 136). According to McGuire et al., this realization comes about by means of creativity and personal engagement. Therefore, it can be argued that computers have the potential to aid older adults in enhancing creativity and promoting personal growth during leisure. Older adults can use computers to email, instant message and video chat with grandchildren, keep in touch with friends, form
online communities, research medical and health issues online, create family websites, convert and edit family movies, find and enjoy the music of their era, work on genealogy, scan family photos, etc. Ryan, Szechtmans and Bodkin (1992) further advance the notion that computers can influence lifelong learning, provide access to information, support rehabilitation and make entertainment available. Lawhorn and Ennis (1996) also contend that seniors can use computers to improve productivity. Finally, White et al. (1999), noting that “many older adults are confronted with social and emotional isolation, which is associated with adverse health outcomes and diminished quality of life” (p. 359), argue that the Internet provides new opportunities for communication that can help older adults avoid social isolation, thus enhancing quality of life. Jones and Bayen (1998) conclude that older adults who participate in computer training have “enhanced self-esteem and mental ability, increased intergenerational social interaction, increased community involvement…increased levels of self-confidence, and lower levels of loneliness” (p. 676). While there is relatively little empirical evidence on the subject, all of the preceding reports suggest that computer use may contribute to aging successfully.

While computer technology may contribute to successful aging, it is important to consider how computer use can be detrimental to older adults. Computers can be used for socially deviant behaviors such as pathological gambling or the consumption of pornography. Also, if computer use becomes preoccupying or even “addictive,” physical decline could occur and other priorities may be ignored. Furthermore, if an older adult uses the Internet to buy groceries, that person might lose the benefits of traveling to the store (physical movement, social interaction, sense of autonomy, etc.). Conceivably,
computer technology can be used as a means of escape from dealing with and adapting to
the realities of life. Older computer users can also be susceptible to fraud.

Other serious issues could limit computer use among older adults. Much of
computer software is not user friendly for older users. In addition, older computer users
do not know what to do when errors or problems with the computer are encountered.
Further, those older adults with financial restrictions have limited access to the resources
necessary for computer use. This problem is addressed somewhat with the development
of computer labs in senior centers and public libraries, but if mobility or proximity is
restricted, access remains a problem. Finally, literacy and reading comprehension could
prove to prevent computer use among the elderly.

Since there seem to be both positive and negative aspects of computer use among
the elderly, it is important to understand how computers can be used in a developmentally
appropriate manner. Considering various definitions of successful aging will aid in
understanding how computers can be used to increase or enhance the conceptualizations
and components of successful aging models.

Two issues of later life associated with successful aging are particularly relevant
to this discussion – generativity and ego-integrity. These issues, originally discussed by
Erik Erikson (1980), are encountered as an older person comes to grips with mortality
(Lemme, 2002). Generativity refers to a concern with what one is leaving behind as a
legacy and can refer to children, products, ideas and works of art (McAdams & De St.
Aubin, 1992; McAdams, Diamond, De St. Aubin, & Mansfield, 1997). Concern is given
to the care of these children, products and ideas and consideration must be given to the
mechanisms – such as computers technology – that may help seniors transmit knowledge
and experiences to younger generations, create meaningful products, communicate ideas and participate in artistic endeavors. On the other hand – recognizing the dialectic character of Erikson’s model – computers could also be used as a means of simple diversion and for purely self-indulgent priorities, thus supporting a pattern of stagnation.

Ego-integrity, which Erikson views as the prevailing need of the last stage of life, is concerned with reconciling one’s past in order to live well in the present. This reflection on the past typically stems from an awareness of the finitude of life and one’s nearness to death. As with generativity, this stage has its antithesis, which is manifest by despair – a fear of death and an unwillingness to accept the past. In this stage of life it becomes necessary to evaluate one’s life and accomplishments. One can imagine that computers could be useful in facilitating ego-integration by encouraging and providing a means for reminiscence and life review. An older adult could scan old photographs, write an autobiography to share with subsequent generations, find and enjoy the music of his or her era, digitize old home movies and share such reminiscence via email, video chat, text chat or blogs. Thus, computers have the potential to assist older people in achieving generativity and ego-integrity.

How older adults adapt to and deal with developmental tasks also influences subjective well-being and quality of life. Havighurst (1953), Antonovsky and Sagy (1990) and others discuss some of the developmental tasks associated with older adulthood. Havighurst mentions developmental tasks associated with physical aging, societal pressures and expectations, the aspirations of the individual and a combination of these forces. Antonovsky and Sagy outline other specific tasks such as retirement, death of a spouse, death of peers, reduced income, etc. In each case, computers could be tools
for helping older adults address these tasks. For example, computer technology could be used to overcome loss of visual acuity (enhanced font sizes and use of screen readers). Further, computer technology can be used to find support groups following the deaths of spouses and friends. There are a myriad of possibilities for computer technology to aid older adults in dealing with the developmental tasks of old age. However, such positive effects are only possibilities and may not be realized if computers are difficult and intimidating to older people or if computers are used for maladaptive purposes.

Whatever the potential benefits or risks of computer use, it is important to understand that older adults encounter certain age-specific obstacles when using or learning to use computers. Such impediments may keep them from enjoying the potential benefits of computer technology.

Obstacles Older Adults Face While Learning to Use and Using Computers

Kelley and Charness (1995) reviewed twelve studies in which age was examined as an individual variable predicting success in learning to use a computer. Ten of the twelve studies they reviewed concluded that older adults experience significantly more difficulty learning to use computers than younger adults do. Difficulty in these studies is defined as taking a longer time to learn to use the system and requiring more help in learning. Several studies have corroborated the assertion that older adults require more time to learn computer programs and also require more help in the process (Charness, Schumann, & Boritz, 1992; Czaja & Sharit, 1993; Czaja, Hammond, Blascovich, & Swede, 1989; Hartley, Hartley, & Johnson, 1984). Kelley and Charness also found that “the learning process is longer and more difficult for older adult computer novices” (p.
111). It is important to understand why it typically takes older adults longer to learn to use computers and why they need more help in the learning process.

Several theories seek to explain why it usually takes older adults longer to learn to use computer technology. Kelley and Charness (1995) suggest that there are a number of cognitive changes that take place in older adults that affect computer performance. They mention declines that occur in ability to remember new information, problem-solving ability and attentional processes (pp. 110-111). Czaja and Sharit (1993) counter this assertion by proposing that experience is more important than age in predicting success in learning to use computers. Thus, since older adults are typically less experienced with computers and technology in general, this inexperience could account for their lower speed of learning. These discrepancies in the literature suggest that more research is needed to understand older adults’ experiences with computer technology and the learning processes involved.

Attitude is another explanation for the difficulty older adults encounter when learning to use computers. Kelley and Charness (1995) note that attitude is “a social psychological concept, which refers to one’s beliefs, feelings, and behaviors toward an attitude object” (p. 111). Ryan, Szechtmman and Bodkin (1992) review literature that asserts that individuals over 65 show a less favorable attitude toward computers and related technology. However, Ansley and Erber (1988) found that there are no noted differences in attitude toward computer technology between younger and older adults. Jay and Willis (1992) provide a possible explanation of this inconsistency in the literature. They claim that for older adults “greater experience with computers and related technologies is associated with more positive attitudes” (p. 250). The authors
conclude that older adults’ computer attitudes are modifiable and can be effectively changed through direct computer experience (p. 254).

Another theory that explains older adults’ difficulty in learning to use computers, as described by Kelley and Charness (1995), is that seniors are more likely to be anxious about using them than younger adults (p. 111). These authors define computer anxiety thus: “a clinical term referring to a negative or stressful emotional state when thinking about or using a computer” (p. 111). Stephenson (2002) found several areas where older learners experienced anxiety in trying to learn computers.

These areas are (pp. 5-6):

- Controlling the mouse
- The language used by the computer and computer instructors
- Not feeling in control of the situation
- The absence of easy-to-follow instructions
- The process of moving around the screen and accessing menus and programs
- Getting in and out of programs
- Feelings of inadequacy
- Feeling that computers are too complicated to be worth the effort

Additionally, Meyer and Poon (1997) found that reading comprehension of older adults diminishes with computer-displayed text and is a source of anxiety for older computer users.

Cognitive decline in old age also constitutes an obstacle to computer use with older adults. Kelley and Charness (1995) conclude that the difficulty of older adults in learning to use computers is not due to attitude or anxiety, but to reductions in cognitive abilities – particularly spatial ability. White et al. (1999), also affirm that these difficulties are due to cognitive changes associated with aging. Such changes include slower processing speed, decline in working memory, decline in spatial ability and decrease in both sustained and divided attention (p. 360). Further, Jones and Bayen
(1998) offer an in-depth discussion of the cognitive decline that affects older adults’ use of computers. The cognitive abilities they refer to include discourse comprehension, reasoning, inference formation, and the acquisition of new memory, all of which are relevant to the acquisition of computer skills. They further cite studies which found that older adults experience cognitive slowing (psychomotor and cognitive speed, reasoning, spatial abilities and long-term memory), limited processing resources (attentional capacity and working memory), lack of inhibitions (ability to ignore irrelevant stimuli and thoughts, Connelly, 2006), and sensory deficits (diminished visual acuity). Perhaps each of the aforementioned difficulties affects older individuals to a certain extent.

The preceding discussion raises questions as to whether these obstacles can be overcome and what role motivation plays in overcoming them. If motivation is seen as a function of enjoyment or a function of perceived value (instrumental ends, quality of life, tasks, etc.), to what extent can it aid in overcoming these obstacles? Baltes and Baltes’ (1990) Selective Optimization with Compensation (SOC) model can be considered as a framework for understanding how motivation can be instrumental in overcoming the obstacles older adults face in using computers.

Using Selective Optimization with Compensation to Overcome Obstacles

Education is one means of adjusting to the aforementioned obstacles. This study is concerned with understanding older adults’ experiences with computers. The complexity of examining such a topic with a highly heterogeneous population suggests a need for a theoretical framework. Toward that end the SOC model will be explored as a framework for understanding motivation and adaptation of older adults facing the
challenges of learning to use and using computer technology. Baltes and Baltes (1990) write, “selective optimization with compensation allows the elderly to engage in life tasks that are important to them despite a reduction in energy or in biological and mental reserves” (p. 24). Thus, this model suggests strategies that could be used to aid seniors in overcoming obstacles to computer use.

Selective optimization is an adaptive process for dealing with the losses and gains of old age. Using selection, a person may develop, define, and commit to alternative goals and life paths by giving up certain aspects of life in order to focus on particularly meaningful domains. In later life, domain involvement is likely to be assessed in terms of developmental priorities such as generativity, ego-integrity and the other developmental tasks described earlier. Optimization implies a reallocation of energy and resources to the selected domains with the intent of maintaining an optimal level of involvement. Intrinsic or extrinsic motivation may come into play in evaluating goals and life paths and then reallocating energy and resources to the selected goals and paths. Intrinsic motivation is reflected in a personal desire to select meaningful aims, while extrinsic motivation involves adapting goals and aims based on external factors (e.g. acquiring information via the Internet to improve health outcomes). Most likely, older adults who utilize selective optimization are spurred by both intrinsic and extrinsic motivation. Finally, compensation is concerned with adaptation, using the mind and technology. The purpose of compensation is to improve capacity through compensatory strategies. Thus, technology can provide the means of compensation by giving an older adult the capacity to overcome certain obstacles. For example, a screen reader could be used to overcome loss of visual acuity. This study, however, not only seeks to understand the computer as a compensatory tool, but also considers older adults’ use of the SOC-type processes in general in overcoming the obstacles associated with learning to use computers in old age.
Research Approach

With the SOC model as a framework, this research project is interested in the following questions:

1) What are older adults’ experiences with computer technology?
   a. How do they use computer technology
   b. Benefits of computer use
   c. Problems with computer use
   d. How they plan to use computer technology
2) What are the ways in which older adults come to use and learn to use computer technology?
   a. What motivated them to learn?
   b. Attitudes and beliefs about computer technology
   c. How did they learn?
      i. Problems faced when learning
      ii. Strategies used to overcome obstacles
3) What do older adults’ accounts suggest about the relevance of computer use for successful aging?
4) How do older adults’ accounts of their computer use contribute to an understanding of the potential contributions of publicly available computer resources and education?

With the preceding research questions in mind, it is important to consider the relationship between theory, methodology and evidence. In Alford’s (1998) first chapter he discusses the problematic nature of balancing theory, methodology and evidence. He distinguishes between “grand theory,” where no effort is made to tie theory to evidence and “middle-range theory,” which is concerned with linking theory, methodology and evidence. Methodology, according to the same author deals with providing specialized techniques and vocabulary. Methods, on the other hand, deal with strategies for finding ways of associating the abstractions of theory to the phenomenon being studied. It is also considered to be techniques for collecting, corroborating, verifying and evaluating data. Alford’s assertion is that researchers need to “reunite theory, method, and evidence in a way that can be both legitimate and powerful” (p. 18). While it is not quite clear what the
author means by “legitimate,” this research project seeks to balance “middle-range theory,” methodology and evidence to provide a report that is instructive and compelling. It is assumed that the consumer of this research will gain practical understanding of the experiences of older adults and have a better theoretical understanding of whether and how computer use can contribute to successful aging. Thus the first two research questions are practical or empirical in nature and the final two lie in the theoretical realm.

To elaborate, Alford (1998) asserts that there are two types of research questions – theoretical and empirical. An empirical question is one that seeks answers that are grounded in some kind of evidence or data. Ideally, the question should be answerable through examination of the data gathered during the research process. A theoretical question on the other hand derives from unresolved, general conceptual issues. Both types of questions have different tracks of analysis. According to Alford, theoretical questions seek explanation, while empirical questions value description. It is natural then, for empirical associations to become evidence of relevance to theoretical questions.

In order to gather evidence that will provide both description (empirical evidence) and also lead toward explanation (theory), a multiple case study approach is the method of choice for this investigation.

Multiple case study methodology can be used to understand older adults’ experiences with computer technology, since the purpose of a case study is to understand a phenomenon within the context in which it occurs. It is essentially qualitative in nature in that it “emphasizes episodes of nuance, the sequentiality of happenings in context, [and] the wholeness of the individual” (Stake, 1999, p. xii). Through thick, rich description of the data, the researcher tries to convey to the reader what the actual
experience itself would convey. In-depth interviews, surveys, and document analysis can be used to reveal seniors’ experiences with computer technology. The selective optimization with compensation model will serve as a guiding framework to shape interview probes dealing with the motivation of participants, their meaning system, and their experience with adapting to the environment in which they live. Finally, the data will be analyzed in order to share and interpret certain older adults’ experiences with computer technology. These ideas will be developed further in chapters two and three.
CHAPTER TWO
UNDERSTANDING THE POTENTIAL INFLUENCE OF COMPUTER USE ON SUCCESSFUL AGING IN LATER LIFE

Introduction

Computer use may contribute to a sense of successful aging in later life. This chapter presents a discussion of some of the various conceptualizations and components of successful aging. Subjective well-being is mentioned as a concept that relates to a sense that one is aging successfully. Attention is then given to Erikson’s (1980) concepts of generativity and ego-integration. Further, the developmental tasks faced by older adults are discussed. Baltes and Baltes’ (1990) model of selective optimization with compensation (SOC model) is then discussed as a means of adaptation that can contribute to successful aging. Computer use is then proposed as an activity amenable to selective optimization and as a tool of compensation, both of which may contribute to successful negotiation of developmental tasks while facilitating generativity and ego-integration.

Successful Aging

In recent decades, a great deal of research focuses on explaining what constitutes “successful aging,” especially as it relates to old age. Gibson (1995) describes success in this arena as “reaching one’s potential and arriving at a level of physical, social and psychological well-being in old age that is pleasing to both self and others” (p. 279).
Others define success as the capability of adapting values to meet the challenges posed by changes that occur in later life (e.g. Clark & Anderson, 1967). Still others point out the relationship between achievement, productivity and successful aging (e.g. Baltes & Baltes, 1990). Fisher (1995) interviewed forty older adults to understand their perceptions of successful aging. The respondents mentioned at least eight criteria relating to successful aging: activity, income, health, interactions with others, autonomy, environmental mastery, personal growth, self-acceptance, and a sense of purpose (p. 244). Finally, Rowe and Kahn (1998) assert that successful aging “implies achievement rather than mere good luck” and is “dependent upon individual choice and effort” (p. 37). These authors seek to counter current culture by discussing the good things that develop or emerge with old age. Theirs is an achievement and growth model of successful aging. Successful aging, in their view, is something that requires planning and work and consequently is attained through individual choices and behaviors. They then go on to define three key behaviors or characteristics of successful aging: low risk of disease and disease-related disability, high mental and physical function, and active engagement with life (p. 38-48). Figure 1 represents Rowe and Kahn’s components of successful aging.

![Figure 1: Adapted from Rowe, J. W., & Kahn, R. L. (1998). Successful aging. New York: Pantheon Books.](image-url)
These authors assert that there is a hierarchy to their model in that the absence of disease and disability makes maintaining mental and physical function easier. Accordingly, higher levels of mental and physical functioning can enhance, but not guarantee, engagement with life. Rowe and Kahn go on to define engagement with life in two domains – relationships and productive behavior. They further qualify engagement as “remaining involved in activities that are meaningful and purposeful” (p. 46). With regards to engagement through relationships, the authors propose that older adults actively take part in social networks of friends and family by giving and receiving social support. Such support includes expressions of respect, affection, and esteem and help people feel valued. With regards to continuing engagement, the authors discuss the role expectations, or lack thereof, placed on older adults. Throughout early life and adulthood, role expectations are rather clear. However, after retirement and with the onset of old age, it is no longer clear what is expected of the elderly. Thus, it is important for an older adult to negotiate new roles, goals and aims. Rowe and Kahn suggest finding new friends, participating in volunteer activities, exercising regularly and enjoying increased leisure.

So, is successful aging reliant on good health, economic freedom, good relationships, enjoyment in retirement, continuing productivity, or feeling satisfied with one’s past, present and future? Baltes and Carstensen (1996) call for an approach that stresses individual and personal definitions of old age. Outcomes related to normative definitions, they argue, fail to take into account the heterogeneity of aging people and ignore the potential for multiple standards of success. They argue that an outcomes-based definition of successful aging often proves specious, creates unrealistic
expectations and focuses too much on either the gains or losses of old age. Consequently they propose a model that defines success as the attainment of personal goals. Such goals can differ greatly among people and can be measured based upon what we know of an individual’s domains of functioning and personal goals. The authors posit “Success can refer to the attainment of personal goals of all types, ranging from the maintenance of physical functioning and good health to generativity, ego-integrity, self-actualization and social connectedness” (p. 400). While this attainment model is correct in focusing on the individualistic and subjective nature of successful aging, it is devoid of a moral or value-based compass for attainment. For example, an older adult could be driven to achieve a goal, which is detrimental to him/herself and others (e.g. seeking continued artistic recognition in spite of a cost to family members). Further, the authors’ focus on goal attainment seems to stem from a largely western philosophy of achievement. It is also conceivable that an older adult could feel that he or she is aging well by simply being, rather than striving for achievement. Again, the importance of allowing a definition of successful aging to be subjective, with growth, development and adaptation as general parameters is perhaps the safest course. However, we may proceed to more carefully consider some of the prevailing indicators of successful aging that other investigators have used.

Subjective Well-Being

Stock, Okun and Benin (1986) define subjective well-being as “an abstract, superordinate, construct entailing the affective reactions of individuals along a positive-negative continuum to their life experiences” (p. 91). The term subsumes other constructs such as life satisfaction, happiness and morale. Subjective well-being is not
focused on the objective conditions of life, but on people’s perceptions of life experiences. According to Diener (2000), subjective well-being “grants to each individual the right to decide whether his or her life is worthwhile” (p. 34). This author specifically mentions people’s reactions to events happening during life, broader judgments about their lives, and judgments about the domains or roles of life. Thus the components of subjective well-being are life satisfaction (general judgments of one’s life), satisfaction with important domains (e.g. job satisfaction), positive affect (positive emotions and moods), and low negative affect (disagreeable emotions or moods). Table 1 provides a summary of the major components of subjective well-being as described by Diener, et al. (1999):

<table>
<thead>
<tr>
<th>Pleasant affect</th>
<th>Unpleasant affect</th>
<th>Life satisfaction</th>
<th>Domains of satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joy</td>
<td>Guilt and shame</td>
<td>Desire to change life</td>
<td>Work</td>
</tr>
<tr>
<td>Elation</td>
<td>Sadness</td>
<td>Satisfaction with current life</td>
<td>Family</td>
</tr>
<tr>
<td>Contentment</td>
<td>Anxiety and worry</td>
<td></td>
<td>Leisure</td>
</tr>
<tr>
<td>Pride</td>
<td>Anger</td>
<td>Satisfaction with past</td>
<td>Health</td>
</tr>
<tr>
<td>Affection</td>
<td>Stress</td>
<td>Satisfaction with future</td>
<td>Finances</td>
</tr>
<tr>
<td>Happiness</td>
<td>Depression</td>
<td>Significant others’ view of one’s life</td>
<td>Self</td>
</tr>
<tr>
<td>Ecstasy</td>
<td>Envy</td>
<td></td>
<td>One’s group</td>
</tr>
</tbody>
</table>

Thus, satisfaction in the domains of work, family, leisure, health, finances, self and community contributes to a sense that one is aging successfully.

In addition to Diener’s components, Ryan and Deci (2000) postulate that three innate psychological needs must be met to yield increased intrinsic motivation, social development and well-being – competence, autonomy and relatedness. Meeting these needs, according to these authors, results in optimal functioning and leads to growth. The authors assert that feeling competent will not foster intrinsic motivation unless an individual has a sense of autonomy. Thus, as conditions are favorably shaped to enable intrinsic motivation to occur, namely an environment that fosters competence, autonomy and relatedness, subjective well-being is increased.

In the article by Diener et al. (1999), which reviews the past three decades of research regarding subjective well-being, the authors conclude, “the happy person is blessed with a positive temperament, tends to look on the bright side of things, and does not ruminate excessively about bad events, and is living in an economically developed society, has social confidants, and possesses adequate resources for making progress toward valued goals” (p. 295). Diener’s later work (2000) emphasizes temperament, personality, means of adaptation, and goal negotiation as leading toward subjective well-being. The same article also highlights heredity, context and previous experience as factors influencing subjective well-being. It is interesting to note that the author acknowledges the subjectivity of subjective well-being while pursuing objective measures of well-being. This highlights the weaknesses of current subjective well-being measures – scores can be influenced by mood at the time of the experiment, ordering of items influences the reports and respondents may provide what they consider socially
desirable responses. Thus, it is conceivable that qualitative methods, which provide rich, thick descriptions of lived experiences, are better tools for understanding people’s subjective well-being.

In any case, Diener (2000) argues that people tend to react favorably to events that are better than a past experience, and react negatively to events that are worse than the past experience. Further, people tend to adapt their expectations to new circumstances by changing their expectations and goals. Diener posits, “people feel better on days when they make progress toward ends that they value highly than they do on days when they are successful at achieving ends that they value less” (p. 38). Thus, according to Diener, subjective well-being hinges on personality, heredity, context or situation, goal adaptation and previous experience. In short, a person who encounters developmental tasks or other life events relies on personality, heredity, previous experience and goal adaptation to deal with the event. A sense of positive well-being results from successful negotiation of these factors.

Subjective well-being seems to be strongly tied to the notion of successful aging. It is conceivable that someone who has an increased sense of well-being in the domains mentioned is more likely to perceive of themselves as aging successfully. As Ryff and Singer (1998) state, “human well-being is ultimately an issue of engagement in living, involving expression of a broad range of human potentialities: intellectual, social, emotional and physical” (p. 2). This definition of well-being implies several domains necessary for continuing development or successful aging. How then, does one develop in the preceding domains? Two of Erikson’s (1980) stages of development are relevant here – generativity and ego-integrity. Let us consider each in turn.
Erikson’s Developmental Stages of Generativity and Ego-Integrity

Generativity and ego-integrity have specific implications for older adults. Erikson states that generativity is a precondition of ego-integrity, so generativity will be addressed first. Generativity, according to Lemme (2002) is the result of coming to an awareness of one’s mortality. At this point concerns over legacy take center stage. According to Lemme, “generativity is more broadly understood to mean a concern with future generations and society as a whole, with the kind of world one will leave behind” (p. 51). Erikson in his dialogue with Evans (1981) clarifies, “it means to generate in the most inclusive sense….I use the word ‘generativity’ because I mean everything that is generated from generation to generation: children, products, ideas, and works of art” (p. 51). As with each of Erikson’s developmental stages, generativity has its antithesis – stagnation. According to Kleiber (1999), this stagnation “is equated with self-concern, self-indulgence, and personal impoverishment that reflect ‘the lack of some faith, some belief in the species’” (p. 145). Antonovsky and Sagy (1990) advance the notion that generativity and stagnation are not essentially antithetical, but rather exist on a continuum. First, an in-depth consideration of generativity is in order. Attention will then be turned to generativity’s potential successor ego-integrity.

Generativity

Erikson (1950) introduced the concept of generativity. From that beginning generativity has taken on a variety of definitions and manifestations. McAdams and Logan’s (2003) chapter lays out what has been learned about generativity as a psychological (individual not societal) construct in the last fifty years.
The first proposition of McAdams and Logan’s chapter is that generativity is manifest in a concern for and a commitment to the nurturing of subsequent generations. Generativity in this sense is not restricted merely to parenting and family life, but can also function outside the sphere of family on a societal level. Such societal activities could take the form of serving in neighborhoods, churches, schools, organizations, communities and society in general. Expressions of generativity could include teaching, volunteering, mentoring, participating in charitable activities, participating in religion, participating in politics, and being a good citizen. Kleiber (1999) suggests several contexts for generative activities. He mentions serving others through volunteerism, mentoring, and youth work. These and other activities, he argues, produce consequences of generativity such as self-expression and self-renewal. According to McAdams and Logan, some forms of generativity might also include a desire to transform society in a way that is seen to make society a better place for future generations. The authors assert that a generative adult could be concerned with both conserving that which they deem good and transforming that which they believe needs improvement. Activities of transformation and conservation are both undertaken with the shared aim of enhancing the well-being of future generations. In summary, the authors assert,

"generativity can manifest itself in activities aimed at generating or producing new things and people, in caring for people and maintaining those most valued aspects of society, and in eventually offering up or letting go of those people and things that have been generated and cared for (p. 16)."

This definition implies that generativity can be biological (reproductive), parental (caring for children), technical (teaching), creative (artifact-based), and cultural (passing on meaning). The desire then is to leave a legacy and give something back.
With generativity well defined, it is appropriate to consider at what point in the life cycle generativity is a developmental challenge. Erikson argued that when the fifth and sixth stages of development are realized, that is, a person has identified who he or she is and developed an intimate relationship, then he or she is ready to commit to subsequent generations. Because of this view, it has been implied that generativity is the prerogative of middle-adulthood. Indeed, Erikson contended that generativity is a midlife stage of development. However, McAdams and Logan (2003) conclude, “generativity may be an especially salient psychological issue in midlife, but generative concerns and issues arise at virtually any point in the adult life course” (p. 18).

Generativity can often be accompanied by many challenges. Those with generative motivations may feel a sense of stagnation if they feel they are unable to generate or produce, or if what they generated does not have the impact they wished. Another challenge to generativity is self-preoccupation. Rather than directing generative thoughts and actions toward others, a person becomes his or her own generative object. The concern, focus and energy of this person are directed toward his or her own well-being, rather than the well-being of future generations. Such failings may prevent further psychological development.

Generativity may be sought for both selfish and selfless desires. The desire for some is to produce generative products that can provide symbolic immortality (children, books, art, reputation, teachings, etc.). This is, in some sense, a self-centered approach to generativity. However, at the same time, generativity is concerned with nurturing and caring for the next generation. This concern is often evidenced by giving up one’s self for children and community. McAdams and Logan (1990) discuss the seeming paradox
of generativity in terms of agency and communion. Agency involves motives for individual expression, expansion, protection and development. It encompasses goals dealing with the individual self. In contrast, communion is motivated by sharing the self with others and giving one’s self up for the good of others. So, the impulse for generativity encourages people to generate lasting products in an agentic manner and nurture those products in a communal manner. The concept of generativity compels people to be both agentic and communal at the same time. In this research McAdams and Logan (2003) found that highly generative adults expressed needs for both agency and communion during an oral life review. They also suggest that these two motives often conflict and make it difficult for a person to meet these inharmonious needs.

Whatever a person’s motivations, Erikson believes that generativity is crucial to the development of the individual and good for society. He saw the benefits of generativity as strengthening social institutions, linking people together, and instituting social change. This is a rather uncritical view of generativity that ignores the possibility that a generative person could undermine the good of society in the interest of his/her own ambitions for the future (as arguably was the case with Adolph Hitler).

Nevertheless, McAdams and Logan’s (1990) review of the research found that generativity is positively correlated with coping and adaptation abilities. They also found studies that suggest that generativity is positively tied to life satisfaction, happiness, self-esteem, affect, lower levels of depression and a sense of coherence in life. Similarly, Stewart and Ostrove (1998) found that generativity was a direct predictor of later midlife well-being for middle-aged women of the Baby Boom generation. Further, McAdams and Logan cite several studies where measures of generativity are positively associated
with psychological and social well-being.

While generativity begins with the psychology of individual lives, it is also shaped by societal influences. Generative adults and generative societies may vary in terms of generative expressions. Therefore, it behooves the individual and societal institutions to work together in encouraging generativity. McAdams and Logan (1990) summarize, “Generativity helps to script how people see the end of their own lives, helping them to construct identities in which endings give birth to new beginnings” (p. 25).

Ego-Integrity

Neuhaus (1982) posits that Erikson’s final stage, ego-integrity, stems from a growing awareness of the finitude of life and of one’s nearness to death. Ego-integrity, as described by Erikson (1980) is “the acceptance of one’s own and only life cycle and of the people who have become significant to it as something that had to be and that, by necessity, permitted no substitutions” (104). Therefore, ego-integrity implies coming to grips with one’s past in order to live well in the present. Kleiber (1999) defines ego-integrity thus: “Ego integrity is the result of having established some internal organization of the self as well as some connection with the rest of the world” (p. 164). To describe the antithesis of integrity, Erikson asserts that “the lack or loss of this accrued ego integration is signified by despair and an often unconscious fear of death: the one and only life cycle is not accepted as the ultimate of life” (p. 104). Such despair is often manifested in a dissatisfaction with life, a feeling that life has been wasted or regret over past choices, a sense that one is unable to change and start a new life, and a fear of death. One also feels concern because of the uncertainty of the future for one’s children,
grandchildren and self. The prospect of potential suffering and inevitable death generates
further anxiety and despair. To avoid this despair and to achieve integrity, Neuhaus
asserts that those in this stage need to “evaluate [their lives] and accomplishments and to
affirm life as having been and continuing to be meaningful and purposeful” (p. 9).
Kleiber suggests that despair over the past can be mitigated by self-acceptance. He calls
for an understanding of one’s limitations and abilities “with a certain amount of
forgiveness granted oneself for past failings and transgression” (p. 165). Such self-
acceptance, according to Kleiber, can occur within the contexts of life review and
reminiscence. These contexts can be undertaken alone or with others. Kleiber argues
that reminiscence and life review can contribute to a sense of coherence about one’s life.
Such development, according to the same author, occurs by finding meaning in a
personal, self-reflective process and also through connections to family, neighborhood or
nation. He suggests that generativity is also reflected in ego integration with “a concern
for leaving the world as well off as possible” and an “interest in the problems that
younger generations are and will be facing” (p. 165). Finally, Neuhaus describes how
ego-integrity is the ability to continue developing in various aspects of life: “religion,
politics, economics, technology, arts and sciences, and to accept leadership
responsibility” (p. 9). Thus, ego-integration is viewed as essential for continuing
development and successful adaptation in later life.

_Ego-Integrity and Generativity Reconsidered_

Antonovsky and Sagy (1990) sought to reconsider Erikson’s work by looking at
developmental tasks in a contextual formulation. They argued that “The jump from
generativity to integrity is far from adequate in allowing us to understand the significant
development transitions during some 40 years of the life cycle” (p. 362). In short, Antonovsky and Sagy sought to understand the processes and tasks in the developmental transitions of old age in a more contemporary light. These developmental transitions are phase-specific psychosocial crises. Such crises can be defined as the conflict arising between emerging personal needs and social demands. The authors specifically sought to understand the developmental tasks associated with retirement, but believe their findings apply to other transitions across the life cycle. Specific details about Antonovsky and Sagy’s findings will be presented later. It is sufficient here to note that generativity and ego-integration can be considered meta-heuristics with developmental tasks filling in the transition periods of old age.

**Developmental Tasks Associated with Successful Aging**

Havighurst (1953) claimed that “to understand human development, one must understand learning. The human individual learns his way through life” (p. 1). The same author describes the path of learning as a relatively level path with moments of steep uphill climbs. A developmental task is related to those moments of steep uphill exertion. Havighurst writes, “a developmental task is a task which arises at or about a certain period in the life of the individual, successful achievement of which leads to his happiness and to success with later tasks, while failure leads to unhappiness in the individual, disapproval by the society, and difficulty with later tasks” (p. 2). The same author asserts that these tasks arise from physical aging, from societal pressures and expectations, from the aspirations of the individual, and from a combination of these forces. Havighurst goes on to mention specific developmental tasks associated with older adults. The first three he mentions are adjusting to decreasing physical strength and
health, adjusting to retirement and adjusting to the death of a spouse. Consider each in turn.

*Adjustment to Physical Decline*

That physical health declines in old age is understood. A lifetime of disease, illness, and use takes its toll on the body. Eyesight dims, hearing diminishes, strength and agility decrease, and locomotion is impaired. Further, cognitive decline takes place, though as with other losses, it is not always easy to discern that which is attributable to biological degeneration alone or to other factors (i.e. social conditions, lack of stimulation, etc). Kelley and Charness (1995) suggest that there are a number of cognitive changes that take place in older adults. They mention declines in ability to remember new information, problem-solving ability and attentional processes (pp. 110-111). White et al. (1999), also affirm cognitive changes associated with aging such as slower processing speed, decline in working memory, decline in spatial ability and decrease in both sustained and divided attention (p. 360). Obviously, adjusting to cognitive and physical decline presents a developmental task for older adults.

Leisure is often affected by such cognitive and physical decline. Activities change or are abandoned, leading to a sense of loss if such activities are not replaced. However, as Kleiber notes, “leisure is relevant to the process of growth as well as adjustment in later life” (p. 164). Therefore, older adults can learn to adapt their activities when faced with physical and cognitive decline. A lifelong runner who can no longer run can adapt and learn to enjoy walking. Or, a life-long reader who has cataracts can check out books on CD at the library. Also, consider a lifelong socialite, who can no longer serve guests, joining an online community for older adults.
Adjusting to Retirement and Reduced Income

It becomes apparent from Antonovsky and Sagy’s (1990) work that there are culturally derived and individually derived tasks that are salient to older adults (i.e. coping with the cessation of fertility, dealing with anxiety over personal or spousal health, concern for children in the military, etc.). They propose four developmental tasks that are particularly salient to older people in Western society who are dealing with the retirement transition. These four tasks are: active involvement, reevaluation of life-satisfaction, reevaluation of a world view and a sense of health maintenance. The authors argue that successfully coping with these tasks leads to personality development with regards to ego-integration.

Retirement, according to Antonovsky and Sagy involves restructuring one’s hierarchy of personal goals, specifically with regards to how one spends time. Upon retirement, the forty hours a week previously spent on work are now available for other activities. Western societies tend to emphasize active involvement in life with an emphasis on production. After retirement social legitimacy is questioned and the task becomes a decision about what is to be done. To gain or maintain social legitimacy after retirement, it is believed one must retain an active lifestyle and “work” at something. The purpose of the authors is not to encourage an active lifestyle, but to point out that this is a challenge that arises upon retirement.

