Computer Use Among Seniors 80 Years and Older:

Narrative Inquiry on the Benefits and Problems

by

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We accept the thesis as conforming to the required standard

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Abstract

This thesis examines the role of computer competence in elders’ well-being as they experience a reduced ability to communicate in very old age. My research question was “How do elders over 80 interact with computers? Employing narrative inquiry, I sought stories from 10 elders living in Victoria, B.C. Narrative style open-ended interviews were conducted one on one. Challenging stereotypes, these participants were computer literate people who happen to be very old. Depending on their relationships, learning from their children was a valuable resource. I found no evidence that they required any special senior friendly websites. These elders learned to use what interested them on the computer—no more. The computer is an extension of their ability to communicate their social messages as they age. The denouement of my narrative research is that computers give voice to elders; nevertheless, decision makers need to respect elders’ right to refuse computer uses.

*Keywords:* computers; social participation; elders 80 years and older; social integration theory; narrative inquiry; narrative style interviews; narrative analysis.
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Introduction

For the elderly there is a communication advantage for those who are computer literate, enabling social participation in the context of the larger community. Some elders live to old age in independence, while others spend their last years in institutions in isolation. Research shows that by providing social networks, computer use could assist seniors to live independently in their own homes longer (Gradis, 2003, p. 5). However, Dickinson and Gregor (2006) claim that cited improvements to well being are more likely attributable to interaction with trainers and other seniors, having little correlation to computer use. In addition, Dickinson and Gregor pointed out that many of the studies cited about “older adults” and computer use cover an extremely diverse group of people (p. 745); my research was limited to elders 80 years and older. I explored how my participants interact with computers in order to gain greater insight into their actual experience with computers and with the overall goal of understanding how computers can be best utilized to support their well-being and social participation.

The well-being of this population becomes increasingly important because of their rising proportion to the general population of Canada and British Columbia. The Urban Futures Institute claims, “The rapid growth of the older population, coupled with slow growth or decline
According to Statistics Canada (2012) in 2011, there were 1,378,103 people 80 years and older in the country, with nearly 200,000 living in the Province of British Columbia. There is a projected percentage increase in the population 80 years and older of 23.7% between 2012 and 2022 in BC (Statistics Canada, 2012). As a comparison, for the same period, there is only a projected 10.2% increase in the 0-14 years age group in BC (Statistics Canada, 2012). Further, according to BC Stats (2011) Elders 80 and older were “4.2 percent of the population in 2010 [and will significantly increase to] 7.4 percent by 2036” (p. 5). New opportunities for the elderly population to continue their social participation may be one result of a rapid shift to a world of digital communication.

This research aimed to examine the reduced ability to communicate in very old age, while exploring the role of computer competence in elders’ well-being. The purpose of my study was to equip decision makers, elders themselves, and their families, with the capacity to determine what computer uses should be introduced and under what circumstances. My research question was: “How do elders over 80 interact with computers?” Sub questions were: “How does computer usage impact elders’ lived experiences?” “How do elders who are regular computer users describe their ability to communicate?” And lastly, “In what ways do computers enable elders to interact with society?”

My previous compilation of three seniors’ life stories, *Stories of Secular Humans* (2007) led me to want to research the meaning elders make of their lived experiences. I contend that elders are a resource and it is important for them to be able to communicate and contribute to society; computers have the potential to facilitate this; the question remains, in what ways, how and under what circumstances?
The body of scholarly literature I drew from and contributed to concerning communications and the elderly was informed by a social integration view of new media theory. Social integration theory allows for the possibility that elders use computers as “shared ritual” to obtain a sense of community and a feeling of belonging to something bigger than themselves (Holmes, 2005, p. 148, 152-154; Littlejohn & Foss, 2008, p. 292-3). Furthermore, social integration theory contends, “interaction is no longer a condition of social connection, as individuals become integrated indirectly by the agency of technologically-extended media forms” (Holmes, 2007, p. 9). According to this view of new media theory, computer users interact with their computer rather than with other individuals; in an earlier example Real, Anderson, & Harrington (1980) explained, “television can substitute for face-to-face communication among those older persons who are physically isolated” (p. 82).