Antonovsky and Sagy posit that a reevaluation of life satisfaction is a core task upon retirement. After retirement a person is confronted with what he or she wants to do, whereas prior to retirement life is largely structured around work. The question arises regarding satisfaction with what has previously been committed to, accomplished, and
chosen. Upon retirement “the developmental transition through which one passes is likely to raise to a conscious, high level of salience the extent to which one feels satisfied in the central areas of life” (Antonovsky & Sagy, 1990, p. 365). This task is similar to Erikson’s ego-integration discussion except that it is not a final reckoning, but a chance to evaluate the past and present and see potential or lack thereof for the future.

Reevaluation of a world outlook implies a reformulation of the linkages between a person and his or her world. Such a reevaluation seeks to make sense of the world, to determine what resources are available to meet the demands posed by the world and to ascertain whether the demands are worthy of investment or engagement. After retirement, a world that was largely structured around work (i.e. schedule, contacts, tasks, and roles) is replaced by an unknown world. Previous mechanisms for dealing with old demands may not be appropriate in the new world. Thus, one is forced to confront how one will interact with the new demands and tasks before him. The focus here should not be on the idea that a person’s world view will or should change, but that retirement forces the person to reevaluate a world that has changed fundamentally.

The fourth major developmental task discussed with regards to retirement is a sense of health maintenance. Antonovsky and Sagy include this task in their discussion of retirement because of retirement’s link to age, not because health maintenance bears an inherent link to retirement. It is during the period of life where one typically retires that morbidity and mortality amongst peers is recognized. Thus, health maintenance becomes personally significant. As one experiences the diseases and deaths of peers, one’s own death becomes conceivable. The task, according to the authors is to define oneself as part of the minority who will die or suffer poor health in coming years or as someone who
will live and be well. The point here is that during this period of life issues of health become more salient.

Antonovsky and Sagy (1990) discuss the role of the individual in dealing with the developmental tasks of later life. The person has an active role in adapting to the biological and social changes, which take place over time. An older adult also should be active in creating patterns of behavior that will lead to ego-integrity and life satisfaction.

In western society, work is a central role for most adults. It gives people a sense of identity and a feeling of productivity. When occupation is absent, the individual often “feels that he does not count, that he is not a worthy member of society” (Havighurst, 278). In addition, if the worker is forced or has the perception of being forced out of work, he or she may feel unwanted and worthless. Also, when retirement comes, it is often accompanied by a serious reduction in income, thus older adults have to adjust expenditures. A reduction of expenditures in this way could also mean a narrowing of contacts and leisure activities. For example, an older adult may need to give up membership in a country club, thus reducing some activities and social contacts. Rowe and Kahn (1998) also assert, “retirement has deprived them of a major source of social and mental stimulation” (p. 50), thus making it harder for older adults to maintain mental functioning.

Death of a Spouse

Adjusting to the death of a spouse presents a common developmental task for older adults. In a case where the couple has lived together for a long time it is hard for one to get along without the other. After losing a spouse, the surviving mate often has to move and has to learn how to take care of the tasks of living that their spouse typically
performed. For example, the widower often has to learn to cook for himself. According to Havighurst, the adjustments that take place include such tasks as “living alone in the old home, moving into a small home, living in a rooming house, moving in with brothers or sisters, living with children, remarrying, [or] going to an old people’s home” (p. 279). Each of these situations requires unlearning old ways and learning new ways. This is often difficult because it presents itself at a time when learning comes harder than in earlier years. However, leisure and technology provide contexts for adaptation.

The death of a spouse often brings a loss of social contacts and a loss of shared leisure. According to continuity theory, it is important for the surviving spouse to continue participation in whatever leisure pursuits were shared with the departed spouse or choose to participate in some other activity. Thus, in dealing with the loss of social contacts due to a spouse’s passing, an older adult could use new leisure pursuits or technology to establish new contacts and activities.

Negative Life Events and Posttraumatic Growth

Some of the developmental tasks faced in old age are associated with negative life events and can present opportunities for growth. Loss of a spouse, deaths of peers, loss of economic security, and certain physical limitations and disabilities could certainly be described as negative life events. Consequently, negative life events provide opportunities for development or posttraumatic growth (PTG). Tedeschi and Calhoun (2004) define posttraumatic growth as “positive psychological change experienced as a result of the struggle with highly challenging life circumstances” (p. 1). They profess further that “It is the individual’s struggle with the new reality in the aftermath of trauma that is crucial in determining the extent to which posttraumatic growth occurs” (p. 5).
According to the same authors, those who experience PTG exhibit growth in five areas: appreciation for life, more meaningful relationships, personal strength or recognition of possession of personal strength, recognition of new possibilities for one’s life, and spiritual development. Thus, even in disturbing life events an increase in subjective well-being may not be far away.

Tedeschi and Calhoun also suggest that posttraumatic growth can lead to the development of wisdom. Wisdom is a concept that is conceivably related to subjective well-being. Baltes and Freund (2003) define wisdom as “an expert knowledge system concerning the fundamental pragmatics of life, including knowledge and judgment about the conduct and meaning of life” (p. 252). The same authors distinguish between theoretical wisdom and practical wisdom. Theoretical wisdom is knowledge about phenomena and causes of truth and the human condition. Practical wisdom, on the other hand, deals with knowledge that becomes action and produces real outcomes. So, experiencing PTG relates to Baltes and Freund’s conceptualization of theoretical wisdom. People who have experienced PTG have developed a theoretical wisdom about life and have a much more mature framework for thinking about their lives. They may also develop “the ability to balance reflection and action, weigh the known and the unknowns of life, be better able to accept some of the paradoxes of life, and to more openly and satisfactorily address the fundamental questions of human existence” (Calhoun & Tedeschi, 1999, p. 21).

Kleiber (2004) posits that leisure in its purest form (purely intrinsically motivated and enjoyable) can be a manifestation of posttraumatic growth. Such a manifestation entails “an attitude of relaxed contemplation, openness, appreciation and celebration” (p.
Successful adaptation after the trauma can then lead to an appreciation of the preciousness of life. So it seems that those, who have experienced PTG or those who are able to adapt to negative or highly stressful situations, may be especially likely to experience increases in subjective well-being.

Problems with Traditional Definitions of Successful Aging

While the preceding topics have tried to delineate how people can increase their sense of aging successfully, there are problems with typical definitions of success in this regard. Rowe and Kahn (1998) mention several problems with defining successful aging. First, they argue that definitions tend to define successful aging too narrowly. Next, they mention that many definitions of success assert that success is the absence of failure (i.e. health is the absence of disease). Further, they posit that much of the research regarding successful aging neglects the positive aspects and gains of old age. Obviously this implies that aging successfully involves not aging at all (Tornstam, 2005). Finally, definers of successful aging have not acknowledged the role of individuals’ values in defining what is successful or unsuccessful. Therefore it is important to consider successful aging in light of a model that can account for a person’s subjective aging experiences.

Selective Optimization with Compensation Model of Successful Aging

Diener (2000) suggests, “People’s values and goals seem intimately tied to what events are perceived as good and bad, and therefore a plausible hypothesis is that goal change is an inherent component of adaptation” (p. 40). He also views adaptation as one of the keys of subjective well-being. Baltes and Baltes (1990) propose a model of adaptation that focuses on goal negotiation. They suggest that three fundamental processes – selection, optimization, and compensation – enable successful development and adaptation across the
lifespan in general and in old age specifically. The SOC model builds on the idea that resources are limited at any one specific point in time. Thus, opportunities or losses that accompany normal development require choices about the reallocation of these limited resources. The SOC model was originally thought of as one single “integrative” process of adaptive mastery (Baltes & Baltes, 1990). However, a recent article by Freund and Baltes (1998) indicates that the three components of the model can be separate processes, with each aspect contributing separately to successful development.

Selection, the first component in the SOC model, refers to developing, defining, and committing to alternative goals and life paths. One central tenet of selection consists of narrowing the range of alternative goals and life paths from the available options that usually exceed the amount of internal and external resources people possess. The limitations and constraints of resources over the lifespan force people to make decisions regarding which goals and outcomes to undertake. By setting the range of goals, selection is the first step for successfully managing one’s life (Freund, 2001). According to Baltes and Carstensen (1996), “selection can entail the avoidance of one domain altogether or it can mean a restriction in tasks and goals within one or more domains” (p. 400). Selection then involves two categories: elective selection and loss-based selection. Elective selection focuses on achieving desired outcomes and refers to instances in which an individual’s choice is not based on lack of resources. For example, to go shopping one can either drive a car or walk to the store. If physical fitness is desired, walking can be selected rather than driving. However, if a loss in means or resources essential to the goal occurs, loss-based selection comes into play. Loss-based selection entails focusing on the most important goal, reprioritizing goals, adapting standards, and searching for new goals. For example, choosing to drive to the store instead of walking occurs when one is not physically able to walk long distances. Loss-based selection is an important process of adaptation when encountering losses in resources (i.e. time, physical abilities, etc.). It provides for redirecting resources, rather than simply giving them up to attend to more promising goals.
(Freund & Baltes, 2002). Thus, the adaptive task of an older adult is to select high priority domains, tasks and goals that are shaped by environmental demands, individual motivation, skills and capacity (Baltes and Carstensen, 1996). Eventually such differing motivations and selection results in a reduction of goals, or new or transformed goals.

*Optimization* refers to applying means in order to achieve optimal functioning or desired outcomes. According to Freund and Baltes (1998) “Optimization is defined as the allocation and refinement of internal or external resources as a means of achieving higher levels of functioning in selected domains (goals)” (p. 531). During optimization, reallocation and refinement of resources are important. Some specific goal-relevant means mentioned by Freund and Baltes are attentional focus, seizing the right moment, persistence, acquiring new skills and resources, practice of skills, effort and energy and time allocation. Thus, when an older adult encounters alternate goals or loss of previously available goal-relevant means, optimization is used to devote particular attention and resources to the chosen domain.

*Compensation* deals with the management of loss and involves substituting means or using alternative means to maintain a given level of functioning. The purpose of compensation is to improve capacity through compensatory strategies. Baltes and Carstensen (1996) explain, “Compensation…differs from selection in that the goal is maintained, but new means are enlisted to compensate for a behavioral deficiency in order to maintain or optimize prior functioning” (p. 401). For example, if walking is impossible because of certain physical constraints, swimming is an alternative means of maintaining physical fitness. So, the SOC model assumes that gains and losses occur jointly across the lifespan and is concerned with how people maintain a given level of functioning in the face of loss or decline in resources.

The SOC model provides a general framework for understanding developmental changes across life stages. Much of the research in which the SOC model is examined focuses on development during adulthood and old age. Freund and Baltes (1998) assert
that “[i]n old and very old age…the dynamics associated with SOC are thought to be amplified and to take on a special profile” (p. 531). Such amplification is the result of encounters with health-related constraints, losses in plasticity, and other resource losses. In summary, Freund and Baltes (1998, 2000) describe selection as the process of goal setting and optimization and compensation as the means and strategies of goal pursuit. The model, however, is generic, referring more to the dynamics of adapting to loss and achieving gains and does not refer to specific goals, priorities and tasks that most commonly define later life. Thus it seems reasonable to consider SOC processes as operating in service of the goals identified earlier (i.e. generativity, ego-integrity, and the accomplishment of developmental tasks), but there are likely others as well.

Baltes and Freund (2003) propose that the theory of selection, optimization and compensation is “basically value-neutral as far as goals and means are concerned” (p. 250). They go on to argue that wisdom, knowledge about the fundamental aspects of human behavior, can be the foundation upon which goals and means that are viewed as developmentally, morally and ethically appropriate. Thus, by considering that which is good and right for humans (theoretical wisdom) and applying this knowledge in one’s life (practical wisdom) happiness and life satisfaction will be produced. In Baltes and Freund’s (2003) model of optimal human development, wisdom is viewed as a means of defining what goals and means are desirable or appropriate and selection, optimization, and compensation constitute ways of implementing wisdom. By following this model, the authors assert, development occurs and life satisfaction and happiness increase.

Computer Use And Successful Aging

That older adults face significant challenges in learning to use and using computer technology is well documented in the first chapter. The SOC model can serve as a tool of adaptation to overcome those challenges, enabling computer use. Several studies have
linked computer use with certain aspects of successful aging. According to these studies, computer use can help seniors learn, communicate with others, and express creativity (Cusack, 1995; Eaton & Salari, 2005; Fisher & Specht, 1999; Jiska et al., 2005). Let us further consider how learning to use and using the computer may aid older adults in dealing with developmental tasks and contribute to successful aging. Table 2 provides a summary of how certain computer activities might be meaningfully related to various domains in later life, and thus lead to successful aging.

<table>
<thead>
<tr>
<th>Computer activity</th>
<th>Domains</th>
<th>Component of successful aging</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email friends and family</td>
<td>Family, One’s Group</td>
<td>Generativity, Social Connectivity</td>
</tr>
<tr>
<td>Video Chat/Text Chat</td>
<td>Family, One’s Group, Work</td>
<td>Generativity, Social Connectivity</td>
</tr>
<tr>
<td>Blogs</td>
<td>Family, One’s Group, Self</td>
<td>Ego-integrity, Generativity, Social Connectivity</td>
</tr>
<tr>
<td>Join Discussion Groups/Online Support Groups</td>
<td>Finances, Health, Intellectual, One’s Group, Self, Work</td>
<td>Adaptation, Developmental Tasks (Death, Retirement, Social Isolation, Physical Decline), Ego-integrity, Generativity, Social Connectivity</td>
</tr>
<tr>
<td>Create Family Website</td>
<td>Family, One’s Group, Self</td>
<td>Creativity, Generativity, Social Connectivity</td>
</tr>
<tr>
<td>Produce Family Newsletter</td>
<td>Family, One’s Group</td>
<td>Creativity, Generativity, Social Connectivity</td>
</tr>
<tr>
<td>Scanning Old Photographs, Digitizing Old Home Movies, Creating Photo Slideshows</td>
<td>Family, Self</td>
<td>Creativity, Ego-integrity (Life Review, Reminiscence), Generativity</td>
</tr>
<tr>
<td>Genealogy</td>
<td>Family, Self</td>
<td>Ego-integrity (Life Review, Sense of Self), Generativity</td>
</tr>
<tr>
<td>Photo Editing, Movie Production</td>
<td>Family, Self, Work</td>
<td>Creativity, Generativity</td>
</tr>
<tr>
<td>Download, Listen to and Compose Music</td>
<td>Family, Self</td>
<td>Ego-integrity (Life Review, Reminiscence), Generativity</td>
</tr>
<tr>
<td>Write an Autobiography</td>
<td>Family, Self, Work</td>
<td>Ego-integrity (Life Review, Reminiscence), Generativity</td>
</tr>
<tr>
<td>Research Health Issues Online</td>
<td>Family, Health, Self</td>
<td>Adaptation, Developmental Task (Physical Decline), Plasticity</td>
</tr>
<tr>
<td>Research Adaptive Activities Online</td>
<td>Family, Health, Self</td>
<td>Adaptation, Developmental Task (Physical Decline), Plasticity</td>
</tr>
<tr>
<td>Download Audio Books</td>
<td>Health, Intellectual, Self</td>
<td>Adaptation, Developmental Task (Physical Decline), Plasticity</td>
</tr>
<tr>
<td>Create a PowerPoint Lesson on Topics of Interest/Create Interactive History Modules</td>
<td>Family, Intellectual, Self</td>
<td>Creativity, Ego-integrity (Life Review and Reminiscence), Generativity, Plasticity</td>
</tr>
<tr>
<td>Participate in Online Tutorials or Other Intellectual Games</td>
<td>Intellectual, Self</td>
<td>Plasticity</td>
</tr>
<tr>
<td>Research Topics of Interest/Service Opportunities</td>
<td>Finances, Health, Intellectual, One’s Group, Self, Work</td>
<td>Adaptation, Generativity, Developmental Tasks, Plasticity</td>
</tr>
<tr>
<td>Manage Finances</td>
<td>Finances</td>
<td>Adaptation, Developmental Task (Retirement and Decreased Revenue)</td>
</tr>
<tr>
<td>Online Shopping</td>
<td>Finances</td>
<td>Adaptation, Developmental Tasks (Retirement, Decreased Revenue, Physical Decline)</td>
</tr>
<tr>
<td>Start Online Company/Work from Home</td>
<td>Finances, Self, Work</td>
<td>Adaptation, Developmental Tasks (Ambiguous Roles, Retirement, Decreased Revenue)</td>
</tr>
<tr>
<td>Entertainment</td>
<td>Self</td>
<td></td>
</tr>
</tbody>
</table>

With the preceding summary in mind, we can begin to speculate about how computers can play a role in contributing to successful aging in later life.
**Computer Use and Selective Optimization with Compensation**

With respect specifically to SOC as a means of adapting to the gains and losses of old age, online communities provide a forum wherein seniors might discuss how they modified personal goals based on some loss. Further, using the Internet as a research tool, seniors can seek out alternative means to pursuing their revised goals. Also, they can use computers as a compensatory resource that helps them maintain functioning by taking the place of lost resources. In addition, seniors can use computers as a research tool to develop strategies for reaching revised goals.

SOC can also be viewed as a process for choosing to learn to use computers and learning to use them. That is, computer use becomes a revised goal as a result of SOC processes. Time, resources and energy can then be applied to learning to use the computer in the desired manner. Strategies for compensation must then be employed to aid older adults in overcoming the challenges of learning to use the computer. Such strategies could include learning at a slower pace, asking an expert for help, taking a class, etc. It is important to note that there will probably be initial discomfort in learning to use computer technology. Such anxiety occurs because the perceived challenge is greater than perceived skill level. However, as with learning any new skill or task, employing SOC processes can lead to successful negotiation of the problems.

**Computer Use and Subjective Well-Being**

According to Diener et al. (2000) there are several domains of satisfaction in which subjective well-being is an issue. The domains mentioned are work, family, leisure, health, finances, self and one’s group. In Table 2 attention is given to the domains of work, family, health, finances, self and one’s group. If used in a constructive
manner, computer activities can eventually increase an older adult’s sense of well-being in each domain. Using computer technology to communicate with other people could increase a sense of well-being with regards to work, family, health and one’s group. In addition, using computer technology to maintain productivity could lend itself to a sense of well-being in the domains of work and finances. Also, simply the act of mastering certain aspects of computer technology could increase feelings of autonomy, satisfaction, and positive affect. Finally, it could be argued that using computer technology as a form of creativity could increase one’s sense of well-being.

Despite the potential for using computers to increase subjective well-being, it is also essential to understand that subjective well-being might decrease with computer use. First, anxiety often accompanies learning something new and challenging. This anxiety can be debilitating if not dealt with using SOC processes. Further, computer use for maladaptive purposes could also serve to undermine subjective well-being in the domains mentioned. For example, if one spends an inordinate of time using computer technology for entertainment and neglects other domains of life, overall well-being could suffer. Thus, it is important that computer use largely be undertaken for developmental purposes.

*Computer Use and Generativity*

Computer use can also lead an older adult toward generativity or be part of a pattern of stagnation, contingent upon how the computer is used. For example, an older adult could spend his or her time at the computer in ways similar to television watching, e.g. surfing the Internet indiscriminately. In contrast, that same individual could use the computer to be more creative and productive. Further, the person could use the Internet to research service opportunities or to keep in contact with children and grandchildren.
Technology is simply a vehicle that could lead to generativity, but such a course is not inevitable. As Ryan and Deci (2000) note, “The fullest representation of humanity show people to be curious, vital and self-motivated….Yet, it is also clear that individuals sometimes reject growth and responsibility” and become “apathetic, alienated, and irresponsible” (p. 68). Thus, while computer technology could help the psychological needs of competence, autonomy and relatedness, there is also the potential, without the proper motivation and context, for the computer to undermine subjective well-being. The argument remains, however, that computer technology can lead to a sense of competence by helping older adults to learn and express creativity, contribute to a sense of autonomy by serving as an aid in overcoming physical and mental obstacles, and promote relatedness to those who might otherwise be socially isolated.

Computer Use and Ego-integration

Computers may also influence ego-integration by facilitating life review and reminiscence. Consider an older adult reviewing his life by scanning past photographs. Also, older adults could use a word processor to write an autobiography to share with family and friends. Further, reminiscence can be shared via email, video chat, text chat or blogs. Technology provides a myriad of possibilities for encouraging life review and reminiscence, particularly because “typically, the past is remembered selectively and what is remembered is recast in a more favorable light” (Kleiber, 165). Peterson (2000) also notes, “in free recall, people produce positive memories sooner than negative ones” (p. 45). Technological tools can aid in the recall of the selective past. This optimistic recall, Peterson asserts, is psychologically beneficial with regards to good mood, perseverance, achievement and physical health.
Computer Use and Developmental Tasks

Technology can also play a role as a research aid in helping older adults seek ways of adapting their lives to the declines experienced in later life. For example, technology can aid in adapting to retirement. Retirement is often accompanied by the loss of roles, social contacts and income. If a retiree misses feeling productive, he or she can volunteer and put skills, knowledge and abilities to good use. With the aid of technology, one can feel productive by using the computer to do genealogy, scan old family photos, keep in touch with family, or work from home. If a person was forced into retirement, he or she could use technology to start his or her own business. When retirement is accompanied by social loss, the retired person can find a new social circle consisting of people who share similar interests and pursuits. The retiree could also join online communities to adapt to the loss of work social contacts. Technology can also be used to provide free activities such as gaming and learning. Further, technology can be used to glean ideas about adjusting leisure activities to a reduced income or to learn about leisure pursuits that are commensurate with income.

It has been argued here that computer use is a tool that may contribute to manifestations of successful aging (adaptation, increased subjective well-being, generativity, ego-integration and negotiating developmental tasks). If one accepts Ryff and Singer’s (1998) definition of well-being as “ultimately an issue of engagement in living, involving expression of a broad range of human potentialities: intellectual, social, emotional and physical” (p. 2), then it becomes apparent that computer technology can serve as a tool for intellectual (Tummermann, 1998), social (Generations, 1997), emotional (Dillon, 2002) and physical development (e.g. researching adaptive activities
or using technology to overcome physical limitations). However, before making such assertions, it is necessary to understand older adults’ experiences with computer technology in order to determine to what extent computer use contributes to aging successfully in their lives.
CHAPTER THREE

METHODS

Introduction

This chapter discusses the theoretical perspective, methodology and procedures that constitute this investigation into older adults’ experiences with computer technology in relation to a nationally recognized, computer education program hosted by a municipal senior center. The chapter begins with a description of the theoretical framework that informs this interpretivist research. The research design for this project utilizes case study methodology and the qualitative data collection method of in-depth interviewing. Document analysis and member-checking are used to ensure that the data which is presented is reliable. Finally, an explanation of the selection of the research setting and participants, the data collection methods, the analysis and the reporting procedures are presented.

Theoretical Framework

Crotty (1998) defines a theoretical perspective as “the philosophical stance informing the methodology and thus providing a context for the process and grounding its logic and criteria” (p. 3). This study uses an interpretivist inquiry paradigm (Alford, 1998) to describe and understand older adults’ experiences with computer technology in a computer education program at a municipal senior center. Tornstam (2005) discusses the
problem of using our own paradigms to study people’s reality. Regarding the study of others’ realities he writes, “we…end up with a remarkable situation in which researchers with one paradigm try to study individuals who are living according to another one” (p. 39). This argument underscores the importance of using techniques and methods that allow people’s perceptions of reality to be central to the research. Later in this chapter, such methods and techniques are discussed.

Alford (1998) writes, “Interpretive arguments are constructed from theories about social interactions that become symbolically meaningful for human actors” (p. 42). These arguments combine a concern for empiricism (data gleaned from human communication) with a theoretical focus on symbolic meanings. Regarding the potential sources of empirical data, Alford mentions collecting data from texts, surveys, interviews and documents. These sources of data are used to construct symbolic meanings of a social world. Thus, in an interpretivist study, readers get a glimpse of the world as seen by the actor. The role of the researcher is to as accurately as possible give detailed descriptions of the people and context at hand. The reader is then able to share vicariously in the lives and experiences of the research participants.

Alford (1998) argues that “within the interpretive paradigm, theoretical claims are viewed as the language used by members of a scientific community to share ideas about a social situation being investigated, [and] the conceptual constructions that explain ‘what is going on here’” (p. 44). Thus, after providing a rich, thick description of the phenomena at hand, attention is turned to theoretical questions concerning relationships among concepts. The description provided should accurately portray the participants’ views of the phenomenon of interest. However, it is the researcher that actively
constructs an image of what is taking place and what concepts or relationships are present. Care should be given to ground such theoretical assertions in the data in a compelling and thorough manner.

The interplay between description and theory represents an interesting issue. Alford (1998) addresses the balance between theory, methodology, and evidence in research. He distinguishes “grand theory,” where no effort is made to tie theory to evidence, from “middle-range theory,” which is concerned with linking theory, methodology and evidence. Methodology, according to the same author deals with providing specialized techniques and vocabulary to researchers. Methods, on the other hand, entails developing strategies for finding ways of associating the abstractions of theory to the phenomenon being studied. It is also defined as techniques for collecting, corroborating, verifying and evaluating data. Alford’s assertion is that researchers need to “reunite theory, method, and evidence in a way that can be both legitimate and powerful” (p. 18). While it is not quite clear what the author means by “legitimate,” this research project seeks to balance “middle-range theory,” methodology and evidence to provide a report that is both instructive and compelling.

The middle-range theory guiding this research is the model of selective optimization with compensation (SOC), with attention given to its connection to successful aging. This model makes assertions about how older adults adapt to the gains and losses of old age. It provides both a theory of personal negotiation applicable to learning to use computer technology and a theory of relevance for using computer technology as a tool to help negotiate later life tasks. With the SOC model providing a theory of personal negotiation, case study methodology should lead to a clearer
understanding of how older individuals learn to use computer technology. Consideration should also be given to how use affects other aspects of seniors’ lives. Stake (2006) argues that a case study researcher needs “to be sensitive to the meanings of activities as perceived by different people” and “anticipate what some of those perspectives might be” (p. 13). The review of the SOC model is an attempt to anticipate some of the psychological perspectives of older adults in order to better understand their experiences and give direction to the research.

Having considered the role of interpretivism as a theoretical framework and SOC as a middle range theory guiding the study, let us turn to a discussion of case study methodology. It can be argued that this methodology is suited to creating thick, rich descriptions of peoples’ experiences, and can eventually lead to compelling assertions and interpretations.

Case Study Methodology

Qualitative case studies are concerned with examining the individuality, particularity and complexity of a single case (Stake, 1995). Each case is similar to other people or programs, yet unique in many ways as well. Case studies are interested in both the commonalities and the uniqueness of such cases. Yin (2003) argues that case studies should be used when you want to deliberately “cover contextual conditions – believing that they might be highly pertinent to your phenomenon of study” (p. 13). Thus, case studies are essentially qualitative in nature and “emphasize episodes of nuance, the sequentiality of happenings in context, [and] the wholeness of the individual” (Stake, 1995, p. xii). Yin further describes case studies as relying on multiple sources of evidence. Through a thorough description of these sources of data, the researcher tries to
convey to the reader what the actual experience itself would convey. Stake (2006) indicates that a case study report should be a summary of what action was taken to try and obtain answers, what assertions can be made about the data with some degree of confidence and what needs further study.

Stake (1995) defines three specific types of case studies: intrinsic, instrumental and collective or multiple. This study fits Stake’s definition of a collective case study and is designed with a concern for learning from each individual case. According to Stake (2005), a collective or multiple case study is also instrumental in nature, in that the cases are examined with the intent of providing insight into a particular issue. Thus, multiple case study methodology provides effective procedures for examining several older adults’ experiences with learning to use and using computer technology within the aforementioned context.

In order to understand multiple case study methodology, it is important to clearly define the term “case.” In multiple case study research, “the single case is of interest because it belongs to a particular collection of cases” (Stake, 2006, p. 4). Thus, in a multiple case study, individual cases share common characteristics or conditions. Stake (2006) calls this common characteristic or condition a “quintain” (pronounced kwin’ton). He then describes what he calls the “Case-Quintain Dilemma.” According to the author, a quintain is the context, which ties individual cases together. The dilemma comes in determining if the focus of a study is on the quintain or the individual case. In this study, the quintain is a SeniorNet Program that is hosted by a municipal senior center in northeast Georgia. The individual cases in this study are participants in that SeniorNet Program and the focus of the study is on these individual cases. Description of the
quintain or SeniorNet program in this case, is included as a means of providing context for each case.

Case Study Limitations

Qualitative case study methodology has several limitations. Due to the subjective nature of case studies, new problems are uncovered more often than solutions to old problems. Further, Stake (1995) believes that the results of case study research “pay off little in the advancement of social practice” (p. 45). Another shortcoming mentioned by Phillips (1990) is that participants’ understandings and meanings are sometimes misunderstood by researchers and their readers. Such misunderstandings are often due to the shortcomings of the researcher and to poor methods that fail to eliminate misunderstanding as much as possible. Further complicating matters is the cost of qualitative research in terms of time and money. Additionally, the phenomena of interest occur over time and often evolve along the way, making it difficult to understand what is taking place. In addition, there are ethical considerations in conducting a case study. Such studies often deal with personal issues, leading the investigator to become deeply involved in the study. Privacy also presents risk in case study research because of the rich, descriptive nature of data presentation. Another shortcoming mentioned by Stake (1995) is that some scholars “go native” in the field, giving special license to the viewpoint of the research participants, and then reverting to less favorable impressions of research participants after returning to academic settings. All of these shortcomings are problematic to some extent and present challenges for the researcher.
Addressing Case Study Limitations

In order to deal with the preceding issues or limitations, the researcher must carefully consider each of them in turn. There is an argument that case study research raises more questions than answers. The purpose of this study is to understand the subjective nature of older adults’ experiences in learning to use computer technology within a given context and the meaning of those experiences to their lives. Thus, it is the intent of this study to raise issues that previous research failed to uncover. Much of the current research on this topic largely advances the perspective of the researcher and focuses on a particular computer education course or methods, rather than on the participants (Chaffin & Harlow, 2005; Cohen-Mansfield, et al., 2005; Kelley & Charness, 1995; Mayhorn, et al., 2004; McConatha, et al., 1995; Renold, Meronk, & Kelly, 2005; Saunders, 2004; Segrist, 2004). This study is intended to provide insight into the subjective nature of this type of learning experience for older adults within a shared context and to also raise issues that are relevant to study participants.

Misunderstanding and misrepresenting the meaning and experiences of research participants can be another problem in case study research. Thus, triangulation should be used to try to limit such misunderstandings and misrepresentations. Stake (1995) argues that triangulation is concerned with generating a comprehensive and accurate description of the case and developing correct interpretations. While qualitative methods allow for a multiplicity of perspectives, the case study researcher strives to portray research participants’ experiences and meanings and confirm those experiences and meanings as much as possible. Stake mentions investigator triangulation, theory triangulation, methodological triangulation, and member checking as means of enhancing the accuracy
of portraying experience and meaning. An examination of each method of triangulation is instructive.

Investigator triangulation is a process of asking other researchers to look at the same phenomena and seeking their interpretations. While this method is useful, it is important to understand that an outside researcher may not possess as comprehensive an understanding of the context of the research as does the principal investigator. Therefore, the final interpretive decision lies with the principal researcher, who must carefully and critically consider the interpretations of other researchers.

Theory triangulation calls for choosing people from alternative theoretical perspectives to review interpretations of the data. In this study, my doctoral committee, particularly my committee chair, acted as investigative and theoretical triangulators by reviewing the overall project at critical junctures throughout the research process. The faculty members on this committee hail from a variety of backgrounds and fields and have varying theoretical perspectives, thus providing insight and reliability by means of investigative and theoretical triangulation.

Methodological triangulation is another method of increasing confidence in interpretation and understanding by using multiple methods of looking at a phenomenon. For example, the researcher might follow up an interview with a review of old records. Member checking asks research participants to review rough drafts of writing where the actions and meanings of the participant are featured. The participant checks the material for accuracy and acceptability. It should be noted, that research participants might want to present themselves in a positive light. The researcher should take care to accurately represent the data, while taking into account that it might not be palatable to the
participant. In this study, research participants were given opportunities at each step of data collection and analysis to review the data and interpretations and offer feedback. A detailed description of this methodological triangulation is provided later in the chapter.

Each of the preceding processes of triangulation is concerned with limiting misunderstandings and misinterpretations. However, it is inevitable that misunderstandings occur in the research process because each individual holds differing views, beliefs, frameworks, experiences and perspectives. We can only understand something within our own frame of reference. Hence, it is the researcher’s responsibility to stretch that frame by earnestly seeking to understand research participants’ views, beliefs, frameworks, experiences and perspectives. Again, triangulation and rich, descriptive data help in this regard.

Another critique of case study research is that the process is time, labor and resource intensive. However, Stake (1995) proposes a research process that “would require a few weeks of fieldwork and an additional few months for planning, management, analysis, and writing” (p. xiii). Further, some aver that case study research is shortsighted because phenomena take place over time and evolve. This argument is cause for consumers of case study research to think skeptically about the case presented. However, the researcher can mitigate this problem by striving to obtain a rich, descriptive narration of how and why the phenomenon took place.

An additional concern with case study research, and qualitative methods in general, is that objectivity is lacking and the researcher often has a personal stake in the research. This perceived shortcoming makes it important for the researcher to stay as true as possible to what the participants say, mean and do and also be clear about his or
her own biases. However, it is impossible for the researcher to divorce himself or herself from the context of the research. The researcher inevitably affects the data, so it is important that the researcher strives to be as unobtrusive as possible. This is accomplished to some degree by trying to remain neutral in questioning and demeanor, by building rapport with participants, by delineating the researcher’s biases and by striving for objectivity.

Subjectivities Statement

Having discussed objectivity, subjectivity and researcher influence, allow me to present my subjectivities as a researcher. First, I feel that it is important to stress that one can never be fully aware of his or her biases. Bias stems from one’s paradigm or perspective and experience. Therefore, the best a researcher can do is to reflexively strive for disclosure of his or her perspectives and experiences, which might have a bearing on the research. The consumer of the researcher’s propositions can then evaluate what is presented based on that disclosure. After much thought, I feel it is important here to discuss my philosophy of knowledge (paradigm). Further, a discussion of my experiences with older adults and computers and my educational experiences, which inspired this study are relevant (experience). The purpose of this disclosure is the help those who read this treatise to evaluate the assertions found herein.

Huberman and Miles (1994) contend that it is important for researchers to make their preferences known. Knowing how researchers view the social world enables research consumers to know who is presenting the information. Researchers with different views of social reality present information in vastly different ways. Thus, a
reader of research who knows their author’s leanings can better evaluate how the social facts are being rendered or presented.

My personal epistemological assumptions lean toward Bhaskar’s (1978, 1989) and Spurrett’s (1998) conceptualization of “transcendental realism.” This branch of scientific philosophy argues that social phenomena exist not only in the mind, but in an objective world as well. Further, it is my contention that there are some fairly stable, lawful relationships to be found among social phenomena in what Bhaskar calls “conjunctions.” This assertion is founded on the sequences and regularities that often link phenomena together. From these observed sequences and patterns, one can derive constructs that account for individual and social life. Bhaskar, however, is careful to distinguish social laws from natural laws. Humans are agents unto themselves, so social laws or patterns are sometimes spurious. However, given a proper and thorough understanding of a given context, regular social patterns and behaviors are often observed and assertions can be made based upon these observances with varying degrees of confidence.

Bhaskar’s viewpoint recognizes the historical and social nature of knowledge and also places emphasis on the meaning making of phenomenological experiences. The aim of the transcendental-realist researcher is to seek causal explanations through evidence that illustrates how observed events are instances of the explanation provided. Thus, there is need for explanation of phenomena and for a careful descriptive account of each specific configuration.

Transcendental realism is a philosophy of thought that seems to try to find a balance between positivism and relativism. It recognizes that “men in their social activity
produce knowledge which is a social product much like any other...[but] that knowledge is ‘of’ things which are not produced by men at all” (Bhaskar, 1978, pp. 21-22). Thus, there is an objective reality, but it is man that creates meaning by interacting with that reality. Since people have different opinions and experiences, and are free to interpret that objective world independently, confusion often ensues. Therefore, in this research project, my intent is not to strive to understand the objective world, but to understand older adults’ interpretations of that world. However, it is not my intent to slide into judgmental relativism, “which asserts that all beliefs (statements) are equally valid, in the sense that there can be no (rational) grounds for preferring one to another,” but to focus on epistemic relativity, “which asserts that all beliefs are socially produced, so that all knowledge is transient, and neither truth values nor criteria of rationality exist outside historical time” (Bhaskar, 1989, p. 57). Consequently, care is given to describe the somewhat objective world of the senior center, computer education course, so that seniors’ interpretations of that world are presented in situ.

In addition to understanding my epistemological assumptions, which shape this research, it is also important to understand the experiences, which led me to conduct this inquiry. My past experiences observing older adults’ interactions with computer technology led me to examine this phenomenon in greater depth. Further, to more completely understand my assumptions and biases, one must consider my educational experiences with computer technology. First, let us turn to my personal experiences with older adults and computers, and my underlying motivations for conducting this research.

I grew up a great distance from my paternal grandparents. As such, our visits together were rather rare. This geographical separation fostered a feeling of frustration
and bitterness in me from my childhood. My grandparents are kind, caring, humorous people, and each time we were together, I realized that I missed out by not having them near. In addition, my grandparents lived near my cousins, and I observed how actively involved they were in their lives. I felt cheated out of something special and often longed for a similar relationship with my grandparents. Now, my bitterness and frustration returns to some extent as I see my own parents refuse to learn the technology that would keep them in better touch with their grandchildren.

The proliferation of communicative technology (i.e. email, chatting and video chatting) led me to consider how my grandparents could have used such technology to be actively involved in my life. Further, I am interested in learning how my parents could learn the computer technology that would help them foster positive relationships with my children. In a broader context, one of the underlying purposes of this research is to help older adults to gain an understanding that computer technology can be a means of connecting socially with loved-ones, despite physical separation.

Similarly, as computer technology increases in availability and ease of use, so does my desire to see people use computers to connect with others and to learn. My first real encounter with the idea of using computers not just for productivity, but also for learning, came during my graduate studies at the University of Colorado, Colorado Springs. There I encountered the concept of e-Training – using computer technology to train employees. Consequently, I began using computer technology to train people in a variety of settings. Due to these training experiences, I entered the Instructional Technology program at the University of Georgia. As I took courses that enabled me to create computer applications to help others learn, I began to delve into the literature on
adult learning. From there, my studies took me on reading forays into the developmental psychology literature. From this point on, computer technology, learning, social growth and human development seemed to mesh in my mind. The preceding events and experiences led me to this point, where I wish to consider, in a rigorous manner, whether the ideas gleaned from these experiences have merit.

While it is my desire to help others find out if computer use can contribute to development, I also realize that computer use does not guarantee growth or even positive experiences. Therefore, it is important for me to keep an open mind as I go about researching older adults’ experiences in a senior center, computer education course and to also look for negative experiences as a way of managing my biases. As will become apparent shortly, care was given to select a research setting and research participants that allow us to understand particular older adults’ perspectives on computer use within a given context. Let us now consider the selection of the research setting and participants.

Selection of Research Setting and Participants

The first obligation of a case study is to understand the single case. Therefore, selecting cases from which one can learn is vital in case study research. Stake (2006) suggests selecting anywhere from 4 to 10 cases in a multicase study. He posits that less than four cases does not show enough interactivity between the case and its situation and more than ten cases produces more data than the researcher and reader can understand.

Stake (1995 and 2006) suggests several criteria for selecting cases. First, cases should be chosen with the intent of maximizing what can be learned from the case. The researcher needs to look for cases that could lead to understandings, assertions and possibly to propositions. He next mentions selecting cases that are easily accessible and
open to inquiry. Further, the case study researcher needs to consider the uniqueness and contexts of alternative selections. Stake is also careful to point out that relevant characteristics are likely to be numerous and urges the researcher to choose a few combinations of characteristics as selection criteria. In his later work (2006, p. 23), he mentions three main criteria for selecting cases:

1. Is the case relevant to the quintain?
2. Do the cases provide diversity across contexts?
3. Do the cases provide good opportunities to learn about complexity and contexts?

Stake sums it up thus, “Even for collective case studies, selection by sampling of attributes should not be the highest priority. Balance and variety are important; opportunity to learn is of primary importance” (p. 6).

This study employs purposive sampling by selecting a variety of participants, while acknowledging opportunities for intensive study of each case. Patton (2002), describing purposeful sampling in the context of case study research summarizes, “cases…are selected because they are ‘information rich’ and illuminative, that is, they offer useful manifestations of the phenomenon of interest; sampling then is aimed at insight about the phenomenon, not empirical generalization from a sample to a population” (p. 40). Chosen Cases should be information rich, heterogeneous, illuminative and easily accessible.

Let us first discuss the selection of the quintain for this study and then turn our attention to the selection of participants. In the spring of 2006, one of my committee members sent an email via a recreation listserv that asked senior center directors in Georgia to contact me if they maintained a computer lab. I chose to study older adults’ experiences in the context of a senior center because of my ties to municipal recreation.
Based on the responses received, I chose ten centers that were geographically near to me (Northeast Georgia). I then sent surveys to each of these senior centers (Appendix B). Nine of the center directors completed and returned the survey. The surveys asked about the centers’ number of computers available, hardware and software available, constituent demographics, number of daily visitors, programs offered and support provided. Based on the information returned and the proximity of the sites, I visited four senior centers and spoke with the respective directors about the research project. These four sites were chosen due to the number of constituents served, diversity of constituents, and variety of programs offered. One surprising finding during this initial phase is that only one of the senior centers provides an open/walk-in computer lab. The other labs were either open only for classes or open only for members. None of the senior centers I visited were offering classes during the summer and two of the centers that served racially diverse populations would not allow me to conduct research at their facilities. The reasons for denying me access to their diverse senior populations were not given.

In conjunction with the survey results and my visits, I chose a senior center located in northeast Georgia as my research site. This senior center operates a SeniorNet program and provides computer classes to those fifty years and older. This center had the largest number of participants in their computer education programs.

Older adults are a heterogeneous group. Thus, even in a study where thick description of experience and perception is sought, it is still important to seek some diversity of experience and background in those participating in the study. Therefore, after choosing a representative senior center computer lab, I visited the chosen site. During this visit, I sought input from what Stake (1995, p. 67) labels an “informant.” The
president of the local SeniorNet chapter became my key informant (cf. Stake, 1995) and helped me give questionnaires to seniors who are or were involved with the SeniorNet program (Appendix C). The questionnaire asked about their background, computer experience and computer use. The computer lab at this center closed for the summer, so I approached seniors at the center and asked them if they participated in the SeniorNet program. My informant (the SeniorNet president) and I then met and chose participants based on diversity of backgrounds with regards to education, gender, marital status, previous occupation, computer experience, actual computer use, motivation and level of involvement with SeniorNet. I also asked my informant to help me choose participants who would provide a great deal of information and from whom we could learn the most. My informant knew all of those who filled out the questionnaire and together we chose six participants with diverse backgrounds. Unfortunately, those who filled out the questionnaire were not racially diverse. As previously mentioned, I tried to find a site that offered programming to racially diverse populations, but the directors of these sites denied me access for reasons that were not made clear to me.

Data Collection and Analysis

Data Collection

After choosing six research participants with diverse backgrounds with regards to education, gender, marital status, previous occupation, computer experience, actual computer use, motivation and level of involvement with SeniorNet, my informant contacted the six individuals and scheduled appointments for interviews. Over the period of one week, I conducted two- to three-hour interviews with the six individuals and with
my informant. To ensure accuracy using methodological triangulation, I sent an email to each participant after the interviews. The emails included a copy of the interview guide and I asked the participants to contact me with clarifications or additional responses to the interview questions. One participant responded with additional information. I then transcribed all seven interviews, sent each participant a copy of their individual transcript and asked them to read and return the transcript with clarifications or further explanation. Two participants responded with clarifications and questions regarding the transcripts.

In order to gain a better understanding of the quintain or SeniorNet program at this senior center, I asked my informant to bring documents describing the program to her interview. She also suggested that I look at SeniorNet’s website and the senior center’s website for additional information about the program. Ideally, a greater understanding of the program could have been garnered by observing the actual SeniorNet courses. However, the program was not active during the summer, and the constraints of time and money did not allow me to return to the center while the program was running. Therefore, documents gathered from my informant and the World Wide Web, as well as comments made by research participants, constitute the data gathered about this particular SeniorNet program.

Analysis

Analysis in case study research is a matter of giving meaning to impressions and thoughts that occur before, during and after data collection. The researcher takes apart that which he or she observed, heard and reviewed in order to give meaning to the parts of the phenomenon. Analysis is closely tied with interpretation in making sense of all
that is experienced during the research process. Bogdan and Biklen (1992) describe qualitative data analysis as a process of systematically working with data gleaned from interview transcripts, fieldnotes and other collected materials in order to understand the data and present what was learned to others. Therefore, the task of the analysis is interpreting and making sense of the collected materials. More specifically, according to these authors, the data are organized, broken into manageable units, synthesized and examined with an eye toward patterns. From this process, the analyst seeks to discover what is important and decides what to share with others. Thus, according to Stake (1995) analysis of case study data takes “the right ambiance, the right moment, by reading and rereading the accounts, by deep thinking, then understanding creeps forward and your page is printed” (p. 73). The same author proposes a meaningful process of conducting case study analysis.

According to Stake (1995) there are two ways researchers attain new meanings about cases – through direct interpretation of the individual instance and through a combination of instances until something can be said about a group of cases. Qualitative researchers tend to adhere to the previous method of attaining meaning, while the quantitative researcher uses the latter method. In this study, concentration is on the individual case with an effort to try to separate it into parts and put it back together in a meaningful and compelling manner. This is what Stake calls “direct interpretation.” However, during the analysis phase of this study, meaning is also sought from the repetition of instances of certain types of data and comparing and contrasting data to some extent. Nonetheless, this constitutes the secondary, rather than the primary approach.
Bogdan and Biklen (1992) suggest taking a short reprieve between data collection and analysis, which allows the researcher to distance himself or herself from the details and become refreshed and rested. Thus, the process of analyzing the data in this study began a few weeks after the data were collected. Tesch (1990) favors reading through all the collected data in order to acquire an overall sense of the data. The researcher then seeks to find relationships, probe certain issues, and aggregate categorical data, but these foci are subordinate to understanding the individual case. Thus, various definitions, interpretations and meanings are explored. Patterns are also sought in the search for meaning. The researcher seeks after consistency and especially consistency under certain conditions. Often, important meanings come from the continual reappearance of certain circumstances. By searching for patterns, the researcher is trying to understand behavior, issues and contexts with regards to the particular case. To make such analysis thorough, it is important to read and reread the raw data, reflect on the data, seek confirming and disconfirming data, and take a skeptical approach to first approaches and simple meanings. If repetitions occur that are relevant to the research questions or relevant to the topic, it is essential to isolate those repetitions. In addition, some data of import may only be stated once. The researcher uses his or her discretion to determine the relevancy of that bit of data. After interpretations are drawn about meanings, patterns and relationships, the researcher seeks confirming and disconfirming data in order to support or reject the interpretation. Let us now investigate the preceding process in greater depth.

The data analysis for this particular study closely followed the process set forth by Creswell (1998). First, Creswell describes organizing the data by transcribing interviews and putting transcripts and other collected materials into files. Next, he suggests reading
through all the data to get an overall sense of the research. Agar (1980) even goes so far as to suggest that researchers “read the transcripts in their entirety several times. Immerse yourself in the details, trying to get a sense of the interview as a whole before breaking it into parts” (p. 103). In this study, I transferred audio recordings of the interviews onto my iPod and listened to each interview several times as I walked to and from my office. I also thoroughly read through all of the data (interview transcripts, participant questionnaires, program documents and website information) several times. Following this step of thoroughly familiarizing myself with the data, I read through the documents again, while listening to the audio recordings and writing notes in the margins. After another reading, I wrote my findings in reflective notes and memos. From the overall reading, the initial notes and the reflective notes and memos, I then wrote summaries of the data with the intent of describing what I saw in context. For the purposes of member checking, I emailed the summaries to my participants and sought feedback from them regarding accuracy of meanings and information. After receiving feedback on the summaries, I made the appropriate corrections.

The final step before creating the final account or narrative, according to Creswell is coding the data. Coding is a process of classifying the data, taking them apart and searching for categories or themes. Developing coding categories in qualitative data analysis is comparable to giving someone the task of sorting a storeroom full of office supplies according to a scheme they develop. They examine each of the items in the storeroom by picking up and looking at each item. There are many ways they could sort the supplies. They could sort them according to size, color, use, country of origin, type
of material, etc. Similarly, there are many different ways to develop coding categories in qualitative data analysis.

Bogdan and Biklen (1992) suggest that developing a coding system involves the steps of “[searching] through your data for regularities and patterns as well as for topics your data cover, and then you write down words and phrases to represent these topics and patterns” (p. 166). These words and phrases then become coding categories. The categories are a means of sorting the collected, descriptive data, so that material relevant to certain topic areas is separate from other data.

In developing coding categories for this report, I read through the data, searching for patterns, regularities, topics and inconsistencies. Specific regard was given to developing codes in light of the literature review and research questions. After each piece of relevant data was assigned a code, I sorted the data by copying and pasting the data according to code. Then, following the advice of Strauss and Corbin (1990), I read through the material included within each code and looked for possible subcodes to take the analysis further. Finally, to seek alternative interpretations, the data sorted by code and summaries were given to my doctoral committee chair for review. From this process a final report was developed.

**Final Report**

The final report of a case study typically consists of a thick, rich description of the case, followed by assertions and interpretations. Creswell (1998) describes the final report as the summation of the interpretive process where the researcher makes sense of the data, takes lessons learned and represents a detailed description of the case and its setting. Attention is also given to larger meanings. Stake (1995) suggests that only the
best stories that are relevant to the assertions and interpretations of the research should be included. This author suggests an entry vignette that gives the reader a sense of the context of the case. He then proposes including a large portion of the report giving an extensive narrative description to further define the cases and contexts. Further, Stake avers that the development of relevant issues should be included in order to highlight the complexity of the case. Next, the author recommends providing descriptive details about issues that need further probing. In this section of the report, the researcher presents the most reliable data and how he or she confirmed and sought to disconfirm the data. Stake next proposes that the author make assertions about the case. In this portion of the report, the researcher provides information that allows the reader to rethink their knowledge of the case and modify previous generalizations about similar cases. Huberman and Miles (1994) recommend, “assembling a coherent understanding of a data set…through building a logical chain of evidence…and making conceptual/theoretical coherence, typically through comparison with the referent constructs of the literature” (p. 432). The final-report author also summarizes his or her understandings about the case and how generalizations or conceptualizations of the case changed through the research process. Finally, Stake recommends including a closing vignette that presents an experiential note from the perspective of the case. This reminds the reader that the report is based on individuals’ encounters with a complex phenomenon.

The final report for the data gathered from this research project begins with a description of the quintain – a SeniorNet Learning Center. I then provide a narrative summary of the data collected for each individual participant. These summaries are based on the participants’ own words and stories. I did take editorial license in re-
arranging the chronological order of the some of the data to increase coherence. I also altered some of the words and syntax to increase clarity. Special care was given to retain the original meaning of participants. The concluding section of the final report deals with my interpretations of the data in relation to the research questions and theory.
CHAPTER FOUR

CONTEXTUAL DESCRIPTION OF THE QUINTAIN AND CASES

Introduction

This and subsequent chapters deal with the context of this study and answer the first research question, focusing on older adults’ experiences with computer technology. First, a description of the SeniorNet program on the national and local level is given. Focus is then turned to summaries of participants’ in-depth interviews and surveys. Specific regard is given to participants’ biographical information, involvement with SeniorNet, positive and negative experiences with computers, computer-learning processes, computer use now, and plans for future computer use. Finally, how computer use has affected their relationships and their lives at or after retirement is discussed. With each summary I attempted to use the participants’ own words to tell their stories. I did take editorial license in re-arranging the chronological order of the data to increase coherence and in changing some of the words and syntax to increase clarity. Special care was given to retain the original meaning of participants’ dialogue. First, however, let us understand the quintain.
SeniorNet

SeniorNet is a national, non-profit organization interested in providing computer education to older adults in order to enhance their lives and enable them to share their knowledge and wisdom. SeniorNet supports local chapters in teaching people age 50 and over basic computer skills with particular focus on using computers and the Internet to pursue their interests. SeniorNet programs aim to “bridge the digital divide by providing computer access and education to those who may not have had the opportunity to learn computer skills in the workplace or who may not have the means to purchase a computer of their own” (SeniorNet: Home Page, n.d.).

SeniorNet Programs

The philosophy of SeniorNet is that peer instruction and small class sizes create a supportive learning environment. SeniorNet’s basic curriculum includes courses on introduction to computers, word processing, spreadsheets and using the Internet. The more advanced courses involve genealogy, graphics, personal financial management and tax preparation. SeniorNet members learn and teach others these courses. They can learn to touch up photos, send and receive emails, add attachments to emails, desktop publish documents, write their autobiographies, manage personal financial records, communicate with others all over the world, and serve their communities. SeniorNet’s website declares, “SeniorNet members share a desire to continue learning and a willingness to contribute their knowledge to others” (SeniorNet: Home Page, n.d.).

Operations

Senior volunteers manage local SeniorNet learning centers. They administer the programs, sustain learning center websites, teach computer courses and serve as coaches
for students. Since 1986, more than one million adults age 50 and older have participated in SeniorNet programs. Currently there are over 240 SeniorNet learning centers throughout the United States and other countries. SeniorNet provides these local chapters with newsletters, an extensive curriculum, instructional materials, discounts on computer-related products, regional conferences for participants, and research regarding older adults and computers. SeniorNet also hosts a website (seniornet.org) where older adults can participate in an online community.

SeniorNet members learn and teach each other a variety of technological skills. The courses offered are led by an instructor and several coaches, who teach anywhere from six to 20 students. The centers typically have approximately six to 20 computers, so there is one student to a computer. Most centers offer drop-in lab time where students can practice their skills or work on projects. Learning centers also have the option of providing computer-user groups, specialty workshops, camps, conferences and social activities. Finally, learning centers are housed in a variety of locations, including senior centers, community centers, public libraries, schools, colleges, clinics or hospitals.

Each learning center is locally or regionally sponsored. The sponsor should help provide a facility where the center will be located, ensure that there is sufficient parking, guarantee accessibility, and make sure the learning center is available at least 20 daytime hours a week. A sponsor can also help fund the learning center. There is a one-time startup fee of $12,000 to establish a learning center and an annual fee of $500 thereafter. These fees give the center access to SeniorNet curricula, software and software upgrades, a dedicated SeniorNet training specialist onsite for one week before the center opens and
professional communication support for the grand opening. If a site selected to host a learning center does not have a computer lab, SeniorNet can help set one up for $8,000.

At the foundation of each SeniorNet Learning Center are its volunteers. Seniors volunteer as instructors, coaches, administrators and board members. It typically takes 20 committed volunteers to start a Learning Center. Further, everyone who enrolls in one or more courses at the Center must join SeniorNet. The cost of an annual membership is $40 (complimentary memberships are given to coordinators and volunteers). This membership fee is paid to SeniorNet Headquarters and allows SeniorNet to support its programs. Student course fees, which are set by the local Learning Center, are retained by the Center to be used for equipment, supplies, volunteer awards, etc. These fees can also be used to recoup the initial startup cost of starting a center.

Description of the Local SeniorNet Learning Center

The Learning Center where this research was conducted is hosted by a community senior center. This Learning Center was opened in 1995 and operates under the auspices of the local county Parks and Recreation Department. The senior center is a 16,500-square-foot recreation facility that offers two arts and crafts rooms, a large multi-purpose room, a game room with two pool tables, a library, a lounge area, conference and meeting rooms, a large patio, horseshoe pits, shuffleboard, table tennis, a small lake, walking trails and the SeniorNet Learning Center.

This SeniorNet Learning Center is governed by a volunteer Board of Directors, which works in conjunction with the senior center director. The board is elected annually at the October volunteers’ meeting and serve for one year. The Board of Directors is comprised of a President, Vice President, Secretary, Treasurer and Education
Coordinator. Other coordinators can also be appointed by the board. Coordinators are responsible for maintaining equipment, responding to member questions or concerns, maintaining the SeniorNet membership database, keeping the Volunteers’ database, etc. Other volunteers at this Learning Center serve as instructors and coaches for the courses offered.

A typical class at the Learning Center is led by one instructor and three to four coaches. There are 12 computers in the lab, so each class is comprised of 12 students. The classes last from one to 8 weeks and meet one day a week for a two-hour instructional session. Open lab sessions are offered throughout the week to students enrolled in a class. The Learning Center provides beginning and advanced courses for adults 50 and over. Some of the introductory courses offered include Meet Your Computer, Basic Computer Maintenance, Windows Essentials, Basic Word and Files, Meet Your Digital Camera, Basic Graphics, and Beginning Excel. Other more advanced classes include Ripping CDs, Digital Imaging 1 and 2, Genealogy, File Management 2, Internet-Email, Quicken and Word 2. Finally, workshops are also offered at the Learning Center. Some of the workshops are Photo and Laminating Workshop, Scanning, Digital Imaging Workshop, and Digital Imaging 2 Workshop. The digital imaging workshops provide instruction on how to transfer pictures from a camera to a computer or scanning photographs and then improving them using software tools.

Having gained an understanding of the quintain, the local SeniorNet Learning Center, let us turn to a description of each of the participants of this study. They have all been involved with SeniorNet to one degree or another. They range from the President of the SeniorNet Board, to someone who has only taken one course at the Learning Center.
Description of the Participants

In order to obtain a general overview of the participants of this study, summary tables detailing participants’ experiences with computers follow. These tables provide a brief overview of each participant to increase the coherence of subsequent chapters and give the reader a better understanding of each participant. The tables can also serve as a quick reference in helping the reader distinguish between participants. These tables are based on survey data and interview responses. Following the summary tables, the participants’ responses to interview queries are discussed in detail.

Table 3
Robert Shanahan

<table>
<thead>
<tr>
<th>Biography</th>
<th>Grew up on farm in Missouri, government worker, Bachelor’s</th>
</tr>
</thead>
<tbody>
<tr>
<td>SeniorNet</td>
<td>Involved for 10 years, national and local level. Teacher. Webmaster and PC User Group.</td>
</tr>
<tr>
<td>Experience</td>
<td>1985 for work. Portable computer for work. Atari 400 and 800. AT&amp;T computer (486). Desktop publishing, database manager, web development. Very comfortable with computers and classifies himself as “above average.”</td>
</tr>
<tr>
<td>Learning</td>
<td>Self-taught. Learns by teaching.</td>
</tr>
<tr>
<td>Current Use</td>
<td>Volunteer work (web), news, music (25,000 songs), online finances, digital photography, digital audio, video chatting</td>
</tr>
<tr>
<td>Future Use</td>
<td>Same. More with DVD burner.</td>
</tr>
<tr>
<td>Problems</td>
<td>Crashes. Problems with Microsoft song downloading.</td>
</tr>
<tr>
<td>Relationships</td>
<td>Research daughter’s condition, family reunion, contact children and grandchildren, friends (online and otherwise)</td>
</tr>
<tr>
<td>Life Events</td>
<td>Dealing with forced retirement, research cancer.</td>
</tr>
</tbody>
</table>
### Table 4

**Lynn Shafer**

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Experience</td>
<td>1989 for work. Called computer a “Monster.” “Smart Alec Geeks” tried to intimidate her into learning. 1999 bought a PC. Comfortable with computers.</td>
</tr>
<tr>
<td>Learning</td>
<td>Time and experience. Relying on co-workers. Learned various systems at different jobs. NOT manuals. NOT long-winded teachers.</td>
</tr>
<tr>
<td>Life Events</td>
<td>Breast cancer. Keeps her company. SeniorNet is her social life. Helped her feel useful after retirement (helping others).</td>
</tr>
</tbody>
</table>

### Table 5

**Gary Jacobs**

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SeniorNet</td>
<td>Teacher of four courses at SeniorNet. Education Coordinator on Board.</td>
</tr>
<tr>
<td>Learning</td>
<td>Trial and error. Crashes. Make mistakes and learn from those mistakes.</td>
</tr>
<tr>
<td>Current Use</td>
<td>Word processing (manuals for SeniorNet). Tinkering with computer hardware and software. Communication. Internet for discovery, research and shopping.</td>
</tr>
<tr>
<td>Future Use</td>
<td>Same way. Would like to learn more about graphics. Plans to take a graphics class.</td>
</tr>
<tr>
<td>Relationships</td>
<td>He loves teaching others. People come to him with computer problems. Grandchildren - teaching Paint. SeniorNet has given him that opportunity. Friendships at learning center.</td>
</tr>
<tr>
<td>Life Events</td>
<td>Purpose. Retirement and continue teaching. Continue with his love - teaching and computing. Cancer research. Diversion if one is frustrated.</td>
</tr>
</tbody>
</table>
## Betty Stewart

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SeniorNet</strong></td>
<td>1 year. Took a course in Excel to learn about databases. Workshop on scanning for volunteer work.</td>
</tr>
<tr>
<td><strong>Experience</strong></td>
<td>1990 at work. Used husband’s computer for word processing. Used computers for two years as part of her volunteer administrative duties. Fairly comfortable with computers and classifies herself as “average.”</td>
</tr>
<tr>
<td><strong>Learning</strong></td>
<td>“Dummies” books. SeniorNet courses. Turning to husband or others.</td>
</tr>
<tr>
<td><strong>Current Use</strong></td>
<td>For volunteer responsibilities. Communication. Games. Medical research. Tickets.</td>
</tr>
<tr>
<td><strong>Future Use</strong></td>
<td>Learn file management. Does not have time, but would like to learn PowerPoint. Digital photography. No plan to go much further with computers.</td>
</tr>
<tr>
<td><strong>Relationships</strong></td>
<td>Keep in touch. Sending photos via email.</td>
</tr>
<tr>
<td><strong>Life Events</strong></td>
<td>Not much influence.</td>
</tr>
</tbody>
</table>

## Fred Cook

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SeniorNet</strong></td>
<td>2 years. Taught 2 courses and coached several others. Took digital imaging course.</td>
</tr>
<tr>
<td><strong>Experience</strong></td>
<td>20 years. Began working with mainframe on the job. PCs in the early 1980s. Writing and spreadsheets for his job. Tracking finances at home. Very comfortable with computers and classifies himself as “average.”</td>
</tr>
<tr>
<td><strong>Learning</strong></td>
<td>Learned on the job. Sitting down with manual and playing. Make a mistake and learn from that mistake.</td>
</tr>
<tr>
<td><strong>Future Use</strong></td>
<td>Digital camera - travel. Same way.</td>
</tr>
<tr>
<td><strong>Relationships</strong></td>
<td>Teaching others. Doesn’t want seniors to be left behind. Communication with children and grandchildren. Emailing photos.</td>
</tr>
<tr>
<td><strong>Life Events</strong></td>
<td>Getting involved with people at SeniorNet. Opportunity to teach, which he always wanted to do.</td>
</tr>
</tbody>
</table>
Let us now consider each participant in more detail.
Robert Shanahan

Biographical Information

Robert Shanahan grew up on a farm about six miles from Maryville, Missouri. He describes himself as a little farm-boy who attended a very small, country school for eight grades. He then attended a small high school and the year he graduated, there were thirty-four students overall in the school. Following his high school career, he attended Northwest Missouri State University in Maryville. Due to a desire to “get off the farm,” Robert graduated from college after three years. He also married during this time.

After college Robert obtained employment with the General Accounting Office, where he worked for five years. He next worked for a year for the Federal Aviation Administration. For the remainder of his 33-year career, he worked for the Federal Highway Administration. During this time he and his family moved many times and lived in a variety of different places. At the Federal Highway Administration, Robert started out in auditing because of his background with accounting. He spent two years in Washington, D.C. working in the training division as an auditor. Then, after about ten years as an auditor his responsibilities shifted to administration. He was what was called a management analyst, which is a lofty title for whatever needed to be done in his area. For nine years he worked as a management analyst in Kansas City before receiving a promotion as the executive officer, the top administrative job for the Southeast Region. This responsibility took him to Atlanta, Georgia. After about five years in this position, he took a promotion in Washington and ran an office that was called the Program Analysis Division, which tracked every penny of federal highway dollars and amounted

\[1\] All names have been replaced with a pseudonym.
to oversight of billions of dollars a year. His division maintained a major database, and during the time he was there (five years) the system was converted to an online database – a major undertaking. He describes the position in this division as “tremendous” and then comments that it ruined his health.

At this time Robert had a heart attack, followed by two heart surgeries in a matter of two years, so he had to retire on disability. While preparing for retirement, his old boss in Atlanta found out about it, called him and said, “Well, Robert, why don't you come back and be a staff person for me?” He decided to take the offer, and had to take a downgrade – a couple of grades because he wasn't going to have the same level of responsibility he had held before. He did not supervise anyone and could make his own schedule. So he did that for about five years and during the last eighteen months, he worked at home. He had a computer, fax machine and telephone that his boss set up for him. During this time he worked on special projects and wrote abundantly. In fact, he wrote a great deal during his entire career.

In 1995, Robert was working a reduced schedule and his health was failing, so he applied again and received disability retirement at 54 years of age. According to Robert, a 54-year-old is a young person – a young man. He felt that his mind was sharp, but his body was not good. So, he needed something to do and began using computers. He used computers to remain productive and active, which topic is covered in depth later.

Robert has a married son who lives near him and a daughter, who has lived with him for all but three years of her life. His daughter has peripheral neuropathy, which is a condition that is the result of damage to the nerves of the peripheral nervous system (Aronson, 2005). He also has one granddaughter, who has three children, making him a
65-year-old with three great-grandchildren. His granddaughter lives in upper New York and he has never seen one of his great-grandchildren and doubts that he ever will.

Involvement with SeniorNet

Robert has been a national host on SeniorNet for ten years. He has taught at and been involved with this particular SeniorNet Chapter for about nine years. He did not know that this local SeniorNet learning center existed until he attended a national convention about ten years ago. In fact, he did not know anything about learning centers before going to the convention. He traveled to the national convention in Wilmington, North Carolina because he was serving as an online host for SeniorNet. During one of the sessions at the conference, he happened to sit next to a conference participant, whose nametag indicated he was from the same county as Robert. From this man, Robert found out about this particular SeniorNet learning center and in the course of the conversation asked the man if they had anybody who teaches Internet at the center. In this way, Robert put together a course on Internet (the first Internet course at this center) and taught it several times.

Robert recalls when the SeniorNet learning center was organized. A group from AT&T set up a computer classroom at the senior center. At this point, the learning center only offered a few courses. Ten years later, Robert has taught many different classes at the center. He has also helped coach several courses, but has mainly served as a teacher because he feels the center needs teachers more than coaches. Robert has also served on the SeniorNet board for this local chapter. At present, Robert finds it nearly impossible physically to teach courses. Standing in front of a class for two hours proves to be too exhausting. Nevertheless, he retains his job as the local SeniorNet chapter Webmaster,
and serves on the board in that capacity. Further, he is involved in the PC User Group at the center and also hosts the book discussion forum on SeniorNet’s website.

Currently, Robert is training another SeniorNet member to take his place as Webmaster. At present, this member is assisting him, but Robert has turned much of the responsibility over to him. He jokingly comments, “You know…I have this bad heart and if I die they're going to be up a creek.” He is gradually turning that responsibility over, so that the learning center website will be safe, no matter what happens to him. Further, he figures that after ten years, it is time to move on to new challenges, because he is busy with so many other volunteer responsibilities.

*Experience with Computers*

Robert suggests that he always loved to type and wanted to be a typing teacher. In fact, he took several college courses toward that end, but ended up working for the government, where they refused to let him type. He could type much better than he could write in longhand, so he was excited when his office acquired computers. Robert’s agency obtained their first computer in the office in 1985, when he was the executive officer in Atlanta. They then acquired a second computer and began to train people to use it. Robert was still not able to start using a computer at this time because he had other responsibilities, and a member of his staff was assigned to use it.

When Robert moved to Washington, he received his first personal computer – an old, compact, portable computer to use in his office. He began doing all his writing on it and used it a lot. One time he decided to take the computer home and “lugged” it with him on the subway. He says that it must have weighed forty pounds and remembers thinking, “This is terrible! This isn't portable!”
Robert’s personal use with computers began with the purchase of an Atari 400 computer in the early 1980’s when computers became affordable for home use. He later upgraded to an Atari 800 and used these computers for game playing and word processing. He actually started using a home computer before he had a computer at the office and was fascinated by it. This was something new, and it started out as a gaming computer. He thinks it had a little word processor with it, but no spreadsheet software. After using the computers for gaming, he then began using it for personal correspondence and then for work. He recalls that it wouldn't do very much, booted from a disc, and used floppy discs for storage.

Eventually, Robert bought his first major PC, an AT&T computer. He recalls that it was a very nice computer. It cost twenty-five hundred dollars for the computer, printer and other peripherals. He had this computer at home, which allowed him to work more. He worked about 8 hours at the office and then returned home to work a few more hours on his home computer. He attributes this work schedule to the ruination of his health.

After returning to Atlanta, Robert remembers using a computer all the time and doing some desktop publishing for his agency. The company produced newsletters and other publications and gave him a top of the line computer – a 486. He was then able to take the computer home and work from home for the next eighteen months. He would typically go into the office on Friday for half a day and that would usually be it. He describes himself as a self-starter, so he did not need somebody looking over his shoulder to make sure he was working.

As mentioned previously, due to a strenuous career, Robert’s mind is sharp, but his body is ailing. After being forced into retirement due to ill health, he needed
something to do. So, his son built him a personal computer. The old work computer he had was worn out and outdated, so his son built a computer with a Pentium 1 or 2. However, he didn’t have a lot to do with this new machine, so his son said, “Well, you need to get on the Internet.” For Christmas his son gave him an HTML (web programming) book and told him he needed to be on the Internet. So, Robert tried the 10-hour sign-up deal, but was worried that he would use up too much time and be charged for overuse. His son encouraged him to purchase a subscription, so he did. From there he created his first web page and loved it.

After getting involved with the Internet, Robert learned of a job via SeniorNet. About six or seven years ago, before the dot-com bust, he was hired as a chat host and a message board screener for CBS Sportsline. The job allowed him to work from home. He started as a screener, scanning the discussion boards three or four times a day in order to ensure that the content was appropriate for their corporate image. This job started at $10 an hour and he never grew rich from it, but it was a nice little supplement to his federal employee’s retirement pay. He remembers that it also helped pay for some of his computer equipment.

The job as a discussion board screen eventually led Robert to another online job as a chat host. For one season these chat hosts covered every baseball game and football game from noon until midnight. Robert would enter the chat room and sit in on the chat as the host. He was responsible for greeting incoming chat members and basically overseeing the chat. Robert is not an expert in sports, so he never chatted much. He recalls that it was the most boring work he has ever done. However, he was paid $15 an hour, so at one time he was making a thousand dollars a month doing this.
Robert screened the message boards and was a chat host for about three years before the dot-com bust. The company he was working for lost their contract with CBS and they cut the hours down so much that Robert was doing about fifteen minutes a day sweeping messages. It was not worth his time to arise at six o'clock in the morning for two dollars and fifty cents. Robert was not desperate for money, so he resigned from the company. Within a couple of weeks, Robert received notice that the whole contract had been cancelled.