My data, consisting of open-ended narrative style interviews, was collected within a narrative inquiry paradigm that allows for collaboration between researcher and participant (Riessman as cited in Gubrium & Holstein, 2001). The narrative method provided the best opportunity to draw out stories concerning the participants’ history and their experience of being introduced to computer technology and gaining computer skills. To further analyze the data I used thematic analysis, paying attention to the common patterns of the participants’ experiences and identifying sub themes, and I employed open coding and relational coding to develop and formulate theme statements (Gibson, 2006). In order to make a contribution to knowledge concerning computer use and aging, I sought stories from 10 elders that I have met through the Victoria Secular Humanist Association and in my community.
Literature Review

Not all scholars agree that computer use is beneficial to the well-being of the elderly. Further, I am in agreement with Holmes (2005) who argued that an “interdisciplinary” approach is required “between communication, media, and sociology” because of the changes in the ways media is experienced (p. xi). To that end, guided by social integration theory, I explored three perspectives providing relevant background for my study: 1) Scholars who are “pro-computer role for communication and well-being in the elderly”; 2) Scholars who are “anti-computer role for communication and well-being in the elderly”; and 3) Scholars concerned with “understanding communication needs in very old age.” My thesis, guided by a comprehensive review of relevant research concerning computers and the elderly, studied the meaning and the role of computer usage in relation to elders’ communication for increased well-being.

Pro-Computer Role

Researchers in this category contend that seniors’ well-being is enhanced when they are encouraged to communicate using computers. Russell (2007) used hermeneutic phenomenological methods to understand the lived experiences of elders involved in learning computer skills. He reported that seniors wished to remain as participants in society rather than be ignored. Russell argues that elders value their relationships with family and that being able to use the computer is a way of maintaining and strengthening those relationships (p. 382). Further, Shapira, Barak, & Gal (2007) conducted a quantitative study with 22 elders with a mean age of 80 years; their results confirm that computer and Internet communication help seniors overcome feelings of powerlessness and isolation, contributing to their self-confidence and positive self-image (p. 482).
Saunders’ 2004 study included an extensive review of literature concerning opportunities for learning to use a computer to “interact with others [which] may help reduce loneliness and the rate of suicide among seniors” (p. 575). The study used two focus groups consisting of 17 people between 65 and 89 years, and its “primary intent was to explore senior attitudes toward computers…” (p. 578). It was found that “eyesight problems and arthritis in the hands—are barriers for a sizable portion of older persons” to computer use (p. 583). However, the author felt that over time a “fear factor” would be reduced by familiarity with the medium, allowing elders to enjoy the benefits of being connected to family and friends. My study also explored my participants’ attitudes towards computers.

Gradis (2003) argued, “in order to build friendships, we communicate, we talk about ourselves, we reciprocate communication behaviors, we try to make a good impression, we find areas of commonality, and we try to act in ways that will preserve the relationship” (p. 1). She also called for future studies about how to encourage seniors to use email for social support and to prevent loneliness (p. 15). Others in this camp, Redsell and Nycyk (2010) looked at ways to reduce the digital divide for seniors in Australia through low cost computer training programs. They argued that an important part of a successful program involves using empathetic and encouraging volunteers. Redsell and Nycyk assert that one way for the elderly to increase their social participation in our increasingly technological society is to learn computer skills (p. 38).

Also arguing for computer use by the elderly, Wood, Lanuza, Baciu, MacKenzie, & Nosko (2010) asserted that it is important for seniors to learn computer skills in order to stay connected to others “which could enhance their social and emotional lives” (p. 835). Through effective instructional programs, emotional barriers such as anxiety and frustration can be alleviated (p. 835). They reported that seniors are a rapidly growing demographic who will need
“tools, such as computers, that might permit seniors to remain independent, active, and engaged members of their communities” (p. 836). My participants’ stories about their individual experiences using computers were useful in testing the assertions of these scholars that computers have a positive role in the continuing participation of elders in society. I used these narratives to search for the role and meaning of computer communication for my participants as an answer to the call for further studies.