On his survey, Robert indicates that he considers himself to be above average regarding his computer expertise. He feels very comfortable with the computer after having used one for twenty-five years. Robert has owned multiple computers and recently bought a new one. He estimates that this is his fifth computer. He has an office and was using dual monitors before purchasing the new computer. He has not yet bought the card which allows him to use dual monitors, but plans to soon.

*Learning to Use Computers*

When asked about how he learned to use computers, Robert responded that he is basically self-taught. He recalls taking two computer classes. One class dealt with electronic forms. The Federal Highway Administration had an abundance of forms and they were switching to electronic forms. The FHA sent him to a one-week school in Washington to learn the new software. When he returned to work, it was his job to train all personnel in eight offices and in the regional office. He remembers one other course in creating and using spreadsheets. He enjoyed the course, but thinks he only learned one thing from it.
Robert believes that he learns as much when he coaches for SeniorNet as he did in the formal course. He feels that as you study and prepare to teach, you learn more. Further, when someone else teaches, you may pick up a tip or two. He remembers coaching a course where someone brought up the tip of using “control-Z” to undo something on the computer. He now uses “control-Z” all the time. He also picked up a tip to use “Windows-E” to open Windows Explorer.

One nice thing about being retired, according to Robert, is that you can be self-directed. If he starts down one path and then sees that something else is interesting, he heads down that path. In this way, Robert has a high amount of intrinsic motivation to learn what he wants, with the ability to abandon what he does not care to learn without repercussions.

**Current Computer Use**

Every morning Robert arises and goes to coffee, which gives him a reason to get out of the house. He meets with other retired men for coffee and discussion. Then, around 9 a.m., Robert returns home and works until lunch. Following lunch, he rests for a couple of hours and then continues working at his computer from around 3 to 6 o’clock. After that he gets out his laptop, sits in his easy chair and works jigsaw puzzles, crossword puzzles and reads the newspapers. With tabbed browsing, Robert visits the Drudge Report and the Atlanta Journal Constitution online. He also has other projects that he works on during the evening and uses a software application to work from his main computer. During his daytime work on the computer, he does volunteer work as Webmaster for six different organizations.
Speaking of his volunteer work, Robert notes that he has been a national host on SeniorNet’s website for ten years. He has also taught at the local SeniorNet, served on the board and volunteered there for about eight or nine years. He had to stop teaching SeniorNet courses because he is physically unable. However, he is also still involved with the PC user group and continues to serve on the local SeniorNet’s board because of his position as Webmaster. Similarly, Robert is the Webmaster for his large church, which has turned into a big job. Additionally, Robert is the Webmaster for the Senior Golden Olympics, which take place in his county. Once a year when these games are held, Robert works on posting the schedules, results and pictures on the website. He also created a web page for his neighborhood homeowners’ association.

In talking about his role as Webmaster for various organizations, Robert comments that he now uses Dreamweaver in working with basic HTML, but has not gotten into database management or any of the other more elaborate web functions. He would like to learn this because there are more complex things he would like to do on the websites over which he has charge. For instance, he would like to add drop-down menus and other dynamic content to his pages.

Robert also uses his computer for his own interests. He loves music and has a large collection of digital music on his computer. At one time he had approximately 25,000 songs. However, he pared that collection down not long ago – now he only has about 10,000 songs on his computer. He took most of those songs and burned them to DVD because he got his first DVD burner on his new computer. During the evening when Robert is working puzzles and reading the news, he will listen to music over the Pandora website (Westergreen, 2007). Along with listening to music on the computer,
Robert has a couple of “web areas” he visits every day. He specifically mentions visiting discussion boards every day. On a more practical note, Robert loves online banking and describes it as wonderful. He pays his bills online and makes purchases via the Internet, so he doesn’t have to leave the house to shop. He has enjoyed success shopping online.

When asked about his personal computer use for gaming, Robert indicates that he doesn’t play games very much and then began talking about his wife’s computer use. According to Robert, his wife spends every night sitting at her computer, playing games. While she plays games, she also listens to books on CD. She loves books on CD and has listened to about eight hundred books in the last five years. Throughout the day, she also uses the computer for email and looking up information on quilting. She has some quilting programs on her computer, but he thinks she has never made a single quilt from any information she retrieved from those programs.

As has been well documented, Robert is Internet savvy. When asked about favorite websites, Robert speaks of one he visits daily. The website is called "Christian Photography" and was started by a Canadian friend of Robert’s, who is also active in SeniorNet. He has actually met this lady at a “bash” his local SeniorNet held in 1996 or 1997. Approximately 75 people meet in the Marriott Hotel in Atlanta. People came from all over the world participate in what Robert calls “a big party.” The party lasted two or three days, classes were provided, and a banquet was held on Saturday night. He says it was a great opportunity to meet the people with whom he became acquainted through technology.

Robert not only appreciates his friend’s Christian photography site, but he also enjoys manipulating digital photographs. He is quick to point out that he has a digital
camera, but does not describe himself as a photographer. He does not enjoy taking pictures per se, but he does do a lot of manipulation of graphics using PaintShop Pro. He works with these digital photographs in order to use them with the websites he manages. He knows how to reduce the image in size for display over the Internet, but he is not comfortable with actually manipulating objects within the photograph. He did, however, take a course where he learned how to outline people in a photograph, but that is not what he generally does.

While maintaining his church’s website, Robert has learned how to work with digital audio. He is responsible for putting the sermons up on the website to provide them as streaming audio. These sermons are recorded on tape and Robert re-records them onto his computer. He learned to do this when he digitally recorded his old vinyl records and tapes. Robert also sings in the choir and he wanted to capture their performances even though he could not put them on the web due to copyright laws. However, he did digitally record the performances for the parishioners’ and his own enjoyment. In fact, when his computer recently crashed, these recordings were lost. He had to bring the tapes home again and spend a whole day finding and re-recording the songs he lost. He says he actually enjoyed doing it over because he was able to listen to the performances again.

**Future Computer Use**

When asked about how he intends to use computer technology in the future, Robert responds that he will continue using computers the same way he uses them today. However, he recently obtained his first DVD Writer and it has already been useful to him. A friend of his had a member of his family produce a two-hour video, which they
put on a single DVD. This friend wanted multiple copies to give to his children because there was an interview of him and his wife about their fifty-two years of married life. He tried to burn copies, but was having problems, so Robert used his new DVD burner to make copies for his friend’s children. He remarked, “It worked beautifully,” and he was able to make four copies. His friend thinks Robert is a hero and is going to take him out to dinner as a gesture of appreciation.

Problems or Negative Experiences with Computers

When asked about negative experiences with computer technology, Robert tells of a couple of times when he had a hard disk crash. Unfortunately, in the most recent crash, he had not backed up the hard drive properly. As was already mentioned, he lost all of the church music he had converted to digital format and he lost all of the work he had done the previous week or two. Robert also recalls working on a white paper that his boss was pushing him to get done. He had the paper on his old compact computer and had just about finished it when the computer crashed. It was not a hard disk crash, but the computer locked up and he had not saved the document. He recalls sitting down to recreate it, feeling sick. It was not an easy paper to re-write because it was a well-researched and well-thought-out paper.

From these experiences Robert has learned to back things up on his computer. He told me about a website that offers two gigabytes of online storage with automatic backup. So, he backs his files up every morning. He starts the backup process, goes to coffee and when he returns, the computer tells him that the backup was successful. In fact, he checked the files the day before our interview and found that the backup process worked. He adds that if he ever has another crash, he is covered. In addition to backing
up his files online, he also saves his files on other hard disks. He proudly informs me that his last computer had four hard disks, including an external hard disk, which he still uses. Even though his files are backed up, Robert laments that when things crash, he still has to reinstall all of his programs. Finally, regarding computer crashes, Robert notes that most of his web work is kept on a server, so he does not have to worry about losing his work with the websites.

Robert tells of encountering another problem that stemmed from his love of digital music. He signed up for a program offered by Microsoft that gave him access to unlimited music downloads. It was a 14-day, free trial, so he spent a good many hours downloading music. He thought the music was free and says the program worked beautifully. He says that he should have known Microsoft does not give anything away. After the 14-day trial period, if you do not pay $15 a month for the service, which Robert was not going to do, the files become locked and you cannot listen to downloaded music. He notes that he has plenty of music and did not need to pay the $15 a month for the service. He understands that this music service has to deal with the digital rights on the music, but feels that the offer was not clear with regards to what would happen at the end of the trial. So he was unhappy that he wasted all that time and cannot enjoy the music he downloaded.

Regarding computer problems, Robert has helped a lot of people with their problems. He has helped people from his church on an individual basis and has also conducted computer seminars at his church. He has often gone to people’s homes to help them with computer problems. He adds that he is not a professional and does not guarantee his work, so he never accepts payment for any of the work he does. He notes
that he is always willing to help any of his friends because he finds joy in helping others with computers. Robert also enjoys serving at the learning center. The joy comes as he sees seniors who have never touched a computer attend SeniorNet classes, and sometime later, seeing them continuing on with computer education and growing in their experiences. Seeing this, he remarks, adds to his self-fulfillment.

*Relationships Affected by Computers*

While being interviewed, Robert received a phone call from his daughter. After talking with her for a while, he began to tell me about her. She has peripheral neuropathy and has lived with Robert and his wife for all but about three years of her life. He has used the computer to conduct research about his daughter’s condition, but did not go into detail about how computer use has affected his relationship with her, other than allowing him to research her condition.

Robert uses his technological skills to organize a family reunion for his family on his mother’s side. For the first time, all of the first cousins are going to meet in Colorado. Accordingly, Robert put together a website for the reunion. He began by putting up some old pictures and some current pictures of family members. He also contacted family members by email and asked them to write their stories. He laughingly tells of sending an email and receiving a reply from his cousin's wife, which said, “who are you?” Robert then posted family pictures, addresses and telephone numbers on a password protected site, so the information was not publicly accessible. He had never created a password-protected site before, so he had to learn how to do that. His good friend showed him what to do and Robert accomplished the task. The preparations for the
reunion have gone really well and all of his cousins are planning on attending. He hasn’t seen some of these family members for fifty years, so he is quite excited about reuniting.

Robert also uses email to keep in contact with grandchildren and great-grandchildren. He notes that one of his progeny owns a web cam, but does not use it much. From there, Robert recounts helping his friend prepare to give a presentation on video-conferencing at a conference for the National Association of PC User Groups. He and his friend tested many of the free video conferencing software packages. His friend put together this presentation and gave it at the conference. Robert was going to participate with him in a live video chat during the presentation, but the hotel where the presentation took place did not have Internet access, so the video chat never happened.

*Computer’s Impact on Life Events*

After Robert was forced to retire because of physical limitations, he needed something to do because his mind was still sharp. He turned to computers and this use and his other activities have kept him busy. In fact, Robert says that he is as busy as can be and hopes to stay that way until he dies. Having something to do helps him look forward to and enjoy every day. He takes pleasure in getting up at six o’clock in the morning and cannot wait to get started in his office. Computers have allowed him to never run out of anything to do. He says that if he ever does run out of things to do, he will create a new task to work toward.

Robert has experienced poor health in later life. He had prostate cancer and all kinds of heart problems. Also, because of some blood transfusions that he had with his heart surgery a few years ago he discovered he had Hepatitis C. He did a lot of research about prostate cancer and his other illnesses. When he was taking Interferon treatments,
he did a lot of research via the web. He and his wife have even taken research to their doctors and have had them read about their findings. He notes that doctors sometimes are not aware of things because they do not have time to read everything that comes out. So he and his wife do medical research on the Internet and he finds it unbelievable that you can find “everything” on the Internet anymore. He has a healthy skepticism toward the Internet, is cautious about it, and understands the need to know and check multiple sources. However, he does feel that the Internet gives him knowledge of health and treatment issues.

When asked specifically about how computers have impacted his major life events, Robert told me quite frankly that his life might have been over without them. He says that he thinks his computer use may be why he is still alive. He notes that this statement may be a little dramatic, but he says he has an active mind and loves to read. He adds that he cannot read twelve hours a day very well and physically is unable to do yard work or any physical work anymore. So, he speculates that if he had to just sit in front of a television set, he would have lost his mind. Computers have given him the opportunity to keep his mind very active and get interested in a lot of things. He has met people all over the world and has friends everywhere through the Internet. He notes that they are not close friends, of course, but he knows them. He knows about their families and they know about him.

Regarding meeting friends via technology, Robert recalls the first time he went on SeniorNet to the chat room café. He read this message in the chat room and thought, “This is just not important.” At the time he asked his wife, “Why would anyone want to do this?” However, he went back to the site as he was searching for senior sites.
few days he saw what was really going on in the chat room. What was said was not
important. What *was* important was that he got to know other people and they got to
know him. He learned something about their families or their problems and pretty soon
he began to care about them. Sometimes he would pose a question and someone would
write to him and help him with it or provide the answer on the web. So, to Robert that is
one of the real pluses and why seniors should get involved with computers. Just because
seniors may be housebound, they do not need to be world-bound. They can go anywhere,
see anything, and do anything and never leave their house. They can talk to people, play
games with other people, chat with other people, and now with voice chat services, they
can talk to people all over the world for free. Robert adds that with a video cam, you can
even see those people. In fact, he and his friend usually video chat every day. He sees
his friend in the morning at coffee, and then in the afternoon or evening they usually
video chat.
CHAPTER FIVE

DESCRIPTION OF PARTICIPANTS CONTINUED

Lynn Shafer

*Biographical Information*

Lynn Shafer (without the ‘c’) was born in Washington D.C. Her father was in the Navy and was transferred to Norfolk, Virginia when she was six months old. Her first six years were in Norfolk, Virginia and then her family moved to Quonset Point Naval Air Station in Rhode Island. She lived in Rhode Island until she married in 1955, after turning 21. She married an Army man, so she went from career Navy to career Army.

Lynn’s husband was transferred to Ft. Dix, New Jersey, where they lived for a couple of years and then transferred to Fort Benning, Georgia and lived there for a time. From there they moved to Alaska where they had many interesting experiences. She recalls that she thought she had gone to the ends of the earth, because it truly is, or at least was, the last frontier of the forty-eight states. I didn’t quite know if she was joking, but with a gleam in her eye, she laughingly told me that she knows there are fifty states now. She adds “contiguous” for my benefit, and we laughed together.

Lynn recalls how some military wives had to be medically evacuated because it was so depressing in Alaska. They had six months of darkness in the year. They were stationed a hundred miles south of the Arctic Circle at Fort Greeley, which is also a hundred miles southeast of Fairbanks. Fairbanks was the closest city and it was a
hundred miles away on bad road. They did not go there except to visit maybe once on a weekend, and she thinks that was the only time they went to Fairbanks. They were isolated and it was remote, but interesting because of the wildlife. About her time in Alaska, Lynn concludes that she enjoyed it and hated it because she was there for two years, when one year would have been plenty. The second year was a little harder, but she endured because she knew they were going home.

After two years in Alaska, Lynn and her family returned to Fort Benning Georgia where it was “nothing but shorts and sandals.” In Alaska they bought parkas, boots, rain gear, sleds and skis. While stationed at Fort Benning again, they tried to sell their winter equipment. She declares, “Try and sell those in Fort Benning in spring!” They tried to sell their gear in Alaska, but everybody in Alaska already had all they wanted. “Leave it to the Army,” she says, “to take you from one extreme to the other.” Lynn and her family were at Fort Benning for a couple of years and then her husband, who is now deceased, decided to finish his college education. The Army had a program called “Bootstrap” that allowed you to finish your college education if you could do it in six months. So her husband went to Fort Leavenworth, Kansas to school for six months.

Lynn and her family then had orders to go to Germany and she was thrilled. They spent two and a half years outside Heidelberg and she loved it. In fact, she loves Europe. They were allowed to travel and anytime her husband had any time off at all they would use the money she saved and travel. At this time they had four children, two boys and two girls ages 3 to 10 – they had four children in seven years. Living in Germany and traveling was quite an experience for her children. They had to learn German in school and were able to visit about sixteen countries. Lynn she was the navigator who planned
their destinations and routes, and loved it. They got to see Austria, Italy, Lichtenstein, Luchtenberg, France and Amsterdam, where the tulips were in bloom.

Lynn and her family went from Germany to Fort Benning again, but her husband had orders for Vietnam. They had thirty days to get Lynn settled into a house and get him to get ready to go to Vietnam. This was a horrible time in their lives because they did not want daddy to go. At this time, wives were allowed to meet their husband somewhere for R and R at about the halfway mark of their tours. Lynn decided to meet her husband at the eight-month mark in Hawaii. She thought that six months was too hard, so she decided on eight because she felt she could endure four months a little easier. She recalls that it wasn’t.

Lynn’s husband was in Vietnam for a year. His return from Vietnam marked the beginning of the end of their marriage. When he came back, they were strangers and she feels that happens to a lot of military spouses. The kids were used to her being the boss, she was used to being in command and it was very hard to fit him into into the picture. She remarks that it was very awkward. So in a couple of years, he divorced Lynn and married his secretary. She then went to work and has worked ever since 1974. She knew how to work, but had only worked for one year as a secretary for an Agricultural Economics professor at the University of Rhode Island before getting married. So with her one year of experience she went around looking for a job. She notes that it was very difficult at the time because of the “misplaced housewives” that were literally abandoned to fend for themselves. All of the sudden she was supporting five people, which she was not used to doing.
Happier times came when Lynn finally obtained employment, working different jobs. She worked her way up to Emory, where she worked at the business school. She worked there for five years and enjoyed it very much. She then grew tired of academia and switched to medical, because she has always been interested in that field. She applied for the medical school and worked at Emory Clinic. She also worked at Eggleston Children’s Hospital, so she had two jobs at the time. Her career consisted of working in medical offices and her last job was office manager, which she enjoyed very much.

Now, Lynn declares, she is a senior citizen and retired. She retired because she said to herself, “I can't keep this up. I’m too old for this. So, I think I'll just be poor, but I won't be stressed out.” So, at the age of 69, Lynn retired and thought, “Well, what’ll I do now?” She is now 71 and believes the cliché that older people want to be useful in the community and still want to learn. She loves to learn everything and anything. In fact, she says she has a voracious appetite for knowledge.

Of Lynn’s four children, the one who lives furthest from her is 15.2 miles away. She comments that it is nice to have them so close. Two of her children moved away to Pennsylvania and Florida and stayed a few years, but then they came back. They are all around her now. She has nine grandchildren and two great-grandchildren.

Throughout the interview Lynn categorized herself as single, divorced and widowed. When queried about this categorization, she explained that she is Catholic and in the church's eyes there is no such thing as divorce. So when her husband divorced her in 1972 to marry his secretary, he was committing adultery by living with this woman. In the church’s eyes, she was still married to him until death. Since he died in 2001, Lynn is
now single and divorced and a widow. As you can imagine, this causes quite the confusion when she indicates all three on medical forms.

_Involvement with SeniorNet_

As stated previously, Lynn loves to learn and had a desire to be useful in the community following retirement. Consequently she went to the local SeniorNet to see what they had by way of computers, because she had read somewhere about the computer business. At first she thought the senior center was going to be a bunch of old people and she envisioned a nursing home, where everybody just shuffles around and plays cards. She thought, “That's not me. I cannot do that, because I'm not ready for that.” She felt that she could do that sort of thing when she is 99, but not right then. She went to the senior center anyway and found out they had computer classes, so she joined. After she took a few classes one of the ladies at the center told her that she would be a good coach. Lynn did not want to coach because she describes herself as shy, but she decided to give coaching a try. She loved coaching and has also taken about every course that the local SeniorNet has offered. She took these classes three years ago, took a break in 2004 due to illness and then returned to SeniorNet in 2005. During this time she has taken Windows Essentials, Excel, Genealogy, Word 1 and 2, File Management, Advanced File Management, Digital Imaging, Digital Imaging 2, Basic Graphics and Advanced Graphics. In addition to taking all of these courses, Lynn has also coached them all. She would like to take a course on Quicken, but nobody will teach it. As soon as they do, she is going to enroll.
Experience with Computers

When asked when she first started using computers, Lynn recalls that they had computers at Emory around 1989. She says the office workers were all terrified because they were used to their little electric typewriters. When the office staff received them, they inquired, “What are you putting on my desk? What is that monster?” She remembers that back then nobody knew how to use computers, so it was on-the-job training. Learning to use the computer, she recalls, was very difficult because of the “smart alec geeks” who would come in to help. Someone would make a mistake and have to call the “help” desk and their technicians would come in and show off their knowledge. In a condescending manner she recalls the interaction, “Well what have you done to it now, Lynn? Well, you messed it up again.” She thought they were trying to be cute and of course the office staff was trembling in their boots because they were afraid they had done something wrong. It was really horrible, she recollects, the way they did not really teach you, but just tried to intimidate you into learning. Even after these horrible early beginnings, Lynn finally admits that in 1999 she finally broke down and bought her own computer.

Learning to Use Computers

As the preceding experience illustrates, Lynn’s first exposure to a computer and computer support were less than stellar. She did not care for being intimidated into learning to use computers, but notes that she gradually learned. After a while the office staff grew accustomed to using computers, although they weren’t allowed to change anything. They used the computers in her office mainly for word processing. They wrote letters and knew you could change the margins, but that is about all they knew
about the computer. Fear of the unknown was prevalent with her early use of computers. She did not know how the computer worked and tried to figure out and understand where things went when you saved them. She had to figure out that she needed to stop trying to understand it and just do it. Giving up this sense of control or understanding was very hard for her.

After her experiences with work computers, Lynn thought that she never wanted to see a computer again. At the time she was just so intimidated by the computer. She thought it was fun because you could type faster than you ever could before, but you still were not learning anything from this thing. It was just a fancy typewriter. Her perceptions began to change when she worked for other doctors and had to learn their programs. She found it interesting to discover how programs differed from doctor to doctor. Each time she worked for a different doctor, she had to learn a different program. She then started understanding the computer more, enjoying it more, wanting to know more about it and what you could do with it. The next thing she knew she was buying a computer for home. She never thought she would see that day.

When asked specifically about how she changed her negative attitude toward computers, Lynn mentioned that learning more about them helped. The more time she spent working with a computer, the more comfortable she felt. She also says she had to stop calling the help desk and start confiding in the office manager next door. They would ask each other what to do when they had a problem or wanted to do something on the computer. So her peers were instrumental in helping her learn because they were going through the same thing. In this way, they shared information about how to use
computers. They worked together, she says, because they all dreaded calling the help
desk. They knew they would feel belittled if they called computer support.

Regarding computer manuals, Lynn says that she used them in the past and found
them confusing. She feels they provide too much information. Her employer would give
her a 500-page manual and she did not know where to start. She recalls that it was a bit
much because she simply wanted the Cliff Notes. She adds that manuals just need to get
to the point because they include too much information. All she wants to know is to push
control and ‘C’ on the keyboard to copy something. She does not want an explanation of
why you do it, or how else you can do it.

Lynn also objects to a similar problem in the classroom. She feels that the
instructors often give too much information, rather than staying with the booklet that is
provided when taking SeniorNet classes. This extraneous information simply confuses
senior citizens. It makes the students wonder if what the instructor is telling them is
important to remember or if it is extra information. It is difficult to ascertain what is
important and what are the instructor’s ramblings. This was one of the biggest
complaints she heard and was also her complaint last year when she took SeniorNet
courses. She also gets upset when instructors go off on tangents. She does not want to
hear their war stories and she does not want to hear what it was like when the instructor
started with computers. She wants them to save all that for after class and doubts they
will have an audience. She concludes that this captive audience business can really get
people carried away sometimes.

Related to the problem of rambling instructors, Lynn notes that the 70-year-old
mind cannot grasp everything as well as it used to. A twenty year old would have no
problem ignoring irrelevant information. She compares it to listening in a room full of people. At twenty, thirty, or forty, you can hear four conversations and retain bits and pieces of every one of them. When you are 70, you can only concentrate on one if you want to get it. Her kids will say, “Mom, I was talking about that at the Easter activity” to which Lynn replies, “Honey – I was talking to somebody else, so I don’t know what you were talking about.” She says she cannot multi-task in her mind anymore and that is why she gets confused in class sometimes.

Current Computer Use

When asked about her computer use now, Lynn responds that she uses email to communicate with her children. All four of them live within 15 miles of her, so they all email each other. Joking aside, she does enjoy communicating with them via computer. However, she uses a computer more because she loves being able to look up things. She loves being able to look up things about herself – her medical situations. She can read about health issues on WebMD, John Hopkins and the New England Journal of Medicine websites. She also subscribes to their free email newsletters. She laughingly admits that she subscribes to all the free stuff. She mentions that she likes to find the latest information on hypothyroidism, cancer or whatever you want to look up. She thinks that it is wonderful that you don't have to go buy a magazine for one little article. The Internet and email give you your article right in front of you. Even though these resources are available digitally, she still prints things out a lot. She comments that experts say the computer is going to do away with paper, but she does not feel this is true. According to Lynn, you print something out because you want to save that resource to look at later. She does not know whether it is a woman thing or what, but she still wants
to hold the paper in her hand, read it and underline it. She does not want to have to sit at the computer to read it.

Similar to her feelings about printing out online articles, Lynn feels that photos should be held as well. Her children bought her a digital camera last Christmas and she thinks it is great. The pictures are on the screen and that is fine, but she still wants pictures and photos in an album where she can flip through them page by page. She does not know if this is just hanging on to the past, but she does not think she will ever want to just sit in front of a computer or TV screen to look at pictures. She does not want to look at pictures on some screen from thirty feet away.

When asked about specific computers uses, Lynn mentions email, learning, news, pictures and travel pictures. She enjoys National Geographic pictures and has downloaded a few she thinks are special and put them in a slideshow. She enjoys pictures of family, travel, nature, animals and other beautiful things. There are some woods about a hundred feet back in her backyard and she loves that scene. There is a six-foot, white fence in the back with a bird feeder. She has her little digital camera setup on a tripod in her office that it is focused on the feeder. She describes working at her computer when suddenly, a cardinal perches on the feeder and she takes his picture. It has been fun for her to take pictures of all kinds of birds – including blue jays and a redheaded woodpecker. She concludes that these pictures and scenes are gorgeous.

I asked Lynn if she has ever video chatted with her family. She thinks that video chatting is good and wonderful, but she does not do it because her family lives close. She suggests that if her daughter was still in Florida and her son was still in Pennsylvania, she
would want a video cam because she would miss them. However, she says she is always getting together with and seeing her nine grandchildren and two great-grandchildren.

Lynn has also used computers at her local library. She says she used them there because she thought that this was the only to do Genealogy for free. She used Ancestry.com at the library for free. At home, Ancestry.com gives you a two-week trial and then they want 30 dollars a month to be a member. She describes this amount as ridiculous and firmly states that she is not going to pay for anything on the computer. She thinks it costs us too much now.

*Problems or Negative Experiences with Computers*

When asked what she thinks about computers, Lynn mentions how fast they keep changing. She is quick to add that they are wonderful, but she just wishes that they did not keep changing. She says that she is not resistant to change and is all for bettering things, but the changes are almost too fast. She points out that by the time you buy a computer, it is obsolete before you get it in the car and you know something better will be available in a month. Since computers change so fast, you put off buying one and when you finally purchase one, you think, “Now I have the latest!” but you do not. The latest is in the box on the truck heading to stores. It is frustrating to her that experts now say that a four-year-old computer is considered old. She hates the thought having to buy a computer every four years and figures it will probably be every two years pretty soon. She then notes that they are not any less expensive either. So, she concludes, it is not good that technology is changing so fast. She then asks rhetorically, “but what am I going to do, slow it down?”
At one point in the interview, I asked if Lynn text chats with anyone over the Internet. She responds that she does not. She tells me candidly that she really does not care about some idiot’s opinion about something. She knows that this sounds snobbish, but she has logged on to see what people are chatting about and they were so lame. She thinks they really have nothing intelligent to say. She always likes to be around people who know more than she does and feels she has a lot to learn. She cannot simply talk about the weather or politics, something she describes as chitchat, and wonders why any of it matters. She figures if she could find an “intelligent room,” she might give chatting a try.

Lynn goes on to explain that her experiences with computers are all positive, except when the computer goes down. She does not like how dependent she has become on the computer, so much so that it upsets her when it is down. It actually concerns her that we depend so much on technology. It really bothers her because when we have a real crisis, all that technology is going to go down. It is all going to crash. In addition, she says, we are not going to know how to communicate. She cites Hurricane Katrina as an example of how everything goes down in a crisis. She attributes much of the problems faced in hurricane-hit areas with communications systems going down. Computers were down, phones were down and all the wires were down. She proposes that it is very important to be able to communicate, so someone needs to come up with some wireless way that we all can communicate and store all our confidential records on the computer without wires.

As mentioned previously, Lynn had negative experiences when she began using computers at work. Again she talks about those awful boys that just wanted to show off
what they knew. They tried to make her feel even smaller than she did already. Further, she thinks that when she was learning, she was putting a great deal of pressure on herself. She knew she had to learn something that was foreign to her in order to keep her job. She had to learn it or else. There was no choice and that put a lot of pressure on her. So she learned to hate the computer. She felt the computer was the reason she was so stressed out because she had to learn to use it and that created very negative feelings.

One other problem that Lynn mentions regarding her computer use is the fact that she was once to the point where she thought she was addicted to it for a while. She now feels that she has broken the addiction. In fact, her son recently invited her to lunch via email and she did not see it, because she did not go near the computer that day. He called and said, “How come you didn't answer?” She replied, “Well, I didn’t go near the computer.” He then said, “I thought you were on it all the time” and she said that she is trying to get away from it. So she missed lunch with her son because he just assumed she would check her email sooner or later that day.

Lynn then describes her abundant computer use. She has a little den where she uses her computer. She cannot go in her den unless she has time to sit down for a couple of hours. She finds it very difficult to use the computer for five minutes and then leave it. There are too many distractions where she thinks, “I gotta look up this. Oh. I wanted to look up that. Oh yeah. I could do this.” Before long she has been there for two hours and things out in the living room aren't getting done.

I asked Lynn what kinds of things were not getting done because of her computer use and she replied that she feels like she is spending too much time on the computer. She specifically mentions paying the bills when she should and reading books that she
checked out of the library. These books are just sitting there and she is too busy using the computer to read them. She also mentions that she has to feed the birds and clean the house. I do not think Lynn was implying that these things were not getting done, but she was saying that they are often put off due to her computer use.

*Relationships Affected by Computers*

When asked about how her computer use has affected her relationships, Lynn first mentions her granddaughter, who was leaving shortly after our interview for a study-abroad program in Austria. For six weeks her granddaughter is going to be in Innsbruck, so she has been on the computer looking up Innsbruck and trying to find the hotel where she is going to stay. The same granddaughter’s boyfriend just returned from a study abroad in Germany and Lynn is amazed at all the wonderful opportunities people have that her generation never had. She figures that they are not going to appreciate these travel opportunities because it is normal to them. She says she would give anything to go back to Europe.

Lynn recently asked her granddaughter if she looked everything up on a map to see exactly where she is going to be. Her granddaughter had not and Lynn incredulously asked, “How can you not? How can you not look at maps and see where you are in relation to where you're going and what's around you? You know, you've got Switzerland and France, Germany and Italy all around you when you are in Innsbruck.” Lynn’s granddaughter is going to have Fridays, Saturdays and Sundays off so she can travel. Lynn spent time using a free, beta-program looking up locations in Austria on the computer for her granddaughter. She looked up Burgess Garden and looked up how far
certain sites are from her hotel. She wanted to be able to tell her how far she would be
from Burgess Garden and from Garnish.

Computers also affect Lynn’s relationship with her grandson to some extent. He is
a wandering musician, who is trying to make his way. He is 26-years-old and is building
a reputation by playing in local taverns and other venues. Because he travels quite a bit,
Lynn uses email to keep in touch. He also has a website that she visits. Even though she
emails her grandchildren, Lynn mostly prefers calling. She does email all her sons and
daughters, but if there is something important she wants to talk about, she would rather
call.

Lynn has also used computers to work on her genealogy. She does not work on her
genealogy as often as she wants to because it is really time consuming. She wants to
learn more about her family, since she knows very little about her maternal and paternal
grandparents. She has worked on tracking down information about her oldest brother,
who was shot down and is buried in Normandy, France. She is using technology to
obtain his military and medical records. In fact, she did not know until just a couple of
weeks ago that her brother won the second highest air medal that can be given – the
Distinguished Flying Cross. She was able to find this information through her online
genealogy work. All she remembers of her brother was that when her mom got the
telegram that her brother was Missing In Action, she was ten. She was old enough to
know that World War II was going on and a year later he was declared dead. She never
knew what they found to let them know it was her brother. As a tribute, she is going to
make a collage of her brother and his medals, which should be fun.

Computer use has affected her relationships with her grandchildren in a positive
way. She explains that this is because she can do the same things her kids and
grandchildren do. In fact, she has told them a few things they did not know about what to
do and how to do it on the computer. So she feels like she is in the mainstream and on
the same level technologically as everyone else. She concludes that emailing makes you
feel closer because you are actually communicating with your family and friends.

*Computer’s Impact on Life Events*

Lynn had breast cancer and says that the computer helped her through the illness
when she was feeling well enough to use it. It kept her company since she lives alone
and it allowed her to be in another place. She loves to travel, but she does not travel much
now. However, she can still look up places that she has been and places where her
children and grandchildren are visiting. Lynn also enjoys getting on her computer,
reading the news and reading other information. She dabbles with some trivia online, but
mostly she sticks with news and other intellectual readings. She says it is like her books.
They are all non-fiction and she does not have time for fiction. She thinks anybody, even
she can make up a story. What Lynn wants is to read something from which she can
learn and benefit. She reiterates that she does not read fiction because that time is being
taken away from a good book that she could be learning something from. Some people
tell her that she is too serious, but she responds that her entertainment is learning.

After Lynn steered the direction away from her experience with cancer, I returned
to the topic and asked her if she used the computer to research cancer. She responded
affirmatively and told me of the pages and pages of cancer research. The cancer support
group she went to also gave her a couple of excellent books to take home. The group she
was with was very good at telling her the truth about cancer. They did not sweeten it up,
like it was all one big, beautiful dream. So it was very helpful to look up her disease on a computer, she concludes.

Lynn feels computers have had a very big impact on her life at or after retirement because it brought her to SeniorNet and this became her social life. She does not have a lot of close friends, with whom she goes out to lunch and has always been pretty much of a loner. However, she can share computer experiences at SeniorNet with others who are in the same boat or at the same age and skill level as she. She would not enjoy SeniorNet as much with a twenty year old. She says that it is nice to know that there are people her age, who are still alive, well and enjoying the computer. She loves coaching the computer courses because she knows how the students feel. When they are worried and sacred to death that they did something wrong, she knows how that feels. The computer intimidates them and she knows how that feels. She is able to be patient with her students because she can very easily empathize with their fears since she has “been there, done that.” She knows what it feels like and she will never forget those feelings even though she was a beginner twenty years ago. They often thank Lynn and express their appreciation for her patience and what she is trying to do. She describes that providing such help “feels good.”
CHAPTER SIX

DESCRIPTION OF PARTICIPANTS CONTINUED

Gary Jacobs

Biographical Information

Gary Jacobs grew up in Maine, lived in Ohio and Connecticut and settled in Georgia. He has a bachelor’s degree from Overland and a master’s degree from Western Reserve University. He taught foreign languages (German and Spanish) for approximately forty years. He began his career teaching at the junior high level and then taught at the senior high level. At one point in his career he also taught French to adults. He retired from teaching in 1999 and is currently teaching computer classes to senior citizens.

Involvement with SeniorNet

Gary began teaching computer courses for SeniorNet because he loves teaching. He is currently the instructor for the Microsoft Word and File Management courses. He has also taught the Internet course and the introductory course – Windows Essentials.

Experience with Computers

Gary first started using computers in the 1970s. He recalls the Apple GSs, with the ambi-screens. He used to do computer programming, but adds that it was a long time ago. However, he still classifies himself as an experienced computer user. His interest in programming began when he was teaching foreign languages. He had to take an in-
service course and one of the possibilities was a course with computers. He fell in love with computers because of course, during which he created some games for his students. He tested the games in his classroom and the students loved the games because they were something new and different. Eventually, seven of the games he created were published. From this start with programming, Gary also created grade management and classroom management software, which were eventually published. At the time it sold quite a few copies. He concludes, that this was way back in the days before Windows – “ancient history.”

*Learning to Use Computers*

Gary learned and learns to use computers by trial and error. He recalls a couple of computer crashes he experienced when he had to reinstall everything. This was a negative experience, but Gary says it was also a learning experience. He has had a couple of courses at the university level and has also taken a couple of courses with SeniorNet. Every time he takes a course or learns a new computer program, he goes back to trial and error. He sometimes reads the manual, but most of the time he works with a program, makes mistakes and learns from those mistakes. He is convinced that trial and error is the best way to learn the computer, even though it takes patience. His students hear this from him often, but he jokingly adds that they don’t believe him.

As we discussed learning to use computers more in depth, Gary compared learning to use a computer with learning a foreign language. He indicates that similar thought and learning processes are involved. He asserts that children learn foreign languages and computers easily and he attributes this ability to a mindset of trial and error.
Gary recalls encountering no serious problems in learning to use the computer. He thinks that once someone is really familiar with the computer, and the way things work and so forth, it is pretty intuitive. However, he is quick to add that there are programs that are not intuitive. He feels Word and Quicken are intuitive programs, unless the user receives an error message. He feels that software programmers have become better at developing user-friendly, intuitive software. He recalls when people had to write their own programs, which were often “pretty bad.” He also remembers writing his own checkbook program that was less than stellar.

Current Computer Use

Gary appreciates how well computers handle information – especially with regards to word processing. In fact, he just finished producing a manual that he is going to use. He notes that he could never have done it without computers. The manual integrates graphics and text in a way that would be difficult if not impossible without a computer. He remarks that computers can accomplish things, which could not be done without it. In addition to word processing, Gary plays games on the computer once in a while. He feels it is terrific entertainment and helps him relax. Gary also enjoys “tinkering” with his computer, trying to make it faster or to run better.

When Gary talks about working on his computer, he is talking about the projects with which he is involved. He is working on projects for SeniorNet and other organizations. Since he is the Education Coordinator for SeniorNet, he does a lot of scheduling of the teachers and volunteers on the computer. He also mentions how he hates the telephone and tries to avoid it by using his computer for communication.
Gary uses the Internet a great deal. He uses it to download utilities and other programs. Basically, he searches the Internet to discover what is there. In addition, Gary likes to shop over the Internet – particularly book shopping – and uses the computer for online banking and bill paying. He also uses the Internet as a research tool for finding and checking information, which helps him configure his computer more effectively. In fact, the day Gary and I were scheduled to meet, his hot water heater stopped working. He remarked that the check for the new water heater was the first he had written in about five years.

**Future Computer Use**

When asked how he plans to use computers in the future, Gary indicates that he will basically use them the same way he does now. His programming days are over because he doesn’t have the patience to do it anymore. He would, however, like to learn more about graphics. He just invested in a digital camera and would like to learn to use it for his grandchildren. He plans on taking a graphics course through SeniorNet to learn to use graphics. What he doesn’t learn in the class, he plans to teach himself. Again, he talks about learning through trial and error. He recounts how many of his students have told him that they do not care about the computer because they are never going to use it, but they want to keep their mind working to prevent Alzheimer’s. He had a 93-year-old student who is sharp as a tack. Gary comments, “If computers do that to you, I’m going to keep on with them.”
Problems or Negative Experiences with Computers

Gary recalls a couple of times when his computer crashed and he had to reinstall everything. However, he thinks this negative experience turned into a positive one because it was an opportunity to learn. In addition to a propensity for computers crashing, Gary worries about the Internet and privacy issues. He thinks that the problem of privacy is getting worse instead of better. He says that he does not get frustrated with computer problems though, because the computer experiences he has now are nothing compared to when he was programming. When he was programming he would be up until three or four a.m. trying to solve a problem. He recalls solving one problem and creating another. So, his previous experience with computers makes any current problems seem insignificant.

One thing about computers that Gary would like to change is how errors are presented. He thinks that the error messages that occur on the computer are written in a language that is incomprehensible to human beings. He grows frustrated at the long numbers in the error message that have little meaning for him. He thinks it is also frustrating to go to a help section that is not helpful. He is convinced that the help sections are written by programmers, for programmers. Another aspect of the computer that Gary would change is the interface. He thinks the interfacing could be made easier, but is not exactly sure what he would change. He simply feels the interface is often too complicated.

In his experience instructing older adults in the use of computers, Gary has encountered problems they often face. According to Gary, older adults are afraid they are going to break the computer. He suggests that this is one of the biggest battles.
However, he feels that the biggest problem seniors face is a decline in short-term memory, which is very disconcerting for them. He says that the learning process or the learning curve for seniors is completely different from high school students or young adults. With loving respect, he recalls an actual occurrence where he taught them something before the break, which they were doing correctly, and after a fifteen-minute break, some of them forgot what they just learned. He also says that by the next week you practically have to re-teach what you taught the week before. He is quick to add that seniors’ attitudes are wonderful: They are there because they want to be there and many of them just want to keep their mind sharp.

I asked Gary how older adults have overcome the obstacles he mentioned. He doesn’t think many of them really do overcome the short-term memory problem. It says it is simply a matter of teaching and re-teaching until it is eventually retained. He does add that there are some seniors who retain practically everything. The gamut goes from the really gifted, to the folks who take the same course two or three times and still cannot work complete a computer task. He concludes that this is the nature of the beast when working with seniors.

Positive Experiences with Computers

When asked about having positive experiences with computers, Gary replied, “They're all positive.” He just bought a new computer and loves it. Further, his passions and love lie with teaching and computing. That’s where his interests and passions lie. Therefore, with SeniorNet he can do computing, which he loves and teaching, which he also loves. He feels that SeniorNet is education at its best with none of the problems. The students are self-motivated and he does not have to deal with behavioral problems.
He also mentions that he enjoys not having any reports to write as a SeniorNet teacher.

Another positive effect computers have on Gary is that they help him to relax. He comments that he has to concentrate completely on what he is doing on a computer and that helps him relax.

\textit{Relationships Affected by Computers}

Gary talks about what a wonderful experience it is to work with senior citizens. He jokingly adds that he would say that even if he weren't being recorded. He remembers the very first time he taught adults and completed the lesson in about half the time. He wondered why it was over so quickly and then realized that he had his students’ complete attention, which had never happened teaching adolescents.

With regard to how computers have affected his relationships with others, Gary mentions that while he was still teaching, anybody who had a computer problem would come to him about it. He also mentions having made a few friends via the Internet, but notes that these friendships have not been lasting. When Gary first purchased his computer, chat rooms were new and he chatted with and met people from all over the country. It was interesting to him, but the interest wore thin quickly. Right now, Gary does not do any chatting because he feels it is incredibly superficial.

Gary comments that computers have affected his relationships with his grandchildren in a strange sort of way. He recalls the first year that he taught at SeniorNet and had to teach Paint. He had never taught a course on Paint before. His grandkids were over for dinner one time and Gary said, “I’m going to have to leave the table now. I’m teaching Paint tomorrow and I’ve never taught it before.” His eight-year-
old granddaughter replied, “Oh, Papa! That's easy! Let me teach you how to do it!”

And she did.

Regarding his service with SeniorNet, Gary mentions the friendships he has made at the learning center. He says that these friendships are wonderful. He believes that anytime you get in a group of people with common interests, friendships arise. Through SeniorNet he has met “a lot of really wonderful people.” He concludes that they don't always talk about computers either.

*Computer’s Impact on Life Events*

After retiring from teaching, Gary has found purpose in his involvement with SeniorNet. As previously mentioned, he loves teaching and computing. His SeniorNet experience has allowed him to continue teaching without the headaches of his previous career. Further, Gary had cancer and used the Internet as a research tool to find out about treatments that were available and about the treatments he was having. He also used the Internet to determine if he was progressing and where he was in the whole process, which made a huge difference. He says that if he had not had a computer during the ordeal, he would not have survived as well as he did.

Gary also mentions that computers can be a diversion if you get frustrated. He says that you can just surf the net as a diversion. He mentions receiving jokes and sometimes, if he needs some diversion, he will just read a few of them. He concludes that if he were ever alone, as a widower for example, the computer would probably make a big difference because it would give him contact with the outside world. He has seen that reality in the lives of older adults at SeniorNet.
CHAPTER SEVEN

DESCRIPTION OF PARTICIPANTS CONTINUED

Betty Stewart

Biographical Information

Betty Stewart was born in Missouri and grew up in Maine. She attended the University of Buffalo and graduated with a B.S. degree in Physical Therapy. She has been a practicing physical therapist on and off due to her family obligations. She has four children, so she intermittently worked part time and full time around the schedule and needs of her children. Her husband worked for AT&T for thirty-two years. Betty retired from full time work in 1995 and continued to do contract work for another five or six years. Therefore, she has basically been retired for two years. She has ten grandchildren: six of them live near her and four live in Texas. In fact, she saw four of her grandchildren the day before our interview. She is able to see the grandchildren who live near her often.

Involvement with SeniorNet

Betty began to be involved with SeniorNet about a year ago. She became acquainted with SeniorNet after her husband started volunteering there. She took a course in Excel, because she needed to learn how to create and manage spreadsheets as part of her responsibilities in one of her volunteer organizations. She also took a one-day SeniorNet workshop on scanning. She quickly adds that she is nowhere near teaching or
coaching with SeniorNet. She plans to take the File Management course with SeniorNet in the fall of 2007. What she typically does, since her husband has taught most of the SeniorNet courses, is take his materials and learn on her own. She jokingly adds that this makes her a “computer thief.” She concludes that she is new to SeniorNet and has not taken all the courses.

**Experience with Computers**

Betty’s husband worked for AT&T in the computer field, so she started learning about computers from him. He was involved in designing computer systems, not the program writing, so they bought a computer. When they first purchased the computer, she used it strictly for word processing. Then she learned email from her husband and when he started teaching and volunteering with SeniorNet, Betty turned to him with questions and thought this was a neat way to learn.

For the past two years, Betty has served as the vice president and president of a large alumni Greek organization. She says she was thrust into these positions, and the first thing she had to do was plan a big meeting and design flyers for it. So, at this point she really got into computers. The positions required that she learn how to email, create attachments and forward email. As president of the organization, she began revising all of the job descriptions and guidelines via computer. She is also putting all of the relevant files onto CD’s because everything was on floppies and peoples’ computers do not take floppies anymore. In addition to her work with the Greek alumni organization, Betty also served as secretary on the executive board of the Georgia Physical Therapy Association for four years. In this position she had to take minutes at meetings and perform other tasks on the computer. These responsibilities also contributed to her having to learn to
use the computer. Without these two volunteer positions, she jokes that she would probably be just sending email and creating documents.

Learning to Use Computers

Initially Betty purchased “Windows for Dummies” to learn the very basics of computers. She used this book to teach herself how to interact with the system. She learned simple things such as deleting files and inserting objects. She feels that learning simple tasks such as these were best learned from a book. Betty also taught herself how to use a word processor using a Dummies book. She would not recommend this, but comments that if you have no other choice, it is one way to go.

In addition to using step-by-step texts to learn to use computers, Betty has also taken a course and a workshop through SeniorNet. She feels that the SeniorNet courses are very good because there are a lot of people nearby to help. The courses typically have one instructor and coaches for every two or three people. She says that the minute someone has a problem there is someone in close proximity who can tell the person what they did wrong. She thinks this is probably the best way to learn; to actually come to a course where there are people who can teach you and help you. Actually, she feels that the absolute best way to learn to use computers would be to have someone sit with you and teach you one-on-one. However, she realizes this is not always possible. Luckily, when she hits a snag, she can turn to her husband for help with her computer questions.

When discussing how she learned to use computers, Betty tells the story of trying to email some pictures. The digital photographs were on a disc and she couldn’t figure out how to send them. So, when her son-in-law came over, she asked him to do it for her. She just didn’t want to take the time to figure it out. She says she needed to do it and he
knew how to do it, so she simply had him send the pictures. She recalls that what he did looked pretty complicated. This is a complication Betty has encountered – people make working with digital pictures sound so simple, but she does not think it is that simple. She thinks that to learn something complicated (i.e. working with digital pictures) one is better off going to a course or having somebody sitting right next to you teaching you one-on-one. She thinks it would be hard to teach yourself complicated computer tasks on your own, because nobody is there to tell you what happens if you do something, what you did wrong, and what you should do to fix the problem.

*Current Computer Use*

As stated earlier, Betty began to use computers because of her volunteer work. Since she no longer has one of these volunteer responsibilities, she figures she will be finished with the other volunteer work soon and expects her computer use to slacken. However, she does use her computer now in her home office. She uses it to check her email first thing in the morning and again in the evening. She uses email because she says you typically get an answer via email quicker than a returned phone call. She says that email right now is her biggest use. In addition to email, she continues to transfer documents from floppy disks to CD’s for her volunteer organization. Further, she has done some scanning after she took a SeniorNet Workshop on digital scanners.

Betty also uses her computer to play games. She typically plays computer games in the evening and mentions playing Spider Solitaire, Free Cell, and Tripix. Betty also uses her computer to surf the Internet. With her medical background, if she hears about a disease with which she is not familiar or a different kind of cancer, she goes to WebMD to learn about it. She also talks about how people, who are diagnosed with something,
can go to different websites and find out what information is available. She feels that most doctors are not very good about telling their patients everything they need to know. Therefore, patients can go to the Internet and find out about alternative treatments, or just exactly what the illness is. She gives an example from her experience in physical therapy. Someone is told that they have to have a knee replacement because of arthritis in their knee. Betty notes that a knee replacement is a difficult operation and requires a long recuperative period. She says a person can go on the computer and see what he can find out that his doctor did not tell him. She thinks that this empowerment is a good thing.

When asked about the specific websites she visits, Betty mentions several related to her previous work. The site she visits most often is the American Physical Therapy Association website and she receives a weekly online newsletter from them. There are other medical sites that she visits to learn about health and medical issues. She also visits the website of her volunteer organization because she has been involved in reconstructing the site. Further, Betty sings in a chorus and visits the chorus’ website to check up on what is happening with the choir. She mentions that she used to visit Neal Boortz’s website, but does not go there frequently anymore.

Betty also purchases tickets over the Internet. She recently purchased tickets through the aquarium website and also bought Braves baseball tickets for friends who were coming to visit her. The same friends want to go to Fernbank, so she plans on visiting Fernbank’s website to find out how to get tickets for the exhibition there. She also uses the Internet to obtain information about places she wants to visit because, she
says, it is difficult to get anybody on the phone anymore. If you try to call the aquarium, you cannot find a person to talk with, a big complaint of hers.

Finally, Betty tells me how she does not use the computer. She says that she is not a chat person. She realizes that a lot of people chat, but she has never been to a chat room and doesn’t particularly want to. She does not feel the need to talk to other people about things in this setting.

*Future Computer Use*

Betty plans to take a more advanced course through SeniorNet in the fall of 2006. She feels that she is at the point where she needs to learn file management and will take the course on her own. Other than that, Betty feels rather content in her computer knowledge. When asked if she has a desire to learn PowerPoint, she expresses interest, but carefully points that she has ten grandchildren and is rather involved in a couple of organizations. This seems to indicate that she does not feel she has the time to learn to use PowerPoint right now. However, Betty goes on to say that she does not really know anything yet about digital cameras. She and her husband just purchased one and know that they are a few years behind everybody else. She has not learned anything yet about transferring photos to the computer, changing them and cropping them. She feels that this is something she needs to learn. She would like to learn about working with digital photographs so she could do it on her own without having anybody to help her.

Other than taking a couple of courses in file management and learning how to work with digital photos, Betty does not feel that she is going to go that much further with computer learning. She feels that she knows most of what she absolutely needs to know. She says she will pursue her computer education a little more, but is not going to
go to the level that some of the people in SeniorNet do. She concludes, “You’re not
going to catch me teaching a class.” How much further she goes probably depends on
necessity.

Problems or Negative Experiences with Computers

When asked what she likes about computers, Betty responded, “I get very mad at
my computer sometimes. Very, very mad at my computer sometimes. When it does not
do what I want it to do. What was the question again?” After laughing about her
response, I asked her why she gets mad at her computer. She responds that it is probably
because her expertise is not that good. She tries to do something and the computer does
not do what she wants it to, or it does something she does not want it to do. There have
been times when she lost files and panicked. Her husband was able to find the file and
recover it for her. She concludes that lack of expertise and the fact that she does not
exactly know what she is doing explain why she gets mad at the computer.

One of the problems Betty has encountered while learning to use the computer is
encountering unfamiliar terminology. She notes that she is not technically oriented and
the fact that she has learned so much on the computer in the last two years is a
humungous accomplishment. She jokingly adds that she is right-brained, which accounts
for her difficulty with computers. When asked how she overcame the terminology
problem, Betty says that she just worked at it. When she encountered unfamiliar terms,
she would make herself go someplace else to find out what they meant. She mentions
just doing experimenting with different tasks to try to figure out what a term means. She
mentions that it bugs her that she is still unclear as to the difference between a file and a
folder.
Betty also talks about problems she ran into in learning to use Excel. She says that the program was too complicated and the instructor gave too much information about how to do things in the application. When asked how she overcame this, she responded that she just doesn’t go there. She knew all she wanted to do was make a simple demographic spreadsheet in her SeniorNet class and did not need to know much of what the instructor was teaching. She did it in class, but never used the superfluous tasks again. She simply did not bother with what was not important to her and ignored what she did not need.

Betty also mentions a concern for what computers mean to children. She feels that one of the negatives associated with computers is that kids sit at the computer all day. She sees kids just sitting in front of the screen instead of getting up and doing something. Kids, she opines, spend hours on the computer. She says her grandchildren do not go outside and play the way her generation used to. One of her grandchildren spends a lot of time on the computer. The parents of her grandchild do monitor his use, but she feels that a lot of parents do not monitor their children’s use. While she understands the safety factor, she feels the world is not so bad that you cannot send your kids outside to play. She laughingly concludes, “That is my medical background coming through.”

When asked if she sees similar problems with seniors who use the computer, Betty replied in the affirmative. She especially points to seniors who live alone. She feels that computers can be good for such seniors because it gives them a support system and gets them to feel like there is someone else out there for them. However, she feels computer use could be accompanied by the same problems they hold for children. She
tells of a neighbor, who was a private person and not in good health. This neighbor basically sat at the computer all day long and it was not good for her. She thinks this is a problem some seniors have, but notes that seniors can also get the information that would take getting in the car, going to the library or whatever from a computer. She notes that computer use is a double-edged sword that requires a happy medium.

Another problem that Betty encounters in her computer use occurs when she types too fast. She will hit a wrong key, something pops up on the screen, and what she was working on goes away. She uses the mouse for everything she does except type, which means that she does not ever use keyboard commands and shortcuts. So, when she accidentally hits a shortcut on the keyboard and something happens on the screen, she has to figure out what to do next. I then asked how Betty negotiates such problems and she responded that she used to just run to her husband. She quickly adds that she has gotten much better now and tries a few things before seeking help. She tells of looking for an email that she thought she had deleted. She looked for the email in the trash, but she had deleted it too long ago. Her previous computer used to retain deleted messages in the trash and never emptied the trash. However, her new computer holds the message for 24 hours in the trash before automatically emptying it. She knew to go to the trash and look for it, but it was not there. She told this story to illustrate that she is much better now at trying to work out problems on her own. She has learned to go to the toolbar to see if anything there helps fix the problem. She concludes laughingly, “My computer is quirky too. I need a new computer.” She feels that if she gets a new computer in the next year or so, it will solve a lot of her problems.
Betty’s main complaint about computers is that the help sections are not much help. She cites Windows help sections specifically and says that she cannot figure out a problem by going to help. These sections do not really tell her what she wants to find out. They do not tell her how to do something. She says that they explain what things are, but fail to give specific instructions on what to do. In addition, Betty states that there are so many things that you can do on a computer, that it sometimes gets overwhelming. She feels that she does not need all of the “stuff” that is on the computer. She gives the example of working with a spreadsheet in Excel. She just does not need to know how to do some of the calculations and formulas that are part of the software. All of the extra components are too advanced for Betty and she does not need all of it. She concludes that simplification would help improve computers.

Another difficulty Betty has is reading the news online. She has her local paper and the Wall Street Journal delivered daily. She tried to go online to read the local papers where her twin sons live, but found it difficult. One of her sons is a high school swim coach and she tried to look up the results of his swim meet. She tried to get online to read it and had a very difficult time. Since that time, she has not tried to read the news online again because it was so hard. She could not recall what made the newspapers difficult to read. Another thing Betty has a problem with sometimes is going to a site and being unable to find what she went to the site to find. One time she was trying to find some information, so she used Google and went to the site. She also went to three or four other sites from her Google search results and what she was looking for was not there. She did not know where to go from there. The information was not readily available and she could not find what she sought. She adds that some sites are not easy to negotiate;
especially some of the shopping websites. When asked for specific examples of shopping websites that are not easily navigable, she could not think of any.

As mentioned previously, Betty feels that working with graphics and digital pictures seems complicated. She tells of a time where she did some scanning, but the experience was not particularly satisfactory. She later found out that what she was trying to scan does not scan very well. She was trying to scan blank forms with a lot of lines and was told that this type of document does not scan very well. She figures either the type of document she had does not scan well, or she just did not know how to do it.

Betty shared several aspects of computer technology to which she and other retired people are resistant. She says that she knows nothing about and does not want to know anything about downloading music on the computer. She does not see any reason to do it because she can buy the CD. She also asks incredulously, “Downloading TV programs now onto the computer?” She says she figures that they have not gotten to downloading movies yet, but it is probably going to come. She simply does not see the need for any of this. Along the same lines, she has a cell phone and her grandson taught her how to text message. However, she cannot see the necessity for all the little gadgets on a cell phone. She wonders why we need all this. She feels that in some respects, we are being overwhelmed by technology.

Betty then begins to talk about what the proliferation of technology means to some seniors. She says that being overwhelmed by technology can be frightening to a senior; especially if the senior has not had any experience with technology. For example, a 66-year-old would probably have known about computers for ten years. However, if someone was 76 ten years ago, he is probably not ready to do all this. She has seen this
at SeniorNet. As Baby Boomers retire, they know all about computers. Last spring, although they had a good turnout, SeniorNet had fewer people sign up for the courses because the Boomers already know all about the programs from work. She opines that this group of seniors is going to be totally resistant to learning the same courses that are offered now because they already have experience.

Betty talks about learning to use a computer in the early 1990s. She was performing administrative duties when her company started trying to integrate computers into the workplace. She recalls returning home and tearing her hair out and asking, “Why can’t it do this? Why can’t it do this?” She was just beginning to learn about computer technology and now, she notes, all of the therapists and nurses who conduct home visits have little handheld computers they input their information into on the spot. She thinks this is a great system that saves time. Instead of having to sit down after visiting six patients to take notes, a physical therapist can do it right after the visit and send the information to the office immediately. Therefore, those therapists and nurses who are comfortable with this technology now will have no need for simple SeniorNet courses when they are older.

Betty and her husband have discussed some of the problems older adults face in learning to use the computer. Her husband, who teaches courses with SeniorNet, told her that the biggest problem seniors face is hand-eye coordination. Working the mouse is harder to do because coordination gets difficult with old age.

Betty voices her concerns about the Internet. Specifically, she is concerned about Myspace and some of the other websites that are out there. Although most of her grandchildren are not really into computers and are not old enough to get into Myspace,
she is still worried. She is particularly worried about the fact that anybody can put anything out on the Internet and there are “no brakes to the system.” Any blogger can put anything out there that he wants to and it is incumbent upon the person reading it to decide whether it is true or not. Betty then mentions how you can do everything on the Internet now, so she worries about the people who cannot use computers. She wonders, “Is everything going to end up that you've got to have a computer to do it?” She can think of some of the older ladies in her organization who do not have email. She cautions that one always has to be concerned in large organizations that have older members because there are those who do not have a computer and do not know how to use email. She worries about people being left behind because they do not keep up with technology. Finally, she feels that she has been lucky to keep up with technology because her husband’s career helped them learn to use computers.

Positive Experiences with Computers

After describing all of her negative experiences and problems with computers after being asked to describe her positive experiences, Betty notes that she probably encountered these problems because her expertise is not that good. She then describes some of the things she likes about computers. She likes that if she cannot contact someone on the phone, she can quickly send off an email and that person will probably read the email before he will return her phone message. She likes this ease of communication. She also likes the fact that for people who do not have a lot of support systems, there are ways to get it from the computer. She also enjoys that you can quickly go on the computer and get a piece of information that might take you an hour to find in a library. Computers are also great, in her opinion, because you can sit at your computer
and get information on anything. She and her husband do all of their plane reservations via Internet now. They also do all of their car rentals and purchase Braves tickets online. With tickets, she remarks, you do everything on the Internet now.

When asked about positive experiences with a computer, Betty mentions the sense of accomplishment that accompanies doing something for the first time on the computer. It was a positive experience for her when she learned how to create a spreadsheet. When she completed the spreadsheet and saw all of the information there, she felt a sense of accomplishment at having performed the task well. She thinks that any time someone does something new and it works, it is a positive experience. She told me about learning to forward email and applauded to illustrate the feeling of accomplishment that it gave her. She concludes, “A positive experience would be any time what you want to do works.”

Relationships Affected by Computers

Betty first mentions that email has affected her relationships with others. It has helped her keep in touch with some people that she probably would not have ordinarily contacted. She does not visit chat rooms, so she says that email has affected her relationships the most. She notes that she will email someone instead of calling them on the phone. She says she is getting as bad as everybody else now. Because of email, if her communication is not something she has to know right away, or is a clarification of something, she figures she should just email people rather than bother them. They will read the email and they can get back to her at their convenience.

When asked if she uses computers to communicate with her children and grandchildren, Betty answers that she only does sometimes because they are so darn
busy. She emails back and forth with her son at times about their lives, but she has not received any pictures lately. She does know that emailing them is an option and that a lot of people email their grandchildren to keep in contact. However, she visits her grandchildren who live in Texas several times a year, so it is not like she does not see them for years at a time. She also does not email her other grandchildren because they live near her in town.

Betty does mention that her daughter-in-law is proficient with a digital camera, but does not do much with the computer. Her son is in business for himself, so the computer is in his home office. She keeps in touch with her son and daughter-in-law via email and thinks it is a great way to keep in contact. She receives pictures from them and also from other people via email and reiterates that it is a great way to keep in touch.

*Computer’s Impact on Life Events*

When asked about how or if computers have had an impact on her major life events at or after retirement, Betty states that she and her husband have not had any health problems and have not had to adjust to reduced income. Fortunately she received an inheritance a couple of years ago, which has been lovely. She does believe that if it had not been for her two big jobs, she probably would not have gotten involved with computers. Since she had the one job with the Physical Therapy Association that she was elected to and had the other job where she took over for someone who died, she had to use computers. She guesses she would call the death of this person a major event because she was Betty’s sorority sister and a very good friend. Upon taking over for her friend in the association, she had to get involved with computers. She believes that in many respects it is a good thing this happened, because she probably would not have
gotten into computers at the intensity that she did if she had not been forced to. She would have been very happy to sit at the computer, play games, create a letter and send email. She adds dryly, “Big deal.” However, that death did thrust her into a position where she had to learn more about computers and she is glad that she did. She concludes, “It has been a very good thing. A good thing for me.”
CHAPTER EIGHT

DESCRIPTION OF PARTICIPANTS CONTINUED

Fred Cook

Biographical Information

Fred Cook was born in Greenville, South Carolina and lived there until he graduated from Clemson with a degree in Electrical Engineering. He then moved to Atlanta to work for AT&T or Western Electric, which was the Bell system at that time. He worked with this system until he retired in 1991, when he was caught up in a downsizing. From here, he opened his own business, a printing company in South Carolina. He wanted to get the company started and run it until his wife retired about two years later so they could then return to South Carolina. However, after living in South Carolina for those two years, he realized that South Carolina was no longer home. He sold the company, returned to Georgia and officially retired.

Fred and his wife, Virginia, who also participated in this research project, have three children. Fred’s wife had two children before they married and they had one child together. Fred and Virginia now have four grandchildren, who live fairly close to them. Two of his children’s families live nearby in Northeast Georgia and the other child’s family lives three hours away in South Carolina.
Involvement with SeniorNet

Fred has been involved with this SeniorNet chapter for about two years. He taught Windows Essentials, which is the basic introductory program, Microsoft Excel, and Word 1, which is the first continuation of the basic, introductory course. He also coached several other courses: Graphics, Word 2, Digital Imaging and others. Actually, the only course Fred took at SeniorNet was Digital Imaging. Those in charge at this chapter of SeniorNet looked at Fred’s background and concluded that he could immediately begin coaching while also taking the Digital Imaging course.

During the interview, Fred described the concept behind this SeniorNet chapter—a hands-on approach to teaching seniors to use computers. Their computer lab has twelve student computers and a thirteenth instructor computer, which is connected to a projector. Each computer has the program of interest installed and the students follow along as the instructor projects the processes involved in running the program. During this instructional process, three or four volunteer coaches watch each terminal. When they see students not keeping up, or confused, they provide one-on-one attention for a few minutes to get the student back on track. Fred opines that instructors and coaches usually end up revisiting processes several times, but the whole course is built on having time to do that. He thinks that SeniorNet courses are effective and efficient since using volunteers as coaches allows personalized computer instruction without the cost.

Experience with Computers

On his survey, Fred indicated that he has been using computers for 20 years and describes his computer skill level as average. He began inputting information into a mainframe computer in the 1970's. He even recalls working with the old punch cards to
input data on the computer. So he used the computer back then, but not the personal computer. In addition, when he was at school, he did a little bit of programming on a PDP 1 mini-computer. This “mini-computer” was the size of four large file cabinets. He did take a few computer classes in school, but that was early on, before the advent of the personal computer.

Fred began using personal computers in the early 1980’s. At the time, his job involved writing instruction manuals for installing cable. He primarily used word processing to accomplish this task and added pictures to the manuals by hand. After he left that particular job, he switched to a product-planning job, which was more of a marketing position. At this point, he used word processing for letters and correspondence and spreadsheets for projecting sales for the year and tracking sales trends. He used PowerPoint at the time for professional presentations. He also started using computers at home to track personal financial records. Through the years, he continued building his computer skills a little at a time. When digital photography came along, he became involved in it.

Learning to Use Computers

Fred learned to use computers on the job. He never participated in any real computer classes until he enrolled in SeniorNet courses, but that was after he was comfortable with computers. He has largely learned by sitting down with a manual and playing with the computer. When he makes a mistake, he learns from that mistake. In fact, he learns more from making a mistake than from reading half of the computer-help books. He feels the best way to learn is to just get in there and start using the computer.
and playing with it. He suggests that after reading a little bit and doing some research, one begins to believe he can build computer skills.

When AT&T first employed Fred, he worked with the electronic switching systems. The company sent him to New Jersey for some training, specific to that system. He attended the training, returned to work, and started using the system. After a few weeks, he began to think, “If I knew this at the time I was in the training, I could have asked more questions.” According to Fred, this illustrates the concept that, “You need experience before you go to class, so you know what to ask. But you need the class before you can do the work.” He then wonders, “So, which is best? Which to do first – the training or the experience?” He then expounds that the best process may be providing some training, returning to work, gaining experience and then returning for additional training. He believes this process would foster more interaction between students, instructors and the material.

Current Computer Use

Fred’s survey answers indicate that he uses computers in a variety of ways. He marked that he uses the Internet for news, doing research, shopping, paying bills and using email. He also mentions using word processing, creating spreadsheet, developing presentations, scanning pictures, editing digital pictures, listening and downloading music, managing finances, playing computer games and calendaring on the computer. When asked about how he currently uses the computer, Fred discusses how he uses to computer to keep track of what is happening with his wife’s health. Virginia has some medical problems and goes to the doctor often, so they keep track of what is happening on the computer. Then, when she goes to the doctor she carries a printout of her medical
and medicinal records. The doctors ask, “When's the last time you were in for this?” and she consults the printout of her personal record for the answer. After these doctor’s visits, Fred and Virginia sometimes go online to research certain conditions and treatments.

Fred says he uses computer mainly for keeping track of personal financial records. He uses online banking and appreciates the access that gives him to his finances. When discussing his use of the Internet, he describes using email, but avoiding online games due to a wariness regarding security and viruses. However, he does have a few games he plays on the computer. He also uses the Internet to read news stories and to occasionally do some medical research. Further, he has done a little bit of shopping via the Internet on sites like eBay. However, many times he just uses the Internet to research prices and products and ends up buying things the old-fashioned way. However, he feels that this Internet product research helps him go into a buying situation a little more educated.

Future Computer Use

Fred and Virginia plan to travel in the next few years. They want to take a digital camera and a computer and hit the road, see the sites, take pictures, and save them on CD’s. After traveling Fred would like to organize the pictures and put them into some type of presentation. Other than that, he plans to continue using computers the same way he currently does.

Problems or Negative Experiences with Computers

Fred mentions several problems he and others have encountered with learning to use and using computers. The first problem is the computer crashes that have happened along the way. He next mentions compatibility as a problem he encounters with
computer use. For example, he purchased an old, used laptop on eBay several years ago. He then found out that the laptop did not have USB capabilities. Further, the laptop was so old that he could not get a card that would make it work with a USB, so it was practically useless. He uses it for some things, but not very much. Fred wishes that computer companies made computer hardware more industry standard. He expresses his frustration with companies, which sell computers and then force you to take your computer to them for hardware repairs and upgrades. He does not buy from the major computer suppliers because of this issue. He has someone build a computer system for him that is upgradeable and repairable by anyone.

Regarding computer software, Fred mentions the steep learning curve associated with some programs. He says he would like to have programs be a little easier to use than they are. He wishes that programs’ significant learning curves could be eliminated, but realizes that some computer programs are complex, so it might be difficult to really do that. Fred specifically mentions not learning Microsoft Access because it seems to have a pretty steep learning curve associated with it. He has Microsoft Access, but has only used it a few times because it is rather difficult.

Fred is also concerned about security issues with his computer. He worries about the security of online banking, but at the same time, he reasons, if you put a check in the mail, how secure is that? Somebody could reach into the mailbox, steal your check and then they have all your account information. He also infers that when you write somebody a check, that person then has your account number and your bank’s routing number because that information is printed on the check. Therefore, in many ways, online banking may be more secure than the mail system. He has not had any problems
with online security himself, because, he feels, banks seem to take the security seriously. He concludes that he does not know anyone who can make anything 100% secure, because there are people out there who spend their whole lives trying to figure out how to get around security. Related to Fred’s concern over security is his decision to stay away from the Internet-type games. He thinks online gaming opens up the computer to viruses and other types of problems.