**Anti-Computer Role**

Researchers in this category contend that seniors’ well-being could be adversely affected if they feel pressured to communicate with computers. Prendergast and Roberts (2009) were researchers for The Product Research and Incubation (PRI) division of the Digital Health Group at Intel. They used ethnography to discover appropriate levels of technology to design for seniors by observing the “patterns of [senior’s] internet usage and modes of learning” at a small Internet café (p. 59). They found that designers of technology should consider senior’s needs as a system, where technology is but one part. Further, designers should avoid developing technologies that “deskill practices of importance to older people” because in their daily lives elders seek to maintain their personal identity and demonstrate their cognitive competence (pp. 60-61). For instance, some elders may have experienced social integration through a lifetime of writing letters to friends and family and have no desire to change communication rituals. My study explored the participants’ experiences of being deskilled by computers.

Dickinson and Gregor (2006) produced a sobering review of the research literature that secondary study authors have cited as evidence that computer use plays an important role in improved well-being for the elderly. They disputed the findings of Saunders (2004) and others, asserting that computer use was not of social benefit to the elderly (pp. 746, 748-750). Further,
they align with Prendergast & Roberts (2009), who cautioned about foisting technology on the elderly. The authors claimed, “The most vulnerable older people…are most in danger of having inappropriate technology thrust upon them” because of reliance on flawed secondary studies by decision makers (p. 753). Further, Evans, Fletcher, & Wormald (2007) believed that, “People with visual impairment are more likely to experience problems with functioning, which in turn leads to depression” (p. 287); one example is the lost ability to use computers. In addition, the findings of Billipp (2001) question the need for the elderly to communicate with computers in the first place. She designed a controlled three-month study of computer use by computer-illiterate elderly and found that computers had no positive effect on their well-being (pp. 139-140). However a marked improvement of the participant’s self-esteem was discovered to be the result of the attention they received from the weekly nurses’ visits (p. 144). There was one disturbing finding that revealed that computer training by “significant others” including family members increased depression in the participants (p. 143). To Billipp this indicated that carefully trained computer instructors are necessary when dealing with a frail elderly population. My narrative research explored what it is about computer usage that impacts elders from my participants’ perspectives including learning from their children.

**Understanding Communication Needs in Very Old Age**

Researchers in this category investigated elders’ need for community feedback for social integration, determining that computer communication that is senior friendly may mitigate physical limitations. McMellon and Schiffman (2000) used a convenience sample of older adults 55+ years that had been solicited over the Internet as online users of SeniorNet (p. 140). According to their website, “SeniorNet's mission is to provide older adults education for and
access to computer technologies to enhance their lives and enable them to share their knowledge and wisdom” (http://www.seniornet.org/index.php?option=com_content&task=view&id=42&Itemid=61). McMellon and Schiffman (2000) maintained that continuity theory explains why seniors use the Internet as an adaptive strategy to successfully compensate for losing mobility as they age. Computer use is a way for elders to continue to participate in society and do business such as banking from home (p. 143). The authors called for websites and Internet products to be senior friendly and cater to this growing market, and they also suggested that public policy should be developed to encourage seniors to go on-line (p. 143). My participants’ stories revealed that computer programs were meeting their needs in 2012.

A quantitative statistical study by Lovden, Ghisletta, & Lindenberger (2005) found a link between the social participation of elderly people and a reduction in the slowing of their perceptual speed (p. 430). They noted that besides social participation there are other factors that affect cognitive function in the elderly, such as exercise and nutrition, that are limitations to their study and they call for future research. I searched for the role computer usage plays in continuing my participants’ social participation.

Alma et al. (2011) analyzed telephone interviews of 173 visually impaired elders and found 50% vs. 29% of the general elderly population assessed as lonely. I have chosen this article because two of my elderly participants are visually impaired. It was found with multivariate hierarchical regression analysis that “SMA [self-management ability] self-efficacy, partner status, and self-esteem were determinants of loneliness” (p. 855). Their study determined that coping skills could be taught to these elders to reduce loneliness. My thesis explored the aspects of computer communication that my participants used to cope with sight impairment.
Hospital patients in very old age have no illusions about their longevity; esteem of self and from others is critically important to them (Maslow, 1968, p. 196). Majercsik (2005) randomly selected 303 geriatric patients with a mean age of 81.3 years. Questionnaires consisted of 10 questions of paired comparison designed to ascertain a hierarchy of needs. The results interestingly demonstrated that the needs of elders are the opposite of Maslow’s (1970) hierarchy of needs. Only safety remained in the same place. For elders self-actualization and esteem are more important than physiological care. My study aimed to understand the role computer communication plays in the self-actualization and esteem of my participants.