During the interview with Fred, he talks about the problems other SeniorNet members encounter is learning to use the computer. He teaches the introductory course and the biggest obstacle he has to help students overcome is the fear of “What's going to happen if I push that key? Is it going to blow up?” He hears that term quite often – “blow the computer up,” meaning they are afraid of breaking the computer. He asserts that if you can get the student past that fear, then the rest of the teaching is easy. He rationalizes that in most cases, there are probably some things you can do to screw up a computer, but in most cases, there is nothing you can do that cannot be undone. However, the problem is getting the students to realize they can rectify mistakes. According to Fred, this is the hardest concept to teach.

Positive Experiences with Computers

Fred likes all the things you can do with computers. Computers give him flexibility. He likes that he can use it primarily for personal finance, keeping track of investments, keeping track of medical records and things like that for his wife. He also enjoys working with digital photos. He does not see now how he managed to get by without computers thirty years ago. He believes they have made life more convenient. He concludes that he likes all of the different capabilities that computers have.
Relationships Affected by Computers

When asked about how computer use has affected his relationships with others, Fred speaks about teaching older adults to use computers. He feels that older adults who do not use a computer, or do not know how to use a computer, are being left behind. He also feels that those who are behind will not be able to relate with other people as well. Therefore, he thinks that computer use is getting to the point where it has become almost a necessity. He expresses concern for the older generation, because they are the ones who have not learned to use a computer. They never had to learn computers for their jobs and never had an opportunity in school to learn, so they are left out in the middle of the field with everybody else around them knowing how to do it. He cites an example of one student who came to class with a brand new computer that his children gave him. It had been sitting in the box for three years because the student did not know what to do with it. Nobody helped him to get it setup, so it just sat there for those years and was obsolete by the time he took it out of the box. He finally went to SeniorNet to learn how to use it. Fred sees a great need for that right now, for helping the older generation learn to use computers.

In looking toward the future of SeniorNet, Fred foresees a decreased demand for elementary computer courses and speaks of restructuring the program to teach more in-depth courses. He thinks there will be a transition where the program will no longer be for people who know nothing about computers, but will be geared to those who want to gain more advanced computer skills.

Regarding computer use and his relationships with children and grandchildren, Fred mentions emailing them to stay in touch. He never got into instant messaging, even
though his son is interested in it. He is content to email and send photos to his children and grandchildren.

*Computer’s Impact on Life Events*

The biggest impact computers have had on Fred’s life is that getting involved with the people at SeniorNet has allowed him to teach. He always wanted to teach and was able to do a little teaching in his corporate work. However, SeniorNet has given him the opportunity to be a teacher, without the administrative problems that paid teachers have. He never had the opportunity to have what he calls a “true teaching function” until he volunteered for SeniorNet. He really enjoys the teaching aspect of SeniorNet.

Finally, Fred summarizes his thoughts on computer use and learning. He affirms,

You really have to continue learning. Once you start learning...you continue learning every day whether you know it or not. And if you don’t, if you're not willing to continue learning, you might as well just close your eyes and go to sleep permanently. That's about what you're going to be if you just keep thinking you know everything you need to know and let it go at that.
CHAPTER NINE

DESCRIPTION OF PARTICIPANTS CONTINUED

Virginia Cook

Biographical Information

Virginia Cook grew up in Spartanburg, South Carolina. She attended one year of college at Spartanburg Methodist College before going to work for Bell South. Virginia started as a telephone operator and was then promoted to the Dial Administrative Unit in Greenville, South Carolina where she worked as a supervisor. That is how she met her husband, who was an electrical engineer in Atlanta. Fred was the engineer over the job she was working on – to convert the type of switching system that they had over to an electronic switching system in Greenville. Her unit took the printout and sent it to him. He found the errors and then returned the printouts to Greenville.

Virginia and Fred worked together all day on February 13th and work spilled over into the next day, Valentine’s Day. She gave the girls who worked for her valentines – the little ones that her three- and five-year old children had. She laid one of these valentines on Fred’s desk and guesses she “tripped his gizzard.” They started dating and were married July 3, 1978. After their marriage, Virginia continued working until 1994, when she retired. All in all, she worked from 1962 to 1994.

Virginia has a twenty-five year old son, a thirty-seven year old son, and a forty-year-old daughter. Fred was a bachelor and Virginia informed him that she would have
one child with him – boy or girl, whichever he got. One of her sons went to Clemson and
Georgia Tech for a degree in electrical engineering and is working in Northeast Georgia.
Her oldest son is in Chesnee, South Carolina and buys and sells car parts. Virginia’s
daughter recently graduated from Clayton State and is now a middle school teacher in
Northeast Georgia.

Involvement with SeniorNet

In addition to using her home computer, Virginia uses the SeniorNet computer lab
when she takes classes there. She has taken five or six of the classes and now she is
coaching some of those classes. She likes being a coach because it serves as a refresher
for the courses she has already taken. It keeps her abreast of what is going on and she
says it is really wonderful to go back. She took Windows Essentials a year ago when she
started and just coached the course this past session as a refresher course. She notes that
each time you are in a class with different students, they bring more information and you
learn more. Amazingly, she says, the coaches learn from the students. The coaches and
the teacher learn more than the students sometimes.

Virginia’s theory is that whoever spends the most time working on the computer
has more knowledge and learns more. She says one of the SeniorNet members is a
magnet of computer information. He worked for Bell South also and is very
knowledgeable. He is the type of person who, if you ask him a question, is bothered by it
until he can answer it. She alleges that he cannot handle being unable to answer a
computer question, so he will go straight home, get on his computer and send his students
an email about the problem. She just loves that. When she was in his class, she told him
that it was so rewarding because if you stumped him, he did not let it wait until the next
week for an answer. He would find the answer while they were still at the senior center, or if not there, at least some time that day. She describes this type of devotion to students as “cool.”

Virginia had to use computers as part of her job. When she retired, she says she just sat tight and did not use computers for about ten years. Finally, in 2004 she decided that she did not like sitting back and wanted to get involved. She saw what her husband was doing and learning with SeniorNet and was jealous. She wanted to be able to do the things she saw him doing. That is why Virginia decided to enroll in SeniorNet classes. A lady at her church kept encouraging Virginia to go to the senior center for SeniorNet. The same lady was a student in SeniorNet classes and then became a coach for some of those classes. She is a very good, active coach now and really helped Virginia get involved with SeniorNet.

**Experience with Computers**

Virginia recalls that she had to use keypunch computers at work. When Bell South was working on the previously mentioned conversion, she actually input the information in the computer. Virginia also kept timesheets for people’s work hours on the computer. She was taking care of time reporting and using Word Perfect to write letters when she retired. Using computers was a requirement at Virginia’s work and she had to take classes to learn to use the computer. She describes this period as “way back yonder” in the early 1980’s.

Virginia cannot recall when she and Fred purchased their first home computer. She comments that Fred was the one who primarily used it. Once Virginia retired, she got away from computer use and did not begin using it again because her husband was
always on it. Sharing the computer proved to be a problem. She says that now she just has to be assertive and tell him she needs to use it. They have two computers now and Fred is backing up all the data on one of them, so he can configure it for Virginia. She adds that he has not gotten around to getting the computer configured for her yet. Thus, Fred and Virginia are still sharing one computer.

Learning to Use Computers

When asked about how she learned to use computers, Virginia answered, “Basically I had to learn. That was my job at work. That was a requirement there.” Her company sent her to classes so that she could learn how to use a computer. After her ten-year break, she then started going to the SeniorNet learning center to learn. Virginia has taken five or six of the classes and is now beginning to coach. Again, the reason she coaches it to refresh her memory and to help her learn more. Some of the courses she has taken or coached are Windows Essentials, Word 1, File Management, Microsoft Paint, Family Tree Maker (genealogy) and Scanning. The scanning course was just a two-hour mini-course, but the rest were eight-week courses. She mentions not taking Excel because her husband teaches that course. She is waiting to take the course when she can get another teacher because she does not feel that she needs to be sitting in his class. It is nothing against him, but she feels that it might be uncomfortable for her to be in her husband’s class.

When asked about the methods she uses to learn computer usage, Virginia says that just getting on there and playing with it does not cut it. She feels that you really learn more when you go to the learning center for instruction. She guesses this is because the instruction in a course is more focused and covers a wide variety of topics, where you
do not learn as much on your own. Students get more information, books and resources in a course and they can go back to the course if they do not remember everything. She explains that the older you get, the less you retain. Especially, she says, when the instructors go through the instruction so fast. In her experience the SeniorNet instructors do a lot of repetition to help students try to retain the information, but older adults still walk out of the classroom and lose it. She is quick to add that this is normal for the older people and that is why she likes returning to coach some of the classes. It helps her to remember more.

*Current Computer Use*

When asked how she uses the computer now, Virginia tells how she and her husband use the computer to keep track of Virginia’s medical records. Her husband has all her medical records from 1978 up to now in a database on their home computer. Primarily, he is the one who keeps the records up-to-date in his documents folder. However, she recently told him that it is her information and she wants to manage the database, so he opens the records for her and she updates it with the medical things that are going on in her life. She says that in the past two years, a lot of stuff has been going on and she likes to keep up. The doctors often want to know when she started a certain medication or what treatments they have tried, so it is valuable to her to have information she knows is accurate. She carries a little notebook wherever she goes and has copies of her EKG in it. She also has copies of the different tests that she has had. Doctors cannot remember when she had certain tests done and if she goes to a different doctor he does not know either. So, having access to her personal medical records database has been invaluable.
Virginia was the caregiver to her 92-year-old father-in-law and is currently the caregiver to her 85-year-old mother. At one time she was taking care of both her father-in-law and her mother, and had to keep track of three different sets of medical records. Consequently, she and her husband began keeping track of everything on the computer to keep all of the medical information straight. Her husband put most of the information into the computer for her after she gave him the medical information. She recalls that it was mostly to keep track of her mother’s information because her father-in-law never was sick.

Virginia’s father-in-law, who people called her shadow because he was four foot ten, wore a size four and a half shoe, and followed her around, came to live with her because he had colon cancer. The doctors said there was nothing they could do for him because the cancer was down the side of the colon wall and they were afraid that if they tried to cut it out they would rupture his colon. They counseled that he would be better off leaving the cancer alone and said he would live five to eight years. He lasted seven years and was only sick from January to May 10th. He died on Mother's Day, three years ago.

During the time Virginia was caring for her father-in-law, she was also caring for her ailing, 85-year-old mother. She often used the Internet to look up medical terms for her father-in-law and mother. Her mother has congestive heart failure and other heart-related problems. She also has Asthma and is on 24-hour oxygen. The doctors put Virginia’s mother on inhalers and tried various inhalers to treat her Asthma. Virginia wanted to find more information on different inhalers and nebulizers. The doctors had her mother on a nebulizer where she poured medicine into a little cylinder and put it in
her mouth as she pumped it. Virginia’s mother cannot inhale, so Virginia told the doctor that he was going to have to try something else. Her mother was not getting the medication she needed because she could not inhale. Virginia did some research on inhalers and nebulizers, took what she found to the doctor and he switched her mother to a different nebulizer that has worked well.

Virginia also uses the computer to keep in touch with people via email. She sends emails and pictures back and forth with her children. She mostly emails family to keep in touch with them. She has not used the computer to write letters because her husband typically does that. If she wants to send a letter to a doctor, she usually gives the information to her husband and he takes care of it. She explains that she knows how to do it, but he is the one sitting at the desk, so he does it.

Photography is Virginia’s passion. She loves pictures and invited me to ask her husband how many thousands of pictures she takes…in one year. She says Fred is very excited that she has her pictures on the computer now, so she does not have to get them developed. He even bought her a photo printer for her birthday. Virginia’s son was recently married to a girl from her hometown and he made her promise not to take pictures at the wedding. He wanted her to just enjoy the ceremony and festivities. So, she took her camera, but other people took the pictures and she ended up with one hundred and ninety-two pictures. She has seen some of them and says there are some great photos in there.

In addition to using a digital camera and photo printer, Virginia also uses the Internet. Her daughter-in-law has her own personal website and blog, so she enjoys visiting her site. Adrien Rogers is Virginia’s favorite preacher. He passed away, but she
still listens to his station online every day. Similarly, she goes online and visits James Dobson’s Focus on the Family website. Virginia also researches medical information when she has a problem. When she has a general question, not necessarily medical, she uses a Google search to find the information that she needs.

Future Computer Use

Virginia plans on taking the SeniorNet courses in which she has not yet enrolled. She wants to learn Excel because she sees how her husband uses it and thinks it would be interesting and helpful. Virginia says she also plans on continuing her coaching to help her to continue to learn. She has not taken the Graphics course yet, but plans to in the future. Right now she takes the pictures and her husband takes the card and loads them on the computer. He also burns the photos on CDs and prints them. Eventually, she says, she will do all of the work with her digital photographs. Finally, Virginia would like to do more work with genealogy. Hopefully, she remarks, she will be able to put some more information into her genealogy files.

Problems or Negative Experiences with Computers

One of the problems Virginia encountered when she was taking SeniorNet classes was working on homework and needing help. She would ask her husband for help and he would not help her because he felt that the way for her to learn was to figure things out on her own. He told her she needed to get in there and dig. She comments that she had already “dug, dug, dug, dug trying to get the answers.” She was at a standstill and just wanted him to help her.

Another problem Virginia faces is not having her own computer. She does not have access to a computer because her husband is on theirs a great deal. She thinks this
problem will be alleviated when they can have two separate computers. Virginia also says she needs more time to work on the computer. She figures she just has to give up some of her time to be able to do what she wants to do – like working on genealogy. The man who taught the SeniorNet Genealogy course told Virginia that, “You can spend 8, 10, 15 hours just on that thing once you get hooked on it.” So, she would like to get more involved with genealogy because she loves it.

When asked how computers could be made easier to use, Virginia mentions shortcuts. Sometimes, she observes, hitting one shortcut is easier than having to go through a series of steps to accomplish a computer task. Similarly, she thinks that there should be shortcuts that allow you to open programs more easily. She wonders if software engineers have shortened things as much as they can, but sometimes it seems to her that they could make some changes and modifications to make things easier.

*Positive Experiences with Computers*

When asked what she thinks of computers, Virginia responds, “I love them. I encourage everybody I see, especially senior adults my age to get over here and get started and get involved because the world is changing to computers and they do not have any choice.” She tells her friends that the sooner they get involved, the better things will be for them. She tells them that they can begin taking classes at age 50 with SeniorNet, so they do not have to wait until they are 65 or 70. She says they have one guy who is a member of SeniorNet that is ninety-something years old and is smart as a whip. She says that he is a little bit forgetful, but she just admires him for being there and trying to keep his mind functioning.
Virginia describes her experience in a SeniorNet genealogy class. She went into the class not having any earthly idea about her family. The class taught her how to find and enter information into the computer. One day was also set aside to travel to the National Archives. The county provided a van and all eleven of them loaded up and went to the National Archives. At the Archives, they participated in a two-hour orientation to give them information about the Archives. Then she was able to go into the system and put in her papa’s name. The National Archives contains records of the cards given to military members. Virginia was able to fill out a request sheet, find his military card and make a copy of it. She reasons that if she had not taken the genealogy class, she would never have had access to this information about her father-in-law. Without taking the class she also would not have known to go the National Archives for genealogy. This was an “awesome experience” to be able to find information about her father-in-law. She states, “I'm ready to go back too.”

During the trip to the Archives, Virginia noticed that the computers they have are old and slow. She would catch herself repeatedly hitting a button, instead of sitting back and waiting for the computer to come back with a response. One of the Archive’s employees approached Virginia and said, “You're going to have to hold them hands” because Virginia was so impatient, waiting for things to load. She says with DSL she is used to flying on the Internet, but it was extremely slow at the Archives.

On her trip to the Archives, Virginia met people who spend days and weeks digging into their family’s genealogy. The instructor for her genealogy course has worked on genealogy for approximately fifteen years and has been everywhere, including cemeteries, searching for information. Before taking the class, Virginia went to her
family’s cemeteries and took pictures of her ancestors’ headstones. She had not thought about entering the data she gathered at the cemeteries into a computer, but she learned how to do it in her class. Virginia would like to do more genealogy, but explains, “I haven't gotten back on the computer too much because somebody else is sitting in my chair.” Hopefully, though, she will be able to put more time into genealogy because it was a thrill for her to be able to access genealogical information.

*Relationships Affected by Computers*

When asked how her relationships have been affected by computer use, Virginia recounts how her little granddaughter called about a homework assignment to find out about entrepreneurs in Georgia. She could not find the information she needed, and her mother was at ball practice and could not help. Virginia recalls that it took her an hour and a half of digging, but she finally found the information she sought. She just had to keep going to website after website before she found what she needed. Eventually Virginia called her granddaughter back and they discussed who the entrepreneurs were, what they did, and where they worked. While they were on the phone, they were both online looking at information together and they completed the report. She remembers that she learned a lot just by playing around on the Internet, helping her granddaughter. Virginia says she has helped other grandchildren in similar ways.

Virginia explains that computers have affected her relationships with others because she is always talking with people about SeniorNet. She has encouraged and spread the word to people she feels need to be involved with SeniorNet. She tells them, “You are going to need this.” They often express that they are afraid of computers and do not want to touch them. She responds that there is no point in being scared. “You
need to go and learn how to use them,” she says, “because it is a valuable asset.” She
tells them that the signs of the times are changing and they are going to be forced to
learn.

Virginia says she invites people to come out to SeniorNet and learn because of
how much fun they can have. She thinks that participants get a motivational drive by
taking SeniorNet courses. If you can get older folks to the learning center to take that
first course, you can get rid of their cold feet and give them a desire to learn. The best
way to learn, she believes, is to start with the easier courses. There is an order or natural
progression to the courses, and the best way to learn is to follow that order.

Virginia feels that her computer use and involvement with SeniorNet have made
her a better person by making her more knowledgeable. In turn, she has enjoyed gaining
the ability to reach out to others by helping them to learn to use computers. She has
learned to share this computer knowledge and pass it on. She concludes, “I’ve earned it
and learned it, and I want to share it with others, basically.”

*Computer’s Impact on Life Events*

One of the major impacts computers have had on Virginia’s life after retirement is
that she feels needed and used. She says, “It's not like I'm retired, sitting back in my
chair lacking and not having anything to do.” She feels her computer use is useful
because it motivates her to broaden her knowledge and gives her a desire to want to learn
more. As she said, she used computers at work, but it was different from what she does
at SeniorNet. At work she was using the computer for her company. At SeniorNet she is
doing it for her own enjoyment and enrichment. She likes to “push the courses on other
people” and encourage them to become involved. She tries to help them see that the computer is nothing to be afraid of and invites them to come out and learn.
Ann Pluett

Biographical Information

Ann Pluett was born in Milwaukee and lived there for ten years. She is the oldest of three children and has two younger brothers. Her family moved to St. Louis for a year when she was 10 and then her father’s work took them to Cape Girardeau, Missouri. Ann attended grade school and high school at a Catholic school in Cape Girardeau. During high school she worked as a nurse’s aid at a little Catholic hospital because her father felt that if she was going to go away to nursing school, she needed to make sure she knew what she wanted. One of the Nuns at the hospital took Ann under her wing and she nurtured her along and guided her in choosing the right nursing school.

After Ann graduated from high school, she went to a nursing school in St. Louis where she received her nursing diploma and gained a hands-on education. She met her husband in the final weeks of her nursing school experience. He came in as a patient after starting to bleed a week after having a tonsillectomy. Ann was working in the hospital that day and was in charge as a senior student at that time, so she took care of him. When Ann first met her future husband she said, “Would you please take off your clothes and get in bed?” to which he replied, “That's a girl I'd like to know better!”
With the resident’s help, Ann stopped the bleeding in short order. They did not have TVs in the hospitals in the early 1950’s, so Ann’s husband asked for a radio to listen to a ball game. She had someone bring over a radio from the nurses’ residence, which was attached to the hospital. Ann and her future husband grew friendly and he asked for her phone number. She went on vacation after that weekend and when she returned found that he had called every day. They started seeing each other, were engaged the following October, and were married the following January. They would have celebrated their 50th anniversary January of 2007.

Ann’s husband had been married before and had three older children, but did not have custody of them. They lived in University City, a suburb of St. Louis and then Alton, Illinois. They had seven children and his three children ultimately came to live with them in their junior high and high school years. Even though they had ten children, they never had more than nine at home at once. The first of their children went to college before the last one was born. After fourteen years in Illinois, the Pluetts moved to Monterey, California in 1972.

When asked if Ann was working during this time, she responded that she worked all the time, but never away from home. She did volunteer work as a nurse, but she was not employed during the years when the children were at home. When Ann and her family moved to Monterey, the youngest of her children was in 2nd grade and her husband’s three older children were grown and gone. She went to work then and planned to work just part time. However, she was offered a really good full-time job and her husband advised her to accept the offer. This was the beginning of Ann’s full-time work
as a registered nurse. She explains that she was home when the children were home and
gone when they were gone.

In the mid-70’s Ann she decided to pursue a B.S. Degree in Health Science since
no local universities or colleges were offering Bachelor’s Degrees in Nursing. Chapman
College of Orange, California offered a Bachelor of Science in Health Science, so she
pursued and received her B.S. in Health Science. Eventually, the California State
University System received a federal grant to offer a B.S. in Nursing to working nurses
through the universities that were close to Ann. San Jose State offered the program and
Ann earned a B.S. in Nursing and a Public Health Certificate. The same institution began
offering a Masters in Community Health and Ann completed fifteen units toward the
degree, but did not finish.

During the time she was going to school and raising her children, Ann worked a
small hospital, Monterey Hospital, and quickly moved to the bigger hospital, Community
Hospital of the Monterey Peninsula. She worked in ICU for two years because she heard
that those were the best nurses and she wanted to be one of the best nurses by continuing
to learn. However, she quickly grew tired of working in ICU and “nursing machines.”
She needed interaction with people because she describes herself as a people person. In
1979 Ann began work in Oncology.

Having transferred to Oncology, Ann found her niche and soon became the
Assistant Head Nurse around 1980. Ann next went to work for a medical oncologist
where they started doing medical procedures on an outpatient basis. Ann helped develop
a transfusion program, wrote a policies and procedures manual about it while working
with the blood bank. As a result of her work with blood banks, she gave a presentation
at the Association of Blood Banks annual meeting. She also wrote an article on home transfusion therapy, which was published in a peer-review nursing journal.

Ann had other professional opportunities at this time. With another nurse she wrote a patient education project for their patients called “Self-Care Guides for Persons with Cancer.” The program was designed to be individualized for patients based on the chemo or radiation treatment they received. She and her colleague marketed the guide at a national meeting and sold the rights to use it to over a hundred hospitals, medical centers, clinics and physicians offices. With the proceeds from the rights they were able to pay their way to the International Conference of Cancer Nurses in New York. They presented their guide at a poster session during the conference.

Eventually, Ann resigned from her position with the oncologist and went to work for the Visiting Nurse Health System. She became their IV Therapy coordinator and supervisor, teaching and supervising the other nurses. Subsequently, she was the only person at Visiting Nurse who had any hospice and oncology background, so she became the nursing director of their Hospice. She stayed in that position for about a year and half and burned the candle at both ends.

While working as the nursing director for Visiting Nurse, Ann grew really tired and she and her husband decided to move to Georgia. After moving to Georgia, Ann took a couple months off to get organized and settled. She eventually decided to start looking for a job. The jobs where she lived wanted to pay her $10 an hour and she felt she had worked too hard to settle for that. She eventually visited a hospital, which was run by the same Nuns who had educated her in St. Louis and she applied for a job as a staff nurse at the hospital. She just wanted to do patient care and the lady who was in
charge said that she would hire Ann at that level, but had a theory that the bubbles rise to the top.

The hospital where Ann began working had nursing shared governance, which is an award-winning, nationally recognized form of nursing administration. She worked in the Oncology unit at this hospital and was the only Oncology Certified nurse at the hospital. She managed to encourage a lot of the other nurses to prepare for the certification exam and when she left the hospital in 1995, 25 of the hospital’s nurses were Oncology Certified.

Ann and her husband did not like the schedule she had to keep working in Oncology. She switched jobs and became the discharge planner for home, health and hospice out of the Department of Social Services. At this time, she was a Certified Case Manager and Home Health and Oncology Certified, and the hospital was looking to Ann to train all the others who would become case managers. During this time, Ann enrolled in Georgia State’s Masters of Nursing Program. At one point she had a bad sinus infection that really set her back and she took a term off. When she returned to school, her husband became very ill. Ann realized she could not work full time, take care of her home and husband, and go to school too. So, after finishing 60 hours of graduate work, Ann made the decision to withdraw from school.

In 1995 Saint Joseph’s offered Ann a one-time only, enhanced early retirement in 1995. She was not ready to retire, but it was such a good deal that she thought, “If I could find another position that I would like, I would take it.” She took a job doing regular home health care case management, and worked from home on a computer. She
visited patients in their homes and sent information from her home computer. She worked for Visiting Nurses until 1999.

In 1999 Ann’s husband began to be very ill. He was thirteen years older than Ann, an insulin dependent diabetic, and very unstable. He took five injections a day of three different kinds of insulin. He had open-heart surgery and several other surgeries from 1994 to 1999. These surgeries really took a toll on him and his vision was getting worse. Finally, it got to the point that he told Ann, “I really think I could use more help.” He also made the decision to give up driving, which amazed Ann. He told her that he was afraid he was going to hurt himself or somebody else.

The main reason Ann kept working at all from 1995 to 1999 was to keep their medical insurance. Her husband was on Medicare, which didn’t cover his prescriptions, but her insurance did. His medicine cost $7,000 a year. When Ann was offered retirement, she and her husband discussed their financial situation and figured out that Ann could retire. She began staying home, but continued her volunteer activities. Five years later, in 2004, Ann’s husband passed away.

*Involvement with SeniorNet*

After retiring in 1999 Ann began to participate in a number of different volunteer activities. She joined SeniorNet in 2000 because one of the founding members of the local chapter was a personal friend of hers. After getting involved with SeniorNet, Ann eventually started coaching for various courses. After coaching a couple of classes, someone told her that they thought she could teach. She began by teaching a little course called “Beginning Computers,” which taught basics such as turning on the computer and using the mouse. She then taught one of the first Window's classes at the learning center,
became the course team leader for Windows, and helped write the learning center’s first Windows manual. Ann was then asked by a friend of hers to take over the graphics course. She had played a lot with graphics and had a digital camera and agreed to take over the course.

In short order Ann was drafted to be on the local SeniorNet board as Education Coordinator. Her predecessor quit after three months because she could not deal with the people on the board and had a lot of personal problems. Ann adds that this person has stayed with SeniorNet and is a valuable resource. Anyway, the SeniorNet board at the time was made up of five individuals (it is now comprised of six people). She served as the Education Coordinator for two years. Her responsibilities involved setting the schedule, recruiting instructors, recruiting coaches, and seeing to it that the manuals were printed. She did the job from home and was able to continue as Education Coordinator during the period when her husband was sick.

As Ann’s husband’s health declined, she still taught or coached classes during the day, but reached the point where she did not leave him at night. She belonged to the choir at her church had to drop out because she could not leave him to go to choir practice. She also dropped out of her book club – a group of three nurses, five social workers and a physician called the Divine Nine.

After Ann’s husband died in 2004, she was still Education Coordinator. She then became Assistant Vice President on the SeniorNet Board. At this time they had just begun having a PC User Group, which they offered free to the community once a month, September through May. At the PC User Group meetings a speaker is brought in to address a variety of topics of interest. Ann was very involved with the user group, so the
board agreed to having the Vice President be responsible for the PC User Group. She figured that when the time came and she moved on, she wanted someone else to have to automatically assume responsibility for the user group. She feels that the PC User Group has been a good way of attracting students to the SeniorNet program.

Next, Ann agreed to be President of the SeniorNet Board for one year. After that year was over, the board members were given the option of remaining on the board. The entire board agreed to stay on for another year, including Ann. In her new responsibility as SeniorNet President, Ann drew from her experiences with nursing. Because of her leadership responsibilities at various hospitals, she was happy to be SeniorNet President. One particular hospital where she worked used the shared governance model of nursing practice. Ann was chair of the education council and also on the executive council where she learned about participatory management and other creative management practices. When she became SeniorNet President she decided to take those same management practices and apply them at SeniorNet.

Shortly into her tenure, Georgia Cares approached Ann about helping with the Medicare D enrollment, since SeniorNet had a computer lab. Ann recalls that people who did not normally volunteer came forward to help with the enrollment. Unfortunately, people had to enroll when the SeniorNet classroom was not in use. Furthermore Ann’s county and Georgia Cares were in charge of publicity, but the enrollment took place around Christmas and their offices were closed. So, whereas they could have helped fifty or sixty people, they had about fifteen enroll. Ann it quick to add, “but it was successful.”
The Medicare D enrollment program was an example of Ann’s leadership style of facilitation and coordination. When Georgia Cares approached the board about the enrollment, one of the board members said he had researched everything they had presented and was really interested in the enrollment program. Ann said to him, “It sounds to me like you are really interested in this project. Would you like to head it up? Lead the way?” She says he looked at her and tentatively said, “Well. Yeah. I guess I could.”

Ann used a similar technique to recruit someone to spearhead the creation of a satellite-learning center, which will fall under Ann’s jurisdiction. The community where the satellite center will be is building a community center, which opened shortly after my interview with Ann. The community center has a senior wing, not a full senior center like the one that houses Ann’s learning center. The community that is building the center approached the SeniorNet board and asked them to provide a computer classroom and a chapter there. The fellow whom Ann replaced as president remained on the board and lives near the new community center. He had a keen interest in what was going to go on there, so Ann asked him if he would like to lead the way. He looked at Ann and said, “Guess you got to learn around here not to express an interest in something!” He is now leading the way on setting up SeniorNet at the new community center.

One of the things Ann realized when she became president was that the immediate past presidents had just sort of gone off into the hinterlands. She realized that these people represented a vast resource that should stick with them. She approached the board with the idea of having the immediate past president remain on the board as a voting member, and the board unanimously agreed.
Ann also implemented a system where there are course team leaders for each of the different areas: Windows, Word, Graphics, etc. The system was such that only one person had been in charge of each area. For example, on person did registration, on person was the Webmaster, one person was volunteer coordinator, etc. Many of these people had been in these positions for quite a while, and that concerned her. Some of them had serious health problems and SeniorNet would have had to deal with losing all of that knowledge and experience if something happened to them. Therefore, Ann asked these leaders to find someone who could learn their job and work with them. The Webmaster said that he was tired of doing it and only kept doing it because nobody else would. They found a new, younger member, who was eager to get involved with the website. She says that the old Webmaster and his protégé still communicate regularly, and the system has been effective. She concludes that they have changed their systems enough, to where losing a leader would not be a problem.

At the time of the interview, Ann was working on putting together a one-week, computer summer camp. Actually, it was the park and recreation department’s project, but the head of the senior center asked SeniorNet to help. The board made the decision not to have classes this summer because everyone wanted time off and they usually have a small summer session anyway. The director of the senior center opened the camp up to enrollment to anybody who wanted to participate and the $48 fee goes to her treasury. Ann plans to help at the camp and will be leading their digital photography workshop. She says she is amazed at how many seniors have a digital camera and do not know how to transfer their pictures to the computer.
Experience with Computers

Ann began using a computer about 1983, when she wanted to start writing and got tired of her typing errors. Computers were relatively new then and people could not afford an IBM computer for home. She and her husband bought a little Kaypro that had WordStar. She was a good typist and did a lot of her professional writing on the Kaypro. She was also doing a lot of presentations for her job because nurses are constantly teaching. She would prepare everything for her handouts on the computer.

When she purchased a Kaypro, Ann used it a lot at home. Then, when they moved to Georgia, prices were coming down to where she was able to purchase an IBM computer. At that point her husband started to learn to use a computer some. He would learn an application if he wanted to do something. One time when she was working at the hospital, Ann’s husband called and asked her how to do Mail Merge in Word – a complicated task. She informed him that she did not know how to do it, but when she returned home, they figured it out.

Ann’s husband wanted to do money management so he learned to use Quicken and Ann learned it too. Once Ann stopped working, she got involved with SeniorNet and started coaching and then teaching, where she learned a great deal about computers. Ann admits that computers were not intimidating for her because nurses are willing to learn everything. She says nurses are very technically oriented for the most part and have to constantly learn some new gadget because everything is computerized: pumps, IV fluids, pain control, charting, etc. As part of her job with home health, Ann had to learn to use a tablet computer. Regarding technology, she concludes, “I think nurses are very savvy.”
Current Computer Use

Ann’s daily routine involves getting up, turning on her computer, plugging in the coffee maker and checking her email. She comments that her inbox is usually rather full. The morning of the interview she checked email and had 18 messages, having checked it the night before no less. Ann’s use of email is indicative of her multifaceted activities.

She is very involved at her church, a faith community of 3,000 families. The church publishes a monthly, eight-page newsletter. She started writing for the newsletter because she always enjoyed writing and has done lots of it over the years (she had some peer-reviewed nursing journal articles and chapters in two professional books published). She volunteered to work with and write for the newsletter because she thought she ought to make a contribution.

Ann is currently the managing editor of her church’s newsletter and works closely with an award-winning journalist from the Atlanta Journal Constitution. She does a lot of the writing in the newsletter because occasionally there are not enough articles to fill the publication. Nonetheless, she tries not to do a lot of writing, unless it involves a topic that really interests her. Ann also works with the graphics that are included in the newsletter. People email pictures to her, give her pictures to scan, or she finds pictures on the web and then manipulates them so they can be inserted into the newsletter. Those involved with putting the newsletter together meet once a month for forty-five minutes. She notes that this is how little personal interaction they have with each other. Working on this newsletter constitutes a large part of Ann’s computer activity.

After her husband died, a good friend and fellow “Mercy Nurse” asked Ann to come back to work as a nurse. She did not really want to apply, but she did anyway.
She applied for a PRN-(as-needed) position and was called in to work about once a week. It became physically too difficult and she resigned after six months. They did not accept her resignation and asked what others things she could do. She stayed on and did all the chart audits for them, which were way behind. They also asked Ann to do some in-service education. She just finished putting together and teaching an HIV/Aids update for the nursing staff and Certified Medical Assistants. She was qualified for this because she was an HIV-AIDs educator and certified AIDS educator in California. In order to teach these AIDS courses, she put together a PowerPoint presentation and created handouts. As a result of her presentations, two employees asked if she would teach them to use PowerPoint. The company these employees were with did not have the resources or the budget for them to take a PowerPoint course, so Ann agreed to teach them as a volunteer.

Currently, Ann is in the process of developing some lessons on PowerPoint. She has already held two sessions and is working on developing a full PowerPoint course. She has never done this before and is learning as she goes. She believes that once you have a basic knowledge of computer applications, you can generally figure things out. She is putting together the lessons with the hope that SeniorNet can offer PowerPoint since there have been requests for it. When she checked with SeniorNet at the national level, no one had submitted a PowerPoint course yet.

In addition to using computers for her volunteer activities, Ann also uses them to manage her finances. She manages all her money online, and uses online Bill-Pay, Quicken and TurboTax. She also shops via the Internet, because she does not want to trot the malls. Further, Ann uses the Internet to conduct research. She did all the research for
her AIDS in-service course using the Internet. She had to use the Internet because when she retired, her husband encouraged her to donate her medical library so they could get a tax break. Consequently, she donated her whole library to Hospice Atlanta, which is part of the NHS. Thus, when the time came to give the AIDS in-service, she used the Internet to gather all of the information for the in-service.

Ann uses the computer for enjoyment as well as professional work. She grew up in a household where classical music was all she heard. She loves the classics and did not know there was any other type of music until she went away to school. Now she likes to sit in the living room, read and listen to her favorite music. She has a Dell Digital DJ and has put a lot of her favorite music on it. She also found a speaker system, which plugs right into her Digital DJ. She also enjoys being able to program what she wants to listen to, instead of being at the mercy of what is on the radio. The radio, she adds, plays less and less of what she likes.

Ann tells me that she is not really skilled at working with digital music yet, but most of her brothers have computers and are very computer-literate. Her youngest brother has gotten into converting his old vinyl records into digital CD’s. He mails Ann some of them and they talk about and enjoy the music together. She would like to be more skilled with digital music. Right now she is transferring some of the music from her CD’s to her digital DJ. She has also downloaded some music – albums she bought from eclassical.com. Thanks to technology, she enjoys music all over her house.

**Future Computer Use**

When asked how she plans to use computers in the future, Ann responds that she will do more of the same. She has a couple of projects that she would like to work on if
she ever gets caught up. She has forty-five years of family photos, which are sorted into envelopes, according to family. As she was organizing these pictures, she discovered she was missing 15-years-worth of pictures. Her son reminded her that those were the years when she having her pictures developed as slides. She found the box full of slides and now plans to scan them and put them onto CD’s, so she can pass them along for each family to keep.

Another project Ann has in mind deals with her family cookbook. She made a family cookbook when her children left home and kept calling her to ask for recipes. She grew tired of giving recipes over the phone and decided to type them up on 5x7 cards. She then sent each of her children a 50-page recipe booklet. Her children liked it so much that a few years later they asked her to update the cookbook. In 1994 they added more recipes to the cookbook and Ann used her computer to create the 100-page, spiral-bound book. In this copy of the cookbook she inserted brief histories about some of the recipes. Her children now tell her that it is time to update the cookbook and put it on CD’s.

Another project Ann has in mind is working with her husband’s personal history. Before his death, Ann’s husband started his personal history, which gave a little bit of information about his background. The history was rather sketchy and incomplete and Ann’s children have asked her to fill in some of the gaps. While she is at it, they also want her to write her own personal history. She declares, “Someday when I get caught up, that's what I'm going to do.”
Problems or Negative Experiences with Computers

When asked about the problems Ann has seen older adults encounter when learning to use the computer, she replies that those who become mentally impaired and limited become very frustrated. Of course, she adds, it depends on their level of cognitive ability. Some of them have beginning dementia. She has seen people take the same course three or four times, get frustrated, yet keep coming to class. She thinks they come because of the fellowship and also because they want to learn. Some of the instructors get frustrated with them and Ann instructs them that maybe teaching the skill is not SeniorNet’s only mission. Perhaps being there for their students is the reason they are there. Ann believes that the frustration level and the inability to solve problems sometimes cause people to quit.

Ann gives an example of an older adult whose frustration with computers led her to quit. She has an 82-year-old aunt, who has a three-year-old computer. In fact, her aunt retired in her late 50’s because her employer was going to computers and she was afraid of them. She reluctantly accepted the computer and as she tried to use it, she was frustrated when problems arose and she did not know what to do. She had nobody to turn to, and Ann feels that if her aunt lived near her, things would have been different. Ann tried to talk her through the problems over the phone. Further, Ann’s aunt would wait until evening when she was tired to try and work on the computer. Eventually her aunt gave up and felt that she had failed. Ann notes that this can happen with seniors. She concludes that her aunt is probably someone who should not have had a computer unless she had somebody available on a day-to-day basis to encourage and help her.
Ann mentions other problems seniors face when learning to use computers: vision, manual dexterity, memory, and comprehension. She also points out that seniors will not take seriously the need to go home and practice what they learned in class. They figure they can come to class week after week and enjoy the course text without having to work at it. Teachers then have to spend the first thirty minutes just going over what was taught the last class period. By the time everyone is back up to speed, it is time for the break and half the class is wasted. Ann thinks memory is becoming an increasing problem. However, she happened to see Dr. Andrew Weil on Public Broadcasting not long ago. He wrote a book called “Healthy Aging” which proposes that two of the best things seniors can do to remain mentally active and alert are to learn and use a computer and to learn and use a foreign language. According to Dr. Weil (2005), these activities make different parts of your brain function better.

I asked Ann how she has seen seniors overcome the obstacles she mentioned. She supposes that they each do it in their own way. She suggests giving a lot of encouragement and persuading them to keep trying. She thinks that if seniors keep trying to learn computers, they eventually will. They need to recognize that if they get into something complex, like graphics or digital imaging, they may need to take the course twice. She says they need to understand that this is acceptable.

*Relationships Affected by Computers*

Ann says there is no doubt that computer use has affected her relationships with others. Many of her friends call her and ask for computer advice because they are having trouble. She draws on her nursing experience of diagnosing problems from symptoms and walks them through the problems. She asks a lot of questions about what they were
doing when it happened and then gives them suggestions. If she encounters situations where she cannot help the person, she gives them the contact information of someone who can help.

Ann’s computer expertise has also affected her relationships at church. She is part of a Publication Review Committee, which consists of six or seven people. The committee communicates through letters and emails about the church’s publications and other facets of the church or even of the diocese. Ann’s computer expertise brought her into contact with this group and enables her to communicate with the members of the committee.

Ann also describes how computer technology has affected her life around SeniorNet. She communicates electronically with the national SeniorNet office regularly. Through communication made possible by computers, Ann met a regional director in Florida and was consequently offered the opportunity to write a new course for SeniorNet called “Quicken Medical Expense Manager,” which is medical expense management software. She declined the offer because of time commitments. This offer is indicative of the opportunities that have arisen because of Ann’s proficiency with computers.

Ann has also used her computer expertise to help others. She states that a number of people have asked if she would come over and teach them for money. She agrees to teach them and declines the money. She sees this as an outreach opportunity and an opportunity for social interaction. She enjoys the social interaction this brings, but is glad to return home to peace and quiet. She now lives alone and enjoys it. She reiterates that she is happy and thinks the fact that she knows her computer is at home is her salvation. She comments that when the Internet is down, her day starts off wrong. Comcast went
through a period where every day for a week, she could not get online in the morning. She exclaims, “It was awful!”

Ann has nine grandchildren. Six of them are in California and three live near her in Georgia. Two of her grandchildren live about forty minutes from Ann and she gave their family a computer to use when theirs died.

The 16-year-old grandson with whom Ann has a strong relationship lives near her. He built his own computer and when he ran into trouble while building it, would call his grandmother for advice. They would talk through the problems and if they could not figure it out, she would advise him to call his father in California because he is a computer expert. Ann and her grandson have talked a lot about computers and have shared a lot. In fact, Ann bought a little iriver mp3 player, but decided it did not hold enough songs. When she bought a Dell Digital DJ, she asked her grandson if he would like to have it. He exclaimed, “I’d love it!” Ann also had an extra Palm Pilot because she bought a new one. She gave him the old Palm Pilot with the instructions that it be used only for schoolwork. It was something to put his assignments and calendar on, not something to play games on. She remarks that he has used it for the proper purposes and taken care of it.

The same grandson just returned from two weeks in Europe. He is a musician and has taken piano since he was four. Currently he plays all the percussion instruments for his high school band. The trip to Europe was a music tour where fifteen students from his school and thirty-five other Georgia high school students traveled to and gave concerts in England, Germany, Switzerland, and Austria. Before he left for this trip Ann asked him if he had a camera. He informed her that he was just going to buy a disposable
camera, so Ann offered to lend him a camera. She then took her grandson and bought batteries for the camera and a one-gigabyte card for the camera. She also let him take a couple of her smaller cards. When he returned from his European trip he immediately visited Ann and could not wait to show her his pictures. She says he took beautiful pictures, so she asked her grandson if he would like to keep the camera. He said, “Oh Grandma. Are you gonna give it to me?” She informed him that she just bought another new camera and wanted him to have the one she loaned him.

Ann comments that her grandson shows her things and she shows him things regarding computer technology. She also shares free computer programs with him. One time she told him about three free photo-editing programs that he could download onto his computer because he didn't have photo-editing software. She learned about these programs because she is going to use them with SeniorNet to teach photo editing. She also emails back and forth with her grandson. In fact, she and all her grandkids email back and forth regularly.

Last year Ann received a frantic email from her granddaughter in California, who is entering her senior year of high school. She was writing a family history as a requirement for one of her courses and needed history and pictures and wondered if Ann had anything she could share with her. This was on a Sunday and the history was due by Friday. Ann had access to two volumes of family history and had a wealth of information and pictures from which to draw. She wrote a synopsis of some of the information, scanned a bunch of pictures and emailed it all to her granddaughter. She was able to get it to her granddaughter in time for her to complete her history project.
One of the things Ann has found is that computer use is a great distraction from pain and discomfort. She has osteoarthritis, cervical disc disease, and degenerative disc disease down her spine. She lives in pain, but finds that when she sits down at her computer and gets involved mentally with something, she forgets about the pain. Of course, she adds, as soon as she gets up and moves away, she remembers it again. She points out that at least during the period she is involved with the computer, she is comfortable and not thinking about how much she hurts.

Ann describes her involvement with SeniorNet and her involvement with her church’s newsletter as her salvation after her husband’s death. To be able to prepare for the things she had to do, to have the interactions, to carry out her role as vice president, to still make a contribution, and to maintain her relationships were invaluable to Ann. She honestly admits that it was her sanity. The people from SeniorNet and her book club were all very supportive. She tried to resign from the Divine Nine, her book club, but they would not let her. Then, every week or ten days, one of them would call. She does not think they coordinated the calls, it just happened and they were a tremendous professional support system. She recalls that they knew how to interact in the ways that she needed. The human interaction (emails, phone calls and visits) from people who were knowledgeable about caregiver stress was helpful.

Ann sums up her involvement with SeniorNet after the death of her spouse in this way, “I cannot tell you how much it has meant to me. It has meant mental stimulation, independence, a sense of purpose and accomplishment, as well as a sense of freedom.”
CHAPTER ELEVEN
EXPERIENCES WITH COMPUTER TECHNOLOGY, SELECTIVE OPTIMIZATION WITH COMPENSATION, MOTIVATION, ATTITUDES AND BELIEFS, AND LEARNING PREFERENCES AND STRATEGIES

Introduction

The preceding chapters provided a thorough description of the Quintain and participants in this study. This chapter summarizes the preceding descriptions in light of the first research question regarding participants’ experiences with computer technology. Attention is then given in the remainder of this chapter and the next chapter to interpret these experiences with focus on the second and fourth research questions. These questions deal with the ways in which older adults come to use and learn to use computer technology and the implications such information has for those who provide computer access and education to seniors. The model of Selective Optimization with Compensation acts as a framework within which we discuss participants’ motivations, attitudes and beliefs, learning strategies and learning preferences. Finally, implications for seniors and those who provide computer education opportunities for them are discussed.
Participants’ Experiences with Computer Technology

The first research question seeks to understand participants’ experiences with computer technology. This question concentrates on how participants use the computer, what benefits they have derived from use, what problems they have encountered and how they plan to use computer technology in the future. While these questions were answered indirectly in the preceding chapters, let us explicitly examine each sub-question with regards to the whole group.

Each participant used computer technology in a variety of ways. Table 10 summarizes various computer functions and which participants used those function.

<table>
<thead>
<tr>
<th>Use</th>
<th>Participant</th>
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<tbody>
<tr>
<td>Internet News</td>
<td>Robert Shanahan, Lynn Shafer, Gary Jacobs, Betty Stewart, Fred Cook, Virginia Cook</td>
</tr>
<tr>
<td>Internet Research (medical and other)</td>
<td>Robert Shanahan, Lynn Shafer, Gary Jacobs, Betty Stewart, Fred Cook, Virginia Cook, Ann Pluett</td>
</tr>
<tr>
<td>Internet Learning</td>
<td>Robert Shanahan, Lynn Shafer, Virginia Cook, Ann Pluett</td>
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<tr>
<td>Internet Communication</td>
<td>Robert Shanahan, Lynn Shafer, Fred Cook, Virginia Cook, Ann Pluett</td>
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<tr>
<td>Internet Games</td>
<td>Robert Shanahan, Gary Jacobs, Betty Stewart</td>
</tr>
<tr>
<td>Internet Shopping</td>
<td>Robert Shanahan, Betty Stewart, Fred Cook, Ann Pluett</td>
</tr>
<tr>
<td>Internet Banking</td>
<td>Robert Shanahan, Lynn Shafer, Gary Jacobs, Fred Cook, Virginia Cook, Ann Pluett</td>
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<tr>
<td>Email</td>
<td>Robert Shanahan, Lynn Shafer, Gary Jacobs, Fred Cook, Virginia Cook, Ann Pluett</td>
</tr>
<tr>
<td>Text Chatting</td>
<td>Robert Shanahan, Gary Jacobs</td>
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<tr>
<td>Video Chatting</td>
<td>Robert Shanahan</td>
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<tr>
<td>Word Processing</td>
<td>Robert Shanahan, Lynn Shafer, Gary Jacobs, Betty Stewart, Fred Cook, Ann Pluett</td>
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<tr>
<td>Creating Spreadsheets</td>
<td>Robert Shanahan, Betty Stewart, Fred Cook</td>
</tr>
<tr>
<td>Creating Presentations</td>
<td>Robert Shanahan, Fred Cook, Ann Pluett</td>
</tr>
<tr>
<td>Scanning Pictures</td>
<td>Robert Shanahan, Lynn Shafer, Betty Stewart, Fred Cook, Ann Pluett</td>
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<tr>
<td>Editing Digital Pictures</td>
<td>Robert Shanahan, Lynn Shafer, Fred Cook, Ann Pluett</td>
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<tr>
<td>Creating Picture Slideshows</td>
<td>Robert Shanahan, Ann Pluett</td>
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<tr>
<td>Creating Digital Art</td>
<td>Lynn Shafer</td>
</tr>
<tr>
<td>Listening/Downloading Music</td>
<td>Robert Shanahan, Lynn Shafer, Gary Jacobs, Fred Cook, Ann Pluett</td>
</tr>
<tr>
<td>Composing Music</td>
<td>Robert Shanahan</td>
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<tr>
<td>Watching Movies</td>
<td>Robert Shanahan, Gary Jacobs</td>
</tr>
<tr>
<td>Listening to Audio Books</td>
<td>Robert Shanahan</td>
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<tr>
<td>Managing Finances</td>
<td>Robert Shanahan, Gary Jacobs, Fred Cook, Ann Pluett</td>
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<tr>
<td>Developing Websites</td>
<td>Robert Shanahan</td>
</tr>
<tr>
<td>Playing Computer Games</td>
<td>Robert Shanahan, Fred Cook</td>
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<tr>
<td>Genealogy</td>
<td>Lynn Shafer, Virginia Cook</td>
</tr>
<tr>
<td>Calendaring</td>
<td>Robert Shanahan, Gary Jacobs, Fred Cook, Ann Pluett</td>
</tr>
</tbody>
</table>
Based on the information in this summary table, it is apparent that most participants use the computer for communicating, managing finances, conducting research, taking and manipulating digital pictures, and word processing. Less common uses amongst these participants included text- and video-chatting, creating digital presentations of various kinds, composing music, playing games, developing websites and doing genealogy. Also instructive here is a consideration of a few of the computer activities participants did not undertake. Such activities include creating movies, reading eBooks, and running a personal online business.

Having considered how participants use computer technology, the research questions lead us to an examination of the benefits participants mentioned related to their use and problems encountered in the learning process. The topics of benefits of computer use and problems encountered in learning to use computer technology will be explored in the next chapter in light of successful aging. However, we will consider participants’ intentions for future computer use here.

Most of the participants answered that they planned to continue using computers the same way they currently do. Robert’s answer to the question about future use was typical: “Same way I’m using them today.” However, Robert does mention having a desire to learn how to use his DVD writer more. Ann also mentions that she would like to do “more of the same,” but plans to digitize forty-five years of family photographs and write personal histories for herself and her husband. Additionally, Gary Jacobs mentions that he wants to work with digital photographs in the future. In contrast to the other participants, Lynn responded that she has plans to continue her normal use, but also intends to use her computer less in the future.
Having considered participants’ experiences with computer technology (current and future use) let us now turn to an understanding of the processes by which these seniors came to use computer technology.

Selective Optimization with Compensation as a Framework

“I started understanding the computer more, enjoying it more and wanting to know more about it. The next thing I knew, I was buying a computer for home. I never thought I’d see that day.” Lynn

The processes of Selective Optimization with Compensation were evident in the lives of the participants in this study. We can assume that all of the participants had already used the selection process to choose competence with computer technology as one of their goals in later life, with the possible exception of Betty Stewart, who has not selected computer technology as a meaningful domain. Selection deals with selecting a domain of functioning in light of the limitations of time and energy (Freunds and Baltes, 1998). Robert talks about selection this way, “All these things I want to do and never got around to. The nice thing is [that] as a retired person you are self-directed. If I start down this path and then see that something is interesting over here today, I may not go down this path. I may decide to go down the other path.” It is apparent that most of these participants chose, and continue to choose, to spend time and energy in the domain of computer technology. They volunteer with SeniorNet and actively strive to learn new computer technologies within the context of SeniorNet and on their own.

Optimization refers to applying means in order to achieve optimal functioning or desired outcomes. According to Freund and Baltes (1998), “Optimization is defined as
the allocation and refinement of internal or external resources as a means of achieving higher levels of functioning in selected domains [goals]” (p. 531). The participants in this study sought to optimize their functioning with computers by attending and volunteering with SeniorNet, consulting more-knowledgeable others, and looking to other outside resources for assistance in gaining competence with computer technology (e.g. manuals; Betty used “Windows for Dummies”). These participants employed skills such as persistence and practice to optimize their functioning with regards to computer technology. When asked about how she learned to use computers, Betty responded, “Just worked at it really…or just doing it over and over and trying to figure it out.” She persisted in the task until it became comfortable. Further, SeniorNet classes provide these participants with resources such as manuals to encourage practicing computer tasks. Other participants optimized functioning by taking classes and by teaching and coaching. Robert said, “I learn as much when I come in here and coach, sitting in on a course every time…[because] as you teach, you learn more.”

Compensation deals with the management of loss and involves substituting means or using alternative means to maintain a given level of functioning (Baltes and Carstensen, 1996). The purpose of compensation is to improve capacity through compensatory strategies. The participants in this study mentioned obstacles they and other seniors face when learning to use computer technology. They employed compensatory strategies to deal with these shortcomings in the form of various learning strategies, which will be discussed later in the chapter.

Participants’ motivations, attitudes and beliefs are related to the selection process. Growing interest in and fondness for computer use demonstrates its selection as a domain
of life in which they wish to focus their energy. Similarly, these motives, attitudes and beliefs can also serve as an energizer throughout the optimization and compensation processes. Further, optimization and compensation processes are also related to the obstacles older adults face in learning computer technology and how they overcome such obstacles. Examples are given to illustrate how SOC processes are involved with motivation, attitudes and beliefs, learning strategies and learning preferences.

**Motivation**

“Computers motivate me to have a desire to broaden my knowledge and to want to learn more.” *Virginia Cook*

Among the seven participants in this study, motivation seemed to be a key factor in determining what was learned and how deeply involved they were in the learning process (selection). Although motivation is difficult to attribute to one or two factors, a few motives stood out as relevant to the current discussion. One of these factors, the motivation to use computer technology in confronting developmental tasks is discussed in the next chapter. Virginia Cook and Lynn Shafer both mentioned another factor – love of learning, as their motivation for using computers. Lynn states, “I love to learn everything and anything. I have a voracious appetite for knowledge.” Thus, the love of learning to use the computer and the love of using the computer as a cognitive tool, both played a role in Lynn’s and Virginia’s motivations.

Instructive here is the fact that Lynn and Virginia both had fairly negative first encounters with computers. They were both forced to use a computer at work, which undermined their desire to use computers. For instance, Virginia mentions completely discontinuing computer use once she retired. However, her motivation to learn and use
computer technology grew when she saw what her husband was able to do with a computer. On the other hand, Lynn’s motivation to learn to use computers came gradually before retirement. As she gained more experience with computers while working at different doctors’ offices, she began to see a number of different computer capabilities. This increased her desire to learn to use these capabilities and eventually she valued the learning process associated with computer use. Virginia sums up the balance between intrinsic and instrumental motives for learning computer technology this way, “I [used computers] at work, but it was a different kind of stuff at work than what it is [at SeniorNet]. There is a difference. You’re doing it for a company, or you’re doing it for yourself.”

In contrast to Lynn and Virginia, Betty is motivated to use computers strictly for instrumental purposes. In fact, all of the participants in this study indicated that they first began using computers for work. However, Betty indicated that the only reason she learned to use the computer was for her volunteer work with various organizations. She said, “How much further I go [with computers] probably depends on the necessity...Now I do have some things I still want to learn, but it is not going to be at the level of some of the people around here. You are not going to catch me teaching a class.” Betty’s motivation to learn to use computer technology, which is largely extrinsic, seems to be tied to her disinterest in becoming more involved with SeniorNet and learning more about computer technology.

On a different note, one insight that stemmed from my interviews with these seniors is the influence social interaction within SeniorNet has in motivating the participants to be involved with the program. Most mentioned that another member of
SeniorNet first invited them to participate. Gary talks about the people with whom he interacts at the Learning Center thus, “The friendships that I have made up here are wonderful. Anytime you get in a group with common interests, I guess this happens. I have met a lot of really wonderful people up here and we don’t always talk about computers either, interestingly enough.” Ann recognizes the importance of this type of social interaction when she states, “We need to recognize that maybe actually teaching the skill is not our only mission, but being there for these folks.” Virginia personifies Ann’s beliefs by encouraging seniors she knows to get involved with SeniorNet. She said, “I encourage everybody I see…to get over here and get started and get involved.” Finally, Lynn found a social life by becoming involved with SeniorNet. She said she does not have many close friends, but has found people with whom she can interact. About these friends she said, “I can share computer experiences here with others who are in the same boat, in the same age level….It’s nice to know that there are people my age, who are still alive and well and still enjoying the computer.” Thus, learning to use computers and an interest in computers serves as a common pursuit that binds this social group. These social bonds proved to be a salient factor among all of the participants of this study.

Another factor tied to motivation is enjoyment. Enjoyment is one of the greatest indicators of intrinsic motivation and was prevalent in these participants’ descriptions of some of their computer uses. They mentioned several activities that were undertaken simply for the pleasure of the activity. Music is one such activity and plays an important role in both Robert’s and Ann’s lives. Robert has used computer technology to gather over 25,000 digital songs on his computer. He also enjoys listening to music over the
Internet. Further, he sings in his church’s choir and digitizes that music for his and the choir’s enjoyment. He said, “I enjoy every day. I look forward to every day. I get up at six o’clock in the morning and can’t wait to get in there and get started.”

Music is also an important aspect of Ann’s life. She uses computer technology to enjoy music all over her home. She grew up listening to classical music and now sits in her living room listening to music and reading. She transferred most of her music to her digital music player, so her music can be moved around the house and travel with her. She is also able to share this love of music with her grandson who traveled to Europe with his band. She gave him an mp3 player and now they share that common bond.

Another enjoyable activity both Virginia and Lynn mentioned was a love of digital photography. About digital photography, Virginia said, “I love the fact that I can just take a picture and there you go. You can print it off just like that.” Virginia’s husband, Fred, also enjoys digital photography because it has cut down on his developing expenses. Virginia talked about the thousands of pictures she took in one year. Likewise, Lynn loves to watch birds and take their pictures. She has a tripod set up in her office and takes digital pictures of the birds that visit the birdfeeder in her backyard. She took her bird pictures and pictures of travel, nature, animal and beautiful things and put them in a slideshow that runs on her computer.

Three of the seniors in this study also mentioned using the computer for games, entertainment and relaxation. Fred plays the games that are included with his computer, but avoids Internet games due to security concerns. Gary said that computers provide terrific entertainment and help him to relax. Betty described herself as happy when she
sits down at her computer at night to play games. However, she noted that if she sits down, she is going to play until she wins.

As was argued in the first chapter, older adults’ experiences with computers can translate to both leisure and non-leisure uses. As is evidenced by the preceding data, each participant expressed having different motivations for learning to use computer technology. Some uses were instrumental in nature and others were undertaken for enjoyment. Often, a combination of intrinsic and instrumental motives were mentioned. The conclusion here is that those who were more highly motivated (intrinsically and instrumentally) used selection to allocate more time and resources to the learning process.

Attitudes and Beliefs

“I get very, very mad at my computer sometimes when it does not do what I want it to do.” Betty

Research participants’ attitudes and beliefs about computer technology also appeared to be related to their motivations for learning to use and continuing to use computers. Whether their attitudes and beliefs affected their motivation or the other way around is irrelevant here. What is important is that motivation, attitude and beliefs are related, in that they affect the level to which these seniors aspire to learn computer technology (selection and optimization). It seems that those who had intrinsic motivation and positive attitudes and beliefs about computer technology were more likely to be actively involved with SeniorNet and more actively involved in the learning process. Let us now consider the attitudes and beliefs of research participants toward computer technology.
Robert and Betty are rather juxtaposed concerning their attitudes and beliefs about computers. On his survey, Robert wrote, “I love using computers,” whereas Betty said that when she first started using computers, she would “go home, tear [her] hair out and say, ‘Why can’t it do this?’” Even when asked about what she likes about computers, Betty immediately responded with what she does not like about them. Robert said computers fascinate him because there is always something new. In contrast, Betty said she is resistant to some of the new computer technologies that are introduced. For instance, she mentions being resistant to blogs, downloading music and TV shows, and using text messaging on her cell phone. However, she has a positive attitude about tablet PCs because of how they are used in nursing (instrumental).

Lynn started out with attitudes similar to Betty. However, her attitudes and beliefs about computer technology changed drastically over time. She uses the word ‘monster’ to define what she first thought of the computer when introduced to it at work. She then mentions the gradual process that took place to help change her mind about computers. She said that after a while she got used to the computer and stopped trying to understand everything about it. From there, she persisted in learning different functions on the computer and eventually saw the need to purchase her own computer. Now she thinks they are wonderful, but is concerned with the rapidity with which they change. She said that she is not resistant to change, but feels that technology changes too quickly.

Unlike Lynn’s attitudes, which changed over time, Gary Jacobs’ attitude about computer technology is and has been positive. He uses the adjective “incredible” to describe computer technology and he likes how computers are constantly getting bigger, faster, and more capable. He offers an idea as to how someone could change his or her
attitude toward computers. He said, “once you are really familiar with the computer, and
the way things work…it is pretty intuitive.” This suggests that experience with
computers can lead to a certain level of comfort with technology. Such a belief is echoed
in the literature – that experience with computers greatly impacts attitudes toward them
(Czaja and Sharit, 1993; Jay and Willis, 1992).

Problems and Strategies for Overcoming Problems

Having considered how selection and optimization are related to motivation,
attitudes and beliefs, let us now examine how optimization and compensation are related
to the problems older adults face in learning computer technology. Robert, Fred and
Gary all mentioned computer crashes as one of the problems facing older adults and
themselves in particular. Betty had a similar problem, but on a lesser scale when she lost
some of her files. To deal with the problem of a computer crash, Robert employs two
compensatory strategies. First, he backs up all his data to four external hard drives.
Further he found a website that allows him to backup his files every morning. Gary, on
the other hand, said he learned from his computer crash because he had to reinstall
everything on the computer. When Betty lost her files, she turned to her husband for help
and he was able to retrieve the lost data. Each of these individuals employed different
strategies for dealing with these obstacles.

The next major problem most of the participants in this study encountered was
dealing with mistakes which occur during computer use. Betty said, “I think it would be
hard to teach yourself on your own because there is nobody going to tell you what you
have done wrong and how to fix it.” For instance, when Betty types too fast, she
sometimes hits keys that activate shortcuts. This often opens another application or closes the one with which she was working. Frequently, she does not know what happened and has to figure out what to do. Similarly, Fred said that his students have problems because they are afraid of making mistakes. He said that his students are often afraid they are going to “blow up” the computer by doing something wrong. Virginia has encountered a similar problem as she coached SeniorNet courses. Her students are afraid of computers and do not want to touch them. Lynn had similar feelings when she first started working with computers on the job because of her fear of the unknown. Virginia offers a suggestion for dealing with such fear. She thinks that if people would attend SeniorNet courses and take the first course, they could get over their “cold feet.” SeniorNet courses follow a particular order of building complexity and she advises starting with the basic courses and working up from there. This process, according to Virginia, “will give them a desire to learn more and help them gain more knowledge.”

Betty brings up another problem that many of the other participants mention. She said that the help sections on the computer are not much help. Gary found similar problems with error messages. He describes the messages as “incomprehensible to a human being.” These error messages and the help sections often frustrate Gary. He is convinced that the help sections are “written by programmers for programmers.” Similarly, Betty mentions that terminology is an obstacle she faces because she is not technically oriented. She has overcome this obstacle by trying to figure out what terms mean based on context, by going to help sections and by consulting manuals. She said she just had to work her way through the problem.

The next problem Betty mentions is dealing with the complexity of computer
technology. She sometimes feels overwhelmed because there are so many different things you can do with a computer. She gives two specific examples of overcomplicated applications—Excel and digital imaging. According to Betty, Excel has too many options and functions. Further, she said working with digital pictures sounds simple when someone explains it, but is difficult when done on her own. Fred experienced similar problems with complex computer applications. He feels that if the programs could be more user-friendly, some of the complexity would be alleviated. Betty has learned to just ignore some of the complexity. She figured out that she does not need all of the functions that are offered and simply ignores those that are not relevant to what she wants to do. Lynn also had to learn to give up some control while learning. She “had to figure out, ‘Stop trying to understand it and just do it.’”

Lynn introduces another problem older adults sometimes encounter when learning to use computers—other people. Often older adults turn to other people for help, but if the person cannot explain things satisfactorily, frustration ensues. Lynn said one grows frustrated “first at yourself, and then at them because they are not explaining [things] right.” Virginia asked her husband for help once and he refused because he felt that she needed to learn on her own by digging for answers. However, Virginia had already “dug, dug, dug trying to get the answers.” She had stalled in her search and wanted his help and his refusal added to her frustration. Along the same lines, Lynn ran into problems in some of her SeniorNet classes because of the instructors. She said they often talk too much and give too much information. The students are then unable to discern which information is relevant and should be remembered. Lynn also recalls that the “help desk” people at her work proved to be a frustration. She said that the computer support
technicians came to show off their knowledge and tried to intimidate her into learning. Lynn then started putting pressure on herself to learn. In addition, she knew she had to learn to use the computer or lose her job. Because of the “help desk” technicians and this self-imposed pressure she learned to hate the computer.

Even though other people can sometimes be an obstacle in learning to use computers, they can also be valuable resources. With time and familiarity, Lynn’s hate for the computer subsided and she began to feel more comfortable with it. Instead of turning to the “help desk” technicians, she confided in her peers and they figured things out together. Further, as was mentioned previously, several of the participants increased their knowledge and skills by teaching and coaching others. As a coach, Lynn has also been a valuable resource for other seniors because she has empathy for what they are experiencing. Her students appreciate her patience with them, which she has because she has “been there, done that.” Similarly, Betty’s husband and her SeniorNet coaches were valuable resources for her as she learns computer technology. Along a different line, Virginia and Ann both learned by helping their grandchildren with homework.

Fred mentions a problem that was unique to him, but seems to be a difficulty other seniors might come across. He encountered compatibility issues with his computer when he bought a laptop that did not have a USB port on eBay. This rendered the laptop essentially useless because most peripherals require a USB connection. He also discusses a similar problem – that computers do not employ industry standards for hardware. He said the attitude of some computer and hardware companies are that if the customer ever wants to upgrade or change things, he has to do it through the company that made the product. He feels that these companies just want to “rip you off.” Therefore, Fred does
not buy from the major suppliers, but has professionals build a system that is upgradeable.

Similar to Fred, Virginia mentions a problem that is unique to her in this group of participants, but is most likely a problem for other seniors. She and her husband share a computer, so getting access to the machine is problematic. She said that he is always on the computer and she has to ask him every time she wants to use it. Her husband, Fred, was working on getting Virginia her own computer and she feels this will rectify her situation. However, with many older adults access to computer technology is a problem that is not easily overcome. Such limited access has implications for municipal senior centers and will be discussed later in the chapter.

Ann brought up some of the main physical obstacles that the participants in this study and their students face due to age. She and most of the other interviewees suggest that vision, manual dexterity, memory and comprehension decline in old age. Gary concurs that short-term memory loss stands in the way of older adults learning to use computer technology. He said that a SeniorNet instructor can teach something before the break and after a fifteen-minute break, the students will have forgotten what was taught. Virginia also said that the older one gets, the more difficult it is to retain information. This is a problem in the SeniorNet classes because they cover information so quickly. Lynn agrees that a 70-year-old mind cannot grasp everything as well as it used to. She said she cannot multi-task in her mind anymore and that proves to be a confusing factor in class.

These participants also suggest several means of dealing with these problems. They have experimented with these strategies in their own learning and with their
students. Virginia implies that she coaches the courses as a refresher. It helps her to learn and remember those things that she did not retain when she was a student. She also said that the booklets SeniorNet provides along with courses are helpful because they serve as a reference if the student does not remember something. Gary talks about his strategies for dealing with seniors who forget what he teaches. He said, “It’s a question of teach, re-teach, teach, re-teach, and eventually it will sink in.” Fred said that with his students he “ends up having to go back over some things a couple of times.” Ann sums everything up thus,

I guess each senior has to overcome these obstacles in their own way. We have to give them a lot of encouragement. Most of them just really keep trying. Many of them have recognized that they may need to take courses twice and that’s okay.

In encountering obstacles while learning to use computer technology, the processes of *optimization* and *compensation* are vital. Learners need to allocate time, energy and resources to practicing and persisting in computer tasks (*optimization*) and devising strategies to match learning preferences and to overcome the obstacles they face (*compensation*). We will now examine how learning preferences and strategies can be understood in relation to optimization and compensation.

*Learning Preferences and Strategies*

Understanding participants’ learning preferences also relates to the processes of *optimization* and *compensation*. Knowing one’s own learning preferences or the learning preferences of one’s students enables learning activities to be catered specifically to the individual. Learning activities developed with this in mind will aid older adults in optimizing their learning experience and choosing methods that help them compensate where they are weak.
Each individual in this study expressed strong learning preferences. Fred mentions a preference for sitting down with a manual and playing with the computer. He feels that the best way to learn is to start using the computer, playing with it and doing research when you encounter a problem or want to accomplish a specific task. He suggests that one should feel comfortable making mistakes and learning from those mistakes. He thinks that a learning model that allows for some formal training, followed by experimentation with what was learned and then additional training is the best model. Gary agrees to some extent in that he feels the best way to learn is by trial in error. He states, “What I do not get [at SeniorNet], I will teach myself….If you really have the patience and really want to do it, that is one of the best ways to do it – by trial and error.” In contrast, Virginia and Betty feel that the best way to learn computer technology is through courses similar to those offered by SeniorNet.

Concerning his learning strategies, Robert mentions that he learned computer technology on his own and only took two formal computer classes. He also learns by teaching and said he learns more that way than he would taking a course. In contrast, Betty has relied on her husband to help her learn to use the computer. When she has computer questions or problems, she goes to him for assistance. Her husband has taught most of the SeniorNet courses, so she takes his instructional materials and goes through them on her own. She also likes the format of the SeniorNet courses “because the minute you have a problem there is somebody right there to help you….when you make a mistake [that person] tells you what you did wrong.” Fred Cook also thinks the system of having coaches and instructors nearby is a good way of dealing with questions and problems. He notes that this would be impossible if the coaches and instructors were
paid, but since they are volunteers, it is a feasible option. In contrast to formal instruction, Betty also learned from the “Dummies” books, but said she would not recommend it. She said seniors have to continue to work at the computer when they encounter problems. She suggests doing something repeatedly until you figure it out. She concludes, “I used to just run to my husband. I’ve gotten much better now and will try new things.”