McMurtrey, Zeltmann, Downey, & McGaughey (2011) examined technology that is compatible with age related skill levels. They analyzed survey data of 173 seniors, with an average age of 83 years, regarding technological use. They found a somewhat diminishing “digital divide” between the young and old. Interestingly over 90% of respondents did not use computers for any social networking and a third had never used Email. Although most elders use some technology, 0% reported being expert in computer use and 68% were not “somewhat” or “very comfortable” using a computer. The authors in this research called for future study of seniors’ “attitudes” to computer use to enhance their quality of life (p. 29). Rodewalt and Tragakis (2003) commented on the research literature; the authors believed that well-being is a process where “other people play a more or less central role in determining one’s feelings of self-worth” (p. 67). They declared, “Everyone’s self-esteem is contingent on feedback from the social environment” (p. 67). My study sought to understand my participants’ attitudes about computer usage to find out if utilizing computer communication can give elders the community feedback that they need for social integration.
Chu, Huber, Mastel-Smith, & Cesario (2009) studied seniors 65 years and older who were deprived of access to health care information because of socioeconomic disadvantages. Guided by Bandura’s (1995) four major sources of efficacy expectations, “the study documented positive difference in computer anxiety, computer confidence, and computer self-efficacy scores after a five-week [instructional] intervention” (Chu et al., p. 18). They found that seniors “were persistent and refused to quit until they had mastered the task at hand” (p. 17). Future studies were recommended to determine if seniors would continue to access health information on the Internet and to evaluate their abilities to find quality sites (p. 18). My participant’s narratives included their concerns about accessing reputable health information on the Internet.

Although I have found many scholars in the fields of sociology, psychology, gerontology and education examining elders’ computer usage, more research is needed by communication scholars on the role of computer usage in elders’ communication rituals. Following the work of Fisher (1989) my study aimed to bridge this gap, using the narrative paradigm as “an approach to interpretation and assessment of human communication,” in order to explore computer communication experiences of elders (p. 57).
Method and Analytical Approach:

Storytelling for Understanding

Narrative Inquiry

Using narrative inquiry allowed me to connect with my participants’ ways of knowing through the act of storytelling. I am interested in their everyday life experiences of interacting with computers and this research approach allowed me to “see and experience the world as the respondent does” (McCracken, 1988, p. 65). My research data consisted of narrative style open-ended interviews, collected within a narrative inquiry paradigm that allows for collaboration between researcher and participant (Moen, 2006, The narrative research process, para. 1). This method is integral to drawing out stories concerning the participants’ history and their experience of being introduced to computer technology and gaining computer skills, because as Geertz (1973) said, “The best way to learn about a group of people [is] to talk to them” (Geertz as cited in Clandinin, 2007, p. 491). Spector-Mersel (2010) argued that although it remains qualitative/constructionist, narrative inquiry has a unique view of understanding through the narrative or story. I chose narrative inquiry because “life stories serve as an excellent means for understanding how people see their own experiences, their own lives, and their interactions with others” (Atkinson as cited in Clandinin, 2007, p. 241). Clandinin (2007) asserts, “All narrative inquirers agree that narrative inquiry is the study of experience” (p. xiv). I contend that these stories could “offer up research understandings that could lead to a better world” (Clandinin & Connelly, 2000, p. 61). Further, narrative inquiry is “associated with Dewey’s theory of experience, specifically with his notions of situation, continuity, and interaction” (Clandinin & Connelly, 2000, p. 50; Dewey, 1944). It “attempts to make sense of and interpret phenomena in terms of the meaning people bring to them” (Moen, 2006, Three basic claims about narrative
The epistemological stance of narrative inquiry is that “there are multiple ways of knowing and understanding human experience” (Clandinin, 2007, p. XIV).

**Data Collection**

After receiving approval from my thesis advisor and Royal Roads University’s Ethics Review Board, I sought stories from 10 elders that I have met through the Victoria Secular Humanist Association and in my community. According to Pasquale, “but for their naturalistic worldviews, [secularists’] values and lifestyles tend to be substantially similar to those of many (moderate or liberal) ‘religious’ neighbors in their communities” (2010, p. 82). Pasquale further concludes that secularists voice “willingness to suspend judgment and accept uncertainty pending further data, or to actively challenge such contradictions if logic or available evidence warrant” (2010, p. 61). I concur with Pasquale that secular humanists tend to be older well-educated males of European descent; further many are former educators and scientists (2010, p. 50-51). Two of my participants were educator/scientists, 60% were male, and most were well educated. Pasquale, who studied secularist groups in British Columbia and the Northwest, found that 46.4% of his U.S. sample and 39.6% of his B.C. sample had received masters or higher degrees. For the U.S. sample this was far higher than a national average of 9.7% (2010, p. 50). Thirty percent of my participants have masters or higher degrees, which generally is in line with Pasquale’s U.S. results.

My interviews were conducted one on one in the homes of my participants. They lasted about 2 hours. The proposed research aimed to investigate why and how an older person chooses to use a computer; for what purposes; how their life would be different without a computer; and in what ways using a computer adds to their social life. My questions (Appendix C) were designed to draw out stories concerning the participants’ history and their experience of being...
introduced to computer technology and gaining computer skills. Listening to responses formed my open-ended questions. For instance: “Would you share your first experience with the computer?” “What types of communication do you perform on computers?” “How many hours per day do you spend on computers?” “What do you find most useful about computers and why?” “What tasks does computer use make easier for you?” or “would you share some of your trials and tribulations as well as your successes and discoveries using the computer?” I intended to gain insight into how elders actually interact with computers and I have been open to the findings.

**Analysis**

Narrative inquiry is both the phenomenon that is being studied and the method for studying the phenomenon (Moen, 2006; Clandinin, 2007); Spector-Mersel (2010) asserted that the story is not a tool to be used to discover reality; rather it is constructed reality. Researchers construct study findings differently, some use thematic coding while others use only narrative analysis (Clandinin, 2007, p. 434). However, “In practice researchers…often combine narrative [and] thematic analysis” (Grafanaki & McLeod, 2002, as cited in Clandinin, 2007, p. 430). I used both methods of data analysis to understand how my participants interacted with computers by first collecting my audio/video data and then transcribing the audio. Next I analyzed the interview data using thematic analysis to focus on identifiable themes that emerged from these narrative interviews (Aaronson, 1994). As I read and interpreted the transcribed conversations, I paid attention to the common patterns of the participants’ experiences and identified sub themes. I employed open coding and relational coding to develop and formulate theme statements (Gibson, 2006). In addition after data collection writing, my goal was to “beautifully communicate [the] results to [a] wider audience” (Clandinin, 2007, p. 569). Furthermore, my narrative research
writing is in the first-person in order to “give voice—to [my] participants as well as to
[myself]—and for breaching … the We/Other divide with its elitist noncollaborative messages”
(Clandinin, 2007, pp. 574-5). My intention is that when the participants’ stories are told in the
first-person “they speak to others like themselves as well as to researchers in the field and the
world beyond” (Clandinin, 2007, p. 574). In this way the emerging results lead to understanding
how computers can be best utilized to support elders’ well-being and social participation.
Participant’s Background

Victoria, British Columbia is home to many retired people from across Canada, including most of my participants. As well, several of my participants immigrated to Canada as young adults from Europe. Ranging from ages 80 to 91, their histories inform their responses to my open-ended interview questions. This study confirms, “ordinary people’s oral narratives of everyday experience…are worthy of study in themselves” (Chase, 2005, p. 655). My participants were all generous with their time and willingly elaborated narratives from my prompts. It has been reported that the “label…‘elderly’…[signifies people that] cannot be useful respondents” (Holstein & Gubrium, 1995, p. 20). My interviews serve as examples of elders who are competent, and it is not my intention to be demeaning by using the term elderly; in contrast, I use it as a term of respect. For this study I have interviewed six men and four women. The following are biographic details of each participant and include a summary of specific functions of their computer use.

Alan “went from an opulent early life in colonial China to stark oppression in a Chinese missionary boarding school. At fifteen…he and his family were interned in a Japanese prisoner of war camp in the Philippines. His talent for art and his ingenuity helped keep his family alive”
COMPUTER USE AMONG SENIORS 80 YEARS (Swartz, 2007). As an adult he immigrated to Canada and became a successful architect and respected artist. Alan uses his computer for writing, including his memoirs and some poetry. He has restored old family photos and converted two thousand slides onto disks, using Photoshop on each one. He keeps photo records of his artwork as well as photos of other interesting artists. In addition he has a favorite website for art pigments for which he is passionate. Further, Alan investigates topics of interest on the Internet, enjoys Ted lectures, and uses computers in the library with no difficulty.

Max’s “pampered childhood in Germany was followed by escape [as a Jewish teenager] from the Nazis. During the Second World War he served as a paratrooper with the US Army…” After the war he completed three university science degrees…” (Swartz, 2007). Max is a social activist; he abandoned America to teach microbiology for Castro at the University of Havana, before immigrating to Canada. Max uses emails to say in touch with friends and family, to coordinate active members and the directors of his organizations, and to contact politicians. He uses political websites such as Tyee to “keep abreast of what’s going on.” Max also plays Solitaire, makes Christmas cards and organizational pamphlets, and Skyped from Germany last year.
Andy spent his boyhood in Victoria, BC, in the 1920s and 1930s. He spent six years in
the military and fought on the beach in Normandy on D-Day. “Today Andy is a leader in the
humanist movement, with websites and newsletters that are widely respected in our community
and throughout North America” (Swartz, 2007). Andy said, “I use five humanist and atheist list
servers…I research WebPages, I check WebPages. Emails need answers and research. I even use
it [the computer] for a dictionary.” He also does online banking, and uses Twitter and
Facebook—but not for socializing. “It’s a pretty effective way to get my message out,” he says.
Danuta was born in Poland; during the German invasion she had a Jewish baby ripped from her arms, witnessing the child and his mother being bayoneted. As a young woman she became a member of an underground movement, leading to imprisonment and torture. After the war, she immigrated to Canada as a scientist, engineer, and professor. Unfortunately, because of Macular Degeneration, Danuta was unable to continue using her computer. In the future, using further magnification, she may regain the ability to communicate with her computer.

Bennett is from Victoria and worked at his family’s resort in Banff, Alberta during school breaks. He became a successful businessman and investor, as well as an involved member of the New Democratic Party. He is in close touch with his daughters and grandchildren using Skype. Bennett plays games everyday on his computer and uses it to make financial investments. Most of his emails are investment related and he does online banking. He says, “With the computer, it’s given me the freedom to invest for myself. [And] if I get a disease I will look it up, try to be a little informed. It does give you a second opinion.”
Ron was born in Dundee, Scotland. “By sixteen I’d been around half the Mediterranean in the Merchant Navy. I had to lie about my mother’s permission.” He immigrated to Canada as a machinist and has been married to Marianne for sixty-three years. Ron reports, “Very, very seldom do I use a computer; over the week maybe a half an hour. It’s just as a form of education” He says of Google, “Everything is right there. No matter what I put in there, I get some answer. It’s great.” Ron does not use a computer for anything else saying, “I don’t like computers.”

Marianne worked as a nurse until she was 61, and then had a Reflexology practice for another twenty years. She and Ron raised three children. Further, she is a watercolour artist, and
COMPUTER USE AMONG SENIORS 80 YEARS

has been a leader in both a lawn bowling club and humanism in Victoria for many years.

Marianne uses email, writes articles, and has kept organizational records in her role as Secretary on her computer. She began using a computer towards the end of her second career almost twenty years ago. Marianne does research on all subjects on her computer, especially surrounding medical issues. “If I wish to buy a new car or any object I am free to research pros and cons and make sensible purchases after research,” she says. Also she stores photos, researches watercolour painting and stores pictures of her art on her computer.

Evelyn is from Victoria and was born with an eye disability (which is not detectible today); it caused her embarrassment in her early years. She and Alan met as young adults riding the same city bus to work and they have been married for fifty-five years, living both in Australia and Canada. Besides raising five children, Evelyn was Alan’s firm’s business manager. Today she plays a computer card game called FreeCell, corresponds by email, has Facebook for keeping up with her grandchildren, and consults websites about cooking, knitting, traveling, gardening, and medical issues.
Peter is my youngest participant, next month he will be 80; but because of partial blindness and difficulty with mobility, I decided to include him in my study. He is from England, and in boarding school “read the Bible during interminable church services.” Peter said reading the Bible ruined him for religion but instilled a love for old books. Eventually he immigrated to Canada and became an antiquarian bookseller in Toronto. Peter has two children, headed the Canadian Crafts Council, and has been a board member of many organizations. He uses his computer for emails, researching family histories, and for watching DVDs. Further he used a computer to publish a newsletter and quarterly journal for twelve years. Peter said, “[A computer] is just a tool. I don’t think of it in a social communication sense at all. It’s just a useful thing. I’m quite sure I don’t use 90% of what a computer is capable of doing. I don’t need it; writing is what I exclusively do. I mean cut and paste and bold face to italic that kind of thing.”
Brenda said, “At one time I worked quite a lot for women’s rights. I was very conscious… Yes, I’ve always been an activist.” Along with the late Evelyn Martens, Brenda was a courageous leader who risked prosecution in the Right To Die movement in Victoria. She has two children. Her own artistic pottery is displayed in her meticulous home. She uses email, and has done online shopping “more for research.” Brenda said, “I use [the computer] to communicate with other people. Being able to access information, contact friends, see my bank account, things like that.” She was suffering the effects of a recent stroke and was frustrated that she was not organized or on top of things for the last couple of months. In front of her computer she carefully read out loud the latest news from the Farewell Foundation; in this case a favorable court ruling out of Georgia, “That’s a huge step for Georgia…That’s very important…” She strikes me as an informed person, even though she is not up to her own high standards.
Narrative Findings: Listening to Their Stories

The goal of my thesis has been an exploration of how my participants interact with computers using their individual voices to tell their stories. Hatch & Wisniewski (1995) lament, “despite the espoused [narrative inquirer’s] goal of encouraging other voices to be heard, the loudest voice is that of the author” (p. 131); my participants are articulate and I have resisted substituting my voice for theirs. Each participant had unique perspectives about the role of computer competence in their well-being, reaffirming that “narrative discourse highlights the uniqueness of each human action and event rather than their common properties” (Bruner, 1986 as cited in Chase, 2005, p. 657; Polkinghorne, 1995). All participants lived independently in their own homes, with computer use playing a significant role in the self-esteem of several of them. I was impressed by the strategies that they used to overcome physical limitations due to age related health issues. Although they were given the option of using a pseudonym, each participant read my Research Consent Form (Appendix B) and willingly agreed to use their own name. Nevertheless, I will refer to them only by their first names.

Why Elders Use Computers

My participants had individual reasons for using computers. Evelyn said, “I check the emails everyday. But not when I’m busy...And I have this little ritual...if I’ve done the cross words and I’ve done all that, and he’s [Alan] watching a Charlie Rose [TV show] that I’m not interested, I go in and I play FreeCell. It’s a card game and you’re supposed to win them all and I’m pretty good at it. I have to win before I shut the computer off. And the other thing is just playing plain old Solitaire because you don’t have to deal the cards out or anything and it’s quick. And it just sort of gets my brain waves feeling OK. [Laughs] It’s just a habit. It’s just a
crazy habit. He [Alan] thinks I spend hours, but never, never more than an hour with it, because an hour is an awful long time. It takes the place of knitting and stuff like that. I’ve always loved puzzles, he’s [Alan] never been like that, and I think it’s just an extension of that. My mother was the same…”

Alan said, “The most useful [thing about the computer] I find is writing. And the reason is you can write it and make your changes. And it’s so fantastic, even the little red wiggly line that tells you you’ve spelled something wrong. I love writing, and I love writing properly. But I’m not the best speller in the world. And the other thing, the other green wiggly line that says you’ve made a mistake in grammar, I don’t always agree with the computer, but I like to know that I’ve got to think about that. And so, I find I just love writing on the computer, just an ordinary letter. I just enjoy making the right grammar, getting the message across—get the right sequence and right grammar. And I love writing a bit of poetry...just for myself. The other is fine but writing is what I would say the computer is really superior for. Second, is for research—into pigments and so on. It would take you a full 12-hour day to read it all [on his favorite website]. Everything you ever need to know about colour: vision, pigments, theory, everything!

Life long activist Brenda said, “I would say that computers have made cooperation much easier. I would have to think so [that social movements are accomplishing more.] We can advise so many people on a computer so quickly that the message...it can all go so much quicker and be known by so many more people. It has to be helpful in people’s causes; they had been more localized and more bloody [before computer communication.] That’s a hopeful thing because they can’t stop the youth like in the olden days. They used to be able to gag people pretty easily through fear. But I think people aren’t going to be buying into that kind of a scenario anymore. ‘You are not allowed to print this’ and ‘You’re not allowed to print that.’ Now they can’t do that.
People won’t stand for it. They will go under ground and they will get the word out. I think that’s thanks to computers, really.”

Marianne said, “Communication is the big thing. Keeping in touch. Writing letters. And yeah, just for writing articles because I can do a little and go back to it. It’s very convenient in many ways. Research. Occasionally, I look up [my] creative side, with arts and that kind of research. For me personally, the computer world has many great advantages. I am constantly in touch with the world, it is a form of encyclopedia, thus research on any subject is at my hand, whether I am concerned about a medical test, a drug, or general medical information on any level. That is a real plus at the senior age when meds seem to be dolled out too frequently.”

Marianne added, “I like the idea of keeping in touch with family and friends on a daily or hourly basis. It keeps me up to date with family issues. Communication. Instant communication. Keeping abreast of current affairs. Interaction with people.”

Ron does not like computers and claims almost never to use them. However, he showed me his new tablet computer and his digital photograph frame. He said, “I put my photograph card in there. I put one in the other day of a montage of my life…I was looking at myself when I was five and twelve, in the Army and the British Navy. I have had a lot of experiences.”

Danuta can no longer use her computer because of losing her vision. She remembered, “Well because when I eventually mastered the computer I liked to write. I wrote more and more, fiction, and sometimes the children would say, ‘you didn’t tell us about this or that’ and I wrote you know…sometimes I wrote short fiction. Early I didn’t use it as memoir. I wrote a few stories and that was it.” Later she added, “Two years ago I typed about 30 pages of my memoirs [on the computer].” Danuta, with the help of her sons, has a new strategy, and will be back to writing her memoirs on her computer using voice recognition software. She plans to train the software to
recognize her voice as she talks into a digital voice recorder and her story is automatically typed on her computer.

**Elders and Computer Literacy**

I asked Evelyn why she thought some seniors didn’t communicate with computers. She said, “I think it’s lack of resource, lack of back up. Because I found I would sit there and listen and make a few odd notes and think I had it all down pat. And then if I didn’t do it quite a few times, like if I didn’t do a function for a while, when I sat down to do it, I found I couldn’t remember. So it’s actually getting the skills for the procedures, and if you go wrong to have a handy person to contact like we have, that doesn’t cost us money. I could be wrong, because at the same time [my son] Mathew was trying to get us involved, he was trying to [teach] his father-in-law. And even though he had the same resource, Matthew and [grandson] Andrew, he just let it go and I don’t know why. He’s the same age as we are. *He just wasn’t getting enough return.* Our age group—it’s a whole new scene out there. Our kids, our grandkids, our great grandkids are all born knowing that this technology is where it’s at. But remember when it was introduced; we’re getting on in years.” She continued, “I’ll give you an example. Our high school recently had its 80th reunion to celebrate, and all our communication came by the computer. And when it came to last minute planning—you know paying for things there was a great deal of saying what you are interested in. You have to do it by the computer. I was probably