Familiarity and experience with the computer seemed to be a theme that most of the participants said was essential for learning computer technology. Ann said that once “you have a basic knowledge of [the computer], you can figure it out.” Gary offers similar sentiments saying, “Once you’re really familiar with the computer, and the way things work…it is pretty intuitive,” suggesting that experience is vital. This concept is evident as Lynn’s attitude towards computers changed as she gained more experience with them.

**Implications**

The preceding findings about motivation, attitudes, beliefs, learning preferences and learning strategies, examined within the framework of SOC, have implications for older adults and those who provide computer education for them. First, it is essential for older adults and those who teach them to understand how to create environments where seniors are motivated to select computer technology as a meaningful domain of later life. Next, personal learning styles and preferences need to be taken into account in order to optimize older adults’ learning and compensate for weak areas. Finally, older adults and
those who instruct them in computer use need to understand how to gain and provide access to computer technology.

Creating a learning environment that fosters intrinsic motivation is important for seniors and those who educate them. Allowing seniors to choose from a variety of computer activities is one option for increasing intrinsic motivation. Such choice could allow seniors to choose tasks that are personally meaningful or relevant to them. However, care should be given to limit the number of choices, so the amount of options does not become overwhelming. Intrinsic motivation may also be increased by matching a learning activity’s challenge to the participant’s energies, personal resources and skill level. If the challenge is much greater than the participant’s skill level, anxiety is likely to occur. On the other hand, if a participant’s skill level is high and the challenge of the activity is low, boredom may ensue. The optimal experience matches the participant’s skill level and the challenge. As skill level and challenge are on par, one’s motivation to engage in an activity increases.

With the preceding thoughts on motivation in mind, classes or learning activities should be structured in a way that helps the learner feel immersed in a personally meaningful task while being simultaneously challenged and in control. An example contrary to this idea would be to ask a novice computer user to develop a web-based database. In this case, anxiety would likely occur and the learner would most likely abandon the task. In contrast, if an advanced computer user were enrolled in a course where students were learning to turn on a computer, he or she would likely be bored and drop the course. Virginia recognized the value of creating this type of environment when she said, “I think [seniors] would gain more knowledge if they would come somewhere
like [SeniorNet]…actually start at the bottom and work their way up through Windows Essentials.” Virginia recognizes that the program offers a progression of courses that begins with easier tasks to meet beginners’ needs and skill levels and progresses to more complex tasks to meet the needs and skill levels of more advanced users.

As has been documented in this and other studies, older adults face significant challenges in learning to use computer technology (Kelley and Charness, 1995). These obstacles can either be paralyzing in the learning process or act as stepping-stones to learning. The key is to structure the educational environment in a way that allows older adults to face and overcome these obstacles. Again, a personal or structured learning program should incorporate the preceding principles of creating a positive, educational environment by starting off with personally meaningful tasks that are appropriate to the skill level of the learner and building up from there.

Another way to create an educational environment that is personally meaningful is to understand and meet students’ learning preferences. As is evidenced in the stories and experiences of the participants of this study, these individuals’ learning preferences differed greatly. Some of the participants were comfortable using manuals and text to learn, while others found this method confusing. The women in this study enjoyed learning with others in a classroom setting, whereas the men typically wanted to learn on their own. Thus, seniors need to be aware of their preferred styles and methods and seek out appropriate computer instruction. It also behooves agencies that provide computer instruction to seniors to create courses that allow for a variety of learning preferences. In such an environment, it is essential to have access to or know about appropriate resources
(manuals, games, more-knowledgeable others, simulations, etc.) to match these preferences.

As a final point, older adults and municipal senior center directors need to understand that lack of access to computer technology can inhibit seniors’ computer education and use. Out of the nine senior centers I visited in Northeast Georgia, one offered a walk-in lab. The other centers required memberships or dues to use the labs. These centers might want to consider that such restricted access limits the learning process and the potential benefits of computer use. Having said this, seniors can be proactive in seeking access to computer technology if it is not available to them at home. In all likelihood, there are multiple locations with open computer labs in most communities. Such labs could be found at the library, schools and other municipal buildings. Working together, seniors and local governments or agencies can overcome the “digital divide” some seniors face.

Conclusion

This chapter addressed the first, second and fourth research questions concerning older adults’ computer experiences, their motivations, attitudes and beliefs and their learning strategies. The implications of these findings were discussed with regards to those who provide computer access and education to seniors. The SOC model provided a framework within which we examined these concepts in the lives of research participants. Creating an intrinsically motivating educational environment was proposed as guide to individuals and educators who wish to learn or provide computer instruction. Providing such an environment is possible by providing choice, matching skill to educational tasks
and meeting learning preferences. Thus, SOC processes are utilized with regards to motivation, attitudes and beliefs and learning strategies. This creates an environment where learners can gradually build competencies.
CHAPTER TWELVE
EXPERIENCES WITH COMPUTER TECHNOLOGY AND SUCCESSFUL AGING

Introduction

The previous chapter dealt with older adults’ experiences with computer technology, their motivation, attitudes and beliefs, their learning preferences and their learning strategies within the framework of the SOC model. This chapter considers research participants’ experiences with computer technology and elements of successful aging in response to the third and fourth research questions. A case is made that in the instances where computer technology aids older adults in the negotiation of developmental tasks, successful aging is more likely. Further, computer technology was found to have been a positive influence on other elements or criteria of successful aging as delineated in chapter two, including generativity and ego-integration. However, instances of maladaptive behavior were also present to a limited extent. After discussing the relationships between successful aging and computer technology use in the lives of research participants, the implications of using computer technology for promoting successful aging are set forth and the final research question is addressed. Finally, a discussion of the limitations of the study and suggestions for future research conclude this treatise.
Successful Aging and Computer Technology

Developmental Tasks

As noted in chapter two, successful aging is partly a matter of negotiating developmental tasks (Havighurst, 1953; Antonovsky & Sagy, 1990). The experiences of the research participants in this study suggest that computer use helped these older adults deal with the tasks of later life. Significant to this discussion are the tasks mentioned in the second chapter. These specific tasks include Havighurst’s (1953) tasks of adjusting to physical decline, adjusting to retirement and reduced income, and adjusting to the death of a spouse or peers. Further insight is gained by examining Antonovsky and Sagy’s (1990) tasks as well – active involvement, reevaluation of life-satisfaction, reevaluation of a worldview, and a sense of health maintenance. Little evidence of reevaluation of a worldview was found in this study and reevaluation of life-satisfaction is tied to ego-integration, which will be discussed later in the chapter. Let us consider the other tasks in turn.

Adjusting to Physical Decline/Developing a Sense of Health Maintenance

There were many instances where participants recount how computer technology helped them deal with the developmental task of adjusting to physical decline and maintaining health. Perhaps most notable is Fred and Virginia’s self-kept medical records database. Fred and Virginia not only had to deal with their own physical decline, but also the decline of those for whom they were caregivers. In addition, Virginia turned to the Internet to research an alternative treatment for her mother because the doctor’s orders were insufficient.
Similar to Virginia, many of the other participants mentioned using the Internet to research health issues. In addition to his bad heart, Robert also had prostate cancer and Hepatitis C. Consequently, he used the Internet to research the illnesses and the treatments he was receiving. He and his wife have also taken research with them to the doctor in order to share the information with him. Robert has also used his computer to research some of the medical situations his daughter faces. Similarly, Betty, Lynn and Ann have used the Internet to research medical issues for themselves and others. Lynn indicated that she loves being able to look up her medical situations on the computer. In fact, she had cancer and used the computer to find information about her illness and to keep her company during the illness. She was able to look up “pages and pages of information about [her] cancer.” Computer technology also helped distract her from pain and suffering during this bout with cancer.

Gary also used the computer to deal with cancer. He went on the Internet during his illness to investigate what treatments were available. He checked his progress with timelines on the Internet and looked at the significance of each phase. He said, “That made a huge difference. If I had not had a computer at that point, I am sure I would not have survived as well as I did.” While he was being treated he also used the Internet as a diversion. He would read the jokes he received electronically and “just surf the Net to see what is there.”

Ann also uses the computer to help her deal with pain. She constantly lives with pain because she has osteoarthritis, cervical disc disease, and degenerative disc disease down her spine. She said, “I find that when I sit down at my computer and get involved mentally with something I forget about it…At least during that period I am comfortable
and not thinking about how much I hurt.” However, she quickly remembers the pain when she gets up from her computer.

*Adjusting to Retirement and Reduced Income*

Several of the participants also told of how computer use has had an impact on their lives after retirement. Most notable is Robert’s experience with retirement. While working for the government, he overworked and ruined his health. Eventually he had two heart surgeries in two years and had to retire on disability at a relatively young age. Even though he had a bad heart and his body was run down, Robert’s mind was sharp. He was accustomed to being active and busy, so his poor health presented a serious problem. Consequently, after his forced retirement he used computer technology to remain productive by working for online companies, which activity also supplemented his retirement income.

Similarly, Ann was forced into retirement in order to care for her ailing husband. She used her skills with computer technology at this time to volunteer and to remain productive. She always loved writing, so she began to work on a newsletter for her church. She also began volunteering with SeniorNet after her retirement. In addition, she was able to audit medical charts from home to supplement her income. Like Ann, Virginia’s computer use and volunteer work helps her to feel productive after retirement. She said, “It is not like I am retired, sitting back in my chair lacking and not having anything to do. Because I am used every day…once I got involved with computers.”

One of the first things Lynn Shafer thought following her retirement was “What will I do now?” She then said, “The old person wants to be useful in the community and still wants to learn.” She found both through her interest in computer technology. Not
only did computer use help these seniors feel productive after retirement, but it also gave them opportunities they did not have while working. For example, Fred stated, “I have always wanted to get into teaching a little bit. I really never did get into a true teaching function [at work]. I kind of enjoy that.” Thus, computer technology has allowed Fred to try something he always wanted to do. Likewise, Gary taught foreign languages for about forty years. After he retired, he began teaching for SeniorNet and said, “I love teaching. That is really where I am at. And here I can do computing, which I love and teaching, which I love…Education at its best and none of the problems.”

Adjusting to the Death of a Spouse or Peers

Only one of the participants in this study mentioned how the death of a spouse affected their lives. While she was caring for her ailing husband, Ann had to cease many of her volunteer activities. However, she was able to continue with SeniorNet because most of that work was on the computer at home. About this time Ann said,

[my work with SeniorNet] was my salvation…To be able to do the preparation for the things I had to do, to do the interaction, to carry out my role as vice president…and still make a contribution, to maintain my relationships, was just invaluable to me. It was my sanity to be honest with you.

At length, Ann’s husband passed away and she said that the people at SeniorNet were very supportive and helped her deal with the loss. The only other person to mention how computer technology might be helpful in dealing with the loss of a spouse is Gary. He said, “If I were ever alone, a widower, [computer use] would probably make a big difference because it would mean contact with the outside world. That is what a lot of the adults [at SeniorNet] find too.”

Finding Active Involvement
The final developmental task we will examine here is Antonvosky and Sagy’s (1990) task of active involvement. Each participant in this study exemplifies the concept of active involvement. Robert Shanahan uses his computer skills to volunteer for six different volunteer organizations. Likewise, Betty has volunteered for a number of organizations and has served as vice-president and president of a large Greek organization that helps college females obtain scholarships. Fred and Virginia Cook are actively involved with SeniorNet by teaching and coaching computer courses at the learning center. Gary Jacobs is also actively involved with SeniorNet. He has coached, taught and served on the board as Education Coordinator at the local SeniorNet chapter. Like most of the other participants, Lynn’s active involvement in the community comes through her volunteer work with SeniorNet, where she helps mentor and coach seniors in an empathic manner.

Other Elements of Successful Aging

Having considered later life developmental tasks and computer technology, let us now discuss Fisher’s (1995) criteria for aging successfully in the same light. The eight criteria set forth by Fisher were: activity, income, health, interactions with others, autonomy, environmental mastery, personal growth, self-acceptance, and a sense of purpose. These elements seem to subsume much of the other research regarding elements of successful aging (i.e. Gibson, 1995; Rowe and Kahn, 1998; Baltes and Baltes, 1990; Ryan and Deci, 2000; Ryff and Singer, 1998). Therefore, we will only explicitly address Fisher’s criteria. The criteria of activity, income, and health have already been addressed in the context of developmental tasks, so examples of computer technology’s influence on the remaining elements are now provided.
Establishing New Relationships/Improving Existing Relationships

Participants’ computer use and involvement with SeniorNet influence their interactions with others. Robert’s computer use has provided social interaction as he has met people while working for online companies and volunteering with SeniorNet. He has traveled to SeniorNet conventions and parties to meet his virtual friends face-to-face. Robert said, “I have met people all over the world. I have friends everywhere through the Internet.” He has a web-cam and video conferences with these friends. He also notes that he uses email to communicate with his children and grandchildren.

Betty has also used computers to maintain and enhance social contact. She enjoys keeping in touch with people via email and said “[email] has made me keep in touch with some people I probably would not have ordinarily.” She especially enjoys sending pictures back and forth with children, grandchildren and friends, which has kept her in close contact with them. Similarly, Fred emails photos back and forth with family to keep in touch. Computer technology has also helped Lynn feel closer to family and friends because of the ease of communication. Lynn’s interest in computers also led her to SeniorNet and helped her establish a social life. She said, “This is my social life….I can share computer experiences here with others who are in the same boat, in the same age level.”

Lynn’s interest with computer technology has also allowed her to remain close to grandchildren because it serves as a shared interest. Further, her computer use has helped her share in the travel experiences of her grandchildren. Ann’s computer skills have affected her relationships in a similar manner. Her children and grandchildren know she is computer savvy and rely on her for things like digitized family recipes, digital photos
and personal histories. Computer technology also serves as a common bond between her and one of her grandsons. She shared an mp3 player and *Palm Pilot* with this grandson. She also helped a distant granddaughter with a family history, homework assignment. Margaret shared a similar experience by helping her granddaughter with homework using computer technology.

Teaching at SeniorNet has affected Gary’s social life because “the friendships [he has] made at SeniorNet have been wonderful.” He also enjoys that when people have computer problems, they come to him for help. Like the other participants, computer technology has also influenced his relationship with his children and grandchildren. He invested in a digital camera for his grandchildren. Further, he tells of a time when he was slated to teach Microsoft Paint for SeniorNet and his granddaughter helped him learn the program.

**Autonomy, Environmental Mastery, Personal Growth and Sense of Purpose**

Computer use and involvement with SeniorNet not only affected participants’ relationships, they also helped contribute to a sense of autonomy, environmental mastery, personal growth and sense of purpose. Regarding autonomy, Betty uses the Internet to make reservations and reserve tickets so she and her friends can remain active without relying on travel agents, thus contributing to her sense of autonomy. She also said she likes that computers can help seniors get the information and services they need without having to travel, which she feels can contribute to a sense of autonomy.

Related to environmental mastery, Fred has used the Internet to conduct online research before making a purchase. This helps him go into a buying situation more prepared, thus lending a sense of environmental mastery. Lynn also feels a sense of
environmental mastery because of her computer skills. She said, “I can do the same thing my kids and grandchildren do. In fact, I have told them a few things they did not know…So I feel like I am in the mainstream.”

Computer use also helps participants feel that they are experiencing personal growth. Betty said she feels a sense of accomplishment the first time she does something she has never done before on the computer. She concludes, “The fact that I have learned to do in the last two years what I have learned to do, to me is a humungous accomplishment.” In a similar manner, Virginia said, “I personally feel [computer use] has made me a better person…more knowledgeable.” This is evidence that computer use has also given her a sense of personal growth.

Lynn uses the computer as a cognitive tool for learning. You will recall that she has “a voracious appetite for knowledge.” Thus, she uses the Internet for learning and visiting places virtually. She loves to travel, but I surmised that she does not have the means to travel at present. Therefore, her virtual travels help her to feel a sense of environmental mastery and personal growth by continuing with something she loves in spite of limited resources and learning of other places and cultures.

Ann’s computer use has given her a sense purpose. She has used her PowerPoint skills to continue training nurses and remain active in her profession even though she is retired. In addition, her active involvement and leadership with SeniorNet have given her a sense of purpose. Further, she feels “in the know” because people come to her for computer help, which also gives her a special sense of purpose.

It is apparent from Ann’s and the other participants’ accounts that computer technology has aided these older adults in dealing with the issues of later life. Computer
technology and involvement with SeniorNet have helped them deal with the
developmental tasks of dealing with physical decline, adjusting to retirement, dealing
with the death of a spouse, and remaining active. They have also helped these seniors
maintain intellectual and social activity, enhanced their sense of autonomy, helped them
feel in control of their environment, given them a feeling of personal growth and
provided a sense of purpose and productivity. Ann sums it up best: “I cannot tell you
how much [computer use] has meant to me. It has meant mental stimulation,
independence, a sense of purpose, and a sense of freedom.”

It should be noted that the preceding benefits are potential benefits and not
guaranteed. In fact, it is conceivable that computer use could prove to hinder older adults
in dealing with any of these tasks and meeting these criteria. Others can learn from the
individuals in this study about using computer technology for the greatest benefit.
Further, it should be noted that many of the benefits realized by these participants is not
necessarily directly related to computer use, but to the SeniorNet program. In this case,
computer technology simply served as a common interest that allowed people to interact
in a manner that aids their development.

*Generativity and Ego-Integration*

Having considered how participants in this study use computer technology to deal
with developmental tasks and meet various other criteria commonly associated with
successful aging in later life, let us now turn to a discussion of Erikson’s stages of
generativity and ego-integration. The participants in this study exhibited behaviors and
attitudes that could be considered generative within the context of computer technology
and SeniorNet. However, they were less likely to exhibit explicit behaviors that are
indicative of ego-integration (e.g. life review and reminiscence) in their use of computers. Perhaps this is due to the age of the participants in this research project. Ann was the only participant whose narrative suggested ego-integration and she was the oldest participant in the group. It is possible that the other participants in this sample were not yet at the point in life where ego-integration is a particularly salient issue.

McAdams and Logan (2003) posit that generative activities could take the form of serving in neighborhoods, churches, schools, organizations, communities and society in general. Expressions of generativity could include teaching, volunteering, mentoring, participating in charitable activities, participating in religion, participating in politics, and being a good citizen. However, it should be noted that these activities are not inherently generative. They are only generative when there is an obvious concern with the future or “outliving the self” as Kotre (1984) discusses. That is, concern is focused on what one will leave behind by way of organizations, children, grandchildren and the like.

Robert exhibited generative behaviors by developing a website for his family reunion. Additionally, he helps his fellow parishioners with their computer problems free of charge and maintains his church’s website. As with most of the seniors in this study, he also exhibits generative behavior by communicating with children and grandchildren via computer technology. Like Robert, Betty also displayed generative behaviors. She has volunteered for a number of organizations and has served as vice-president and president of a large Greek organization that helps college females obtain scholarships. While these volunteer organizations are unrelated to computer use, computer technology has helped her serve more effectively in these organizations.
Fred showcased his generative concerns when discussing seniors who are not familiar with computer technology. He worries that, “they are getting...left out in the middle of the field with everybody else around them knowing how to do it.” Therefore, Fred and Virginia encourage seniors they meet to take the courses so they do not get left behind. Virginia displays the same generative attitude when she said, “I have enjoyed the ability to reach out to others and help them to learn...I’ve earned it and learned it, and I want to share it with others.” In addition to a concern for seniors, Virginia also displays generative behaviors with her grandchildren. She tells one story of her granddaughter calling her for help with homework. While they were on the phone together they both surfed the Internet to find information for the homework assignment. They enjoyed working together in this manner.

Betty expressed generative concern about her grandchildren, the younger generation and the Internet. She said, “I am concerned about the Internet because of Myspace and some of those things that are out there... I worry about the fact that anybody can put anything out on the Internet and there are no brakes to the system.” She is concerned because it is up to the person reading the information on the Internet to determine its veracity. She is also concerned that “kids spend hours on the computer, sitting in front of the screen instead of getting up and doing something.” Her “grandchildren do not play the way [she] used to play. They do not go outside and play.”

Similarly, Lynn Shafer is concerned about the younger generation’s lack of understanding of basic geography. Therefore, she has used computer technology to help her grandchildren gain a sense of where and who they are in relation to the rest of the world. With her grandchildren, she has researched places they were going to visit. She
states, “it is when you do not know about people that you go to war with them. If you know those people, you do not want to start a war with them.”

Ann Pluett also exhibits generative behaviors and attitudes. She has used her computer skills to help develop her church’s newsletter. Further, she helps her friends and family members who have computer problems. Ann may have retired, but she is still concerned with the younger generation of nurses. She continues to teach about medical issues in her profession. In addition, she voluntarily teaches younger nurses to use PowerPoint. Further, Ann’s computer expertise has helped her establish meaningful relationships with her grandchildren. She used computer technology to help her granddaughter with a family history assignment. Moreover, she shares a common bond with one of her grandsons because of computer technology. She gave him a digital camera and a Palm Pilot and helped him build his own computer. She provided him with these technologies to help him remember his travels, to keep on top of his homework and to learn.

While generative behaviors and attitudes were plentiful in the experiences these seniors shared, examples of ego-integration in light of computer technology were sparse. However, a few of the participants did mention some specific activities that could be related to ego-integration. Lynn and Virginia had positive experiences with SeniorNet and genealogy work. Lynn wanted to learn more about her mother and father and grandparents on both sides because she knew very little about them. She also had an older brother who was shot down over Normandy. While doing genealogical research over the Internet she learned that he was awarded the Distinguished Flying Cross. She was unaware of the specifics of his death, so she ordered his military and medical records
to gain an understanding of who he was and what happened to him. Similarly, Virginia took a genealogy class “not having any earthly idea about [her] family.” During the course she learned to enter genealogical information into the computer and to access data at the National Archives. She also used her digital camera to visit family cemeteries and take picture of gravestones. She then entered that information into the computer. About finding access to her family history, Virginia said, “It was a thrill for me to be able to access that.”

Ann is the only other participant who has participated in computer activity that indicates ego-integration or Antonovsky and Sagy’s (1990) developmental task of reevaluation of life satisfaction. She mentions that she has forty-five years of family photographs and has a goal to scan them, put them on CDs and give them to her childrens’ families. She also talks about putting together a recipe book for her children. It started out in booklet format and has since migrated to CD-Rom. She included short histories of the recipes in the digital recipe book. Finally, she tells of a personal history her husband started before his death. The details in it were sketchy, so her children asked her to complete his history and write her own while she was at it. She plans to create these personal histories “when [she] gets caught up.” Again, the age of participants could explain the sparseness of narrative indicative of ego-integration.

Maladaptive Behaviors

Kleiber (1999) writes, “There is, however, the prospect of overinvestment in leisure activity, in which case…[the] experience can be maladaptive developmentally” (pp. 28-29). While there were a few instances of this type overinvestment in the
interviews, none of the interviewees mentioned anything that could be termed deviant behavior (pathological involvement with pornography or gambling, for example). Additionally, some of the stories of maladaptive behavior are anecdotal rather than the direct experience of the interviewee. Let us consider some examples, anecdotal and direct, that participants mentioned.

Betty told of her neighbor who was a private person. She said that this neighbor was not healthy and sat at her computer all day. As a medical professional, Betty saw her neighbor’s health deteriorate due to inactivity. Similarly, Lynn discloses that at one point she thought she was addicted to her computer. She could not go into her den where the computer is located unless she had the time to sit down for a couple of hours. She became so involved with the computer that she would lose track of time and eventually realize she was not getting things done around her home. The things that did not get done included paying the bills, reading books she checked out from the library, feeding the birds, cleaning the house, etc. She said she felt like she was wasting too much time on the computer, but has broken the habit.

In addition to the physical aspects of maladaptive computer use, frustration is also possible. Lynn talks about how frustrated she is when her computer or the Internet goes down and is concerned with how dependent she has become on the computer. Along those same lines, Ann talked about how seniors who are mentally or physically limited get frustrated when trying to use the computer. She has seen people with beginning dementia take courses with SeniorNet three or four times and become frustrated because they cannot grasp what is being taught. Along those same lines, Ann has an 82-year-old aunt who reluctantly purchased a computer. This aunt would try to use the computer and
“get so frustrated because things would happen that she did not know how to fix and she had nobody to turn to.” Ann tried to talk her through the problems on the phone, but her aunt only grew more frustrated. Ann’s aunt eventually gave up and felt like she had failed.

Implications

The preceding findings about developmental tasks and successful aging in light of computer technology have implications for older adults and those who provide computer education to them. First, it is important for seniors to understand how computer use can help them negotiate developmental tasks by engaging in computer activities that are developmentally appropriate (see Table 2 in Chapter 2). For example, the only person who mentioned enjoying chatting over the Internet was Robert. The other participants in this study spoke of chatting as inane, superficial and unimportant. Robert had similar initial impressions, but persisted with the activity. After a few days he thought,

I saw what was going on, that it…was not what was said. That was not important. What was important was that I got to know you. You got to know me. I got to know something about your family or your problems or whatever it was and pretty soon you began to care. Then maybe I would have a question and you would write to me and help me with it.

I had a similar experience in doing research for this project. I went to a WWII Veterans’ site to see what was discussed in the chat room. I came across a conversation between two veterans who marveled that they could keep in touch since the veterans in their town had passed away. Without technology, these men would have felt alone and cut off from people of similar experience. To me this illustrates the point that seniors need to seek out opportunities for developmentally appropriate technology use. They need to be persistent
in finding out how computer technology can help them with developmental tasks and not
give up too easily.

Those who provide computer education to seniors also need to understand how
computer use can aid development. Computer tasks can be encouraged which help
seniors adjust to physical and cognitive decline, live healthily, adjust to retirement,
manage finances, adjust to the loss of peers and spouses, establish new relationships,
strengthen existing relationships, learn, teach subsequent generations, review their lives,
participate in creative endeavors, etc. Thus, senior educators will then be able to provide
an appropriate curriculum that recognizes which programs and activities can help seniors
negotiate these later life tasks. Further, those who educate seniors and seniors themselves
should realize that computers can be used for a variety of means. They can be used for
deviant means, for wasting time, for productivity or for meaningful life activities. The
experiences of the people in this study suggest that more emphasis should be given to
providing activities that encourage choice, matching skill and to educational tasks,
promoting computer activities that help older adults negotiate developmental tasks, and
explaining how computer activities can contribute to other established elements of
successful aging. These elements could include autonomy, environmental mastery,
personal growth, self-acceptance, social integration, sense of purpose, generativity and
ego-integration. Recognizing the barriers that stand in an individual’s way will also
enable providers to facilitate the selection, optimization and compensation components of
effective adaptation.
Limitations

A few limitations of this study need consideration. The first limitation of this study is that I was unable to find a great deal data regarding negative thoughts, experiences and attitudes regarding computer technology from research participants. Whether this is due to a lack of such negativity or to me being a novice researcher, not knowing how to tease out this type of information, is unclear. This could also be due to my informant suggesting people who would portray a positive image of SeniorNet. Similarly, since SeniorNet was not holding classes the summer I gathered the data for this project, access to participants was limited. This created two major problems. First, I was not actually able to observe SeniorNet courses at the learning center. Additional insights and data from such an observational period would undoubtedly have been instructive. Further, I might have been able to find someone who took one SeniorNet class and decided not to continue or someone who had a negative experience with SeniorNet. Again, such an interview would have been instructive. Also, while the purpose of this case study was to generate propositions rather than generalizations, the cases examined here were more ethnically and racially homogenous than would have been ideal.

Another major limitation of this research is my inability to tease out what benefits and experiences described by participants were due to computer use and what were associated with participation in the SeniorNet program more generally. Often, the participants used computer use and their involvement with SeniorNet synonymously. It seems probable that many of the benefits mentioned are tied to involvement with SeniorNet, rather than to computer use per se. For instance, many of the same benefits observed in this group might be just as germane in a group that volunteers together at a
nature center. Therefore, care should be given before ascribing benefits to computer use, when in fact the benefits may result from participation in a volunteer organization such as SeniorNet.

Future Research

Further research regarding seniors and computer technology could be informative – particularly as the demographics of older computer users shifts. Studies examining various computer education settings for seniors would be useful for determining what type of environment fosters developmentally beneficial computer use. Further, researchers could study those seniors who have very little occupational computer experience and what type of learning environment they need to succeed in learning to use computer technology. Similarly, research could be undertaken to study a more heterogeneous group with limited means and resources to capture the needs of different populations.

Further research could include studying those who are already comfortable with the productivity tools computers offer and see how to help them leave their comfort zone to learn more about life applications (photo editing, digital video editing, digital music, interactive personal histories, etc.). Further, there seemed to be an assumption held by most of the participants that computer use reduces or slows cognitive decline. An empirical study could illuminate whether this assumption is well founded. Finally, it would be fascinating to consider those seniors who use computers maladaptively and those who have overcome such patterns.
Conclusion

The lives of former generations are a lesson to posterity; that a man may review the remarkable events which have happened to others, and be admonished; and may consider the history of people of preceding ages, and of all that hath befallen them, and be restrained. Extolled be the perfection of Him who hath thus ordained the history of former generations to be a lesson to those which follow.

Stories from the Thousand and One Nights

Participants in this study have used computer technology largely for benefit in their lives. How they used it should instruct all of us who read their stories and help us to choose wisely. Regardless of how one uses computer technology, for developmental purposes or otherwise, Fred summarizes the main conclusion of this research:

You really have to continue learning. Once you start learning...you continue learning every day whether you know it or not. If you are not willing to continue learning, you might as well just close your eyes and go to sleep permanently. That is about what you are going to be if you just keep thinking you know everything you need to know and let it go at that.
REFERENCES


APPENDIX A

INTERVIEW GUIDE

RQ1  What are the ways in which older adults come to use computer technology?

• Tell me why you started using computers.
• Tell me about how you came to use the computer.
  o Possible Probes
    ▪ What prompted you to learn?
    ▪ How: helpers, teachers, manuals, family members, more knowledgeable other?
    ▪ Preferred methods of learning (e.g. manual, exploration, playing, someone showing you, reading).
    ▪ What problems, if any, did you encounter in learning to use the computer?
    ▪ Do you have any problems now?
• What would prompt you to use the computer more?
• What prohibits you from using computers more?

RQ2  What are older adults’ perceptions, beliefs and experiences with computer technology?

• Tell me what you think of computers.
• Tell me about how you learned to use the computer.
• Where and when do you use the computer?
• Typically, when you use the computer, what do you do?
• Has your life changed as a result of computer technology, and if so, how?
• How do you see yourself using computers in the future?
• Think of a time when you had a positive/negative experience with the computer and tell me about that.
• If you could talk to a computer designer, is there anything you’d like them to change about the computer to make it easier to use?
• Computer uses:
  o Tell me about your favorite websites.
  o Tell me about the software you use.
    ▪ Music?
    ▪ Movies?
    ▪ Photo editing or presentation?
    ▪ Internet/News?
    ▪ Internet/Health related issues?
    ▪ Email?
• Surf the Internet?
• Genealogy?
• Calendaring?
• Web design?
• Word processing?
• Database?
• Presentation software?
• Financial software?
  o What hardware features do you use?
    • Digital camera or camcorder?
    • Scanner?
    • Printer?
    • Webcam?
    • Portable storage disc?
    • Microphone or headphones?

• What do you like about computers?
• What don’t you like about computers?
APPENDIX B

SENIOR CENTER SURVEY

About the Lab

Name of Senior Center:

Do you have a computer lab for seniors?

☐ Yes
☐ No

How many computers do you have in your lab?

What operating system is on the computers?

Choose One

What software programs are installed on the computers?

Which of the following computer peripherals does your lab provide:

☐ Digital Camera
☐ Printer
☐ Headphones
☐ WebCam
☐ USB Music Keyboard
☐ Digital Projector
☐ Microphones
☐ MP3 Player
☐ PDA
☐ IV Converter

About Seniors, Who Use the Lab

Please describe the population served:

Age range:

Socio-economic status: Choose One

Race ratio:

% African American
% Asian
% Caucasian
% Latino
% Other

Gender ratios:

% Women
% Men

How many seniors use the lab in a typical day?

Programs Offered to Teach Computer Use

What programs do you offer to teach seniors how to use computers?

Support

Tell me about the support available to seniors, who use your lab (i.e. manuals, books, computer support person, etc.).
APPENDIX C

SENIOR CENTER PARTICIPANT QUESTIONNAIRE

**About You**

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td></td>
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<tr>
<td>Occupation before retirement</td>
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<tr>
<td>Highest level of education (check one):</td>
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</tr>
<tr>
<td>- High School</td>
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<tr>
<td>- Bachelors</td>
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<tr>
<td>- Masters</td>
<td></td>
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<tr>
<td>- Doctorate</td>
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<tr>
<td>How many years have you used computers:</td>
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<tr>
<td>How would you describe yourself with computers:</td>
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<tr>
<td>- Beginner</td>
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<tr>
<td>- Average</td>
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</tr>
<tr>
<td>- Expert</td>
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<tr>
<td>How comfortable are you with computers:</td>
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<tr>
<td>- Very uncomfortable</td>
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<tr>
<td>- Fairly uncomfortable</td>
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<td>- Uncomfortable</td>
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<td>- Comfortable</td>
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<tr>
<td>- Fairly comfortable</td>
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<tr>
<td>- Very comfortable</td>
<td></td>
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<tr>
<td>Where do you use computers (check all that apply):</td>
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<tr>
<td>- Home</td>
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<tr>
<td>- Relative’s Home</td>
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<td>- Friend’s Home</td>
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<tr>
<td>- Senior Center</td>
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<td>- Public Library</td>
<td></td>
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<tr>
<td>- Other. Please Specify:</td>
<td></td>
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<tr>
<td>How often do you visit the senior center in order to use the computer:</td>
<td></td>
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<tr>
<td>- times a month</td>
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</tbody>
</table>

**Your Computer Use**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>What do you use the computer for (check all that apply):</td>
<td></td>
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<tr>
<td>Internet</td>
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<tr>
<td>- News</td>
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<tr>
<td>- Looking up Information</td>
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<tr>
<td>- Communication</td>
<td></td>
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<tr>
<td>- Games</td>
<td></td>
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<tr>
<td>- Shopping</td>
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<tr>
<td>- Paying Bills/Banking</td>
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<td>- Email</td>
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<tr>
<td>- Text Chatting</td>
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<tr>
<td>- Video Chatting</td>
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<tr>
<td>- Word Processing</td>
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<tr>
<td>- Creating Spreadsheets</td>
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<tr>
<td>- Creating Presentations</td>
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<tr>
<td>- Scanning Pictures</td>
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<tr>
<td>- Editing Digital Pictures</td>
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<tr>
<td>- Creating Picture Slideshows</td>
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<tr>
<td>- Creating Digital Art</td>
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<tr>
<td>- Listening/Downloading Music</td>
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<tr>
<td>- Composing Music</td>
<td></td>
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<tr>
<td>- Watching Movies</td>
<td></td>
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<tr>
<td>- Creating Movies</td>
<td></td>
</tr>
<tr>
<td>- Reading Ebooks</td>
<td></td>
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<tr>
<td>- Listening to Audio Books</td>
<td></td>
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<tr>
<td>- Running Online Business</td>
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<tr>
<td>- Managing Finances</td>
<td></td>
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<tr>
<td>- Developing Websites</td>
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<tr>
<td>- Playing Computer Games</td>
<td></td>
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<tr>
<td>- Doing Genealogy</td>
<td></td>
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<tr>
<td>- Calculating</td>
<td></td>
</tr>
</tbody>
</table>

What motivates you to use the computer?

What keeps you from making more use of computers either at the senior center or at home?

Would you be willing to be interviewed about your computer use? Yes ☐ No ☐

If yes, please provide your phone number or email address and return this form to the person in charge of the senior center lab. If no, please simply return the completed form to the person in charge.

Thank you very much for your participation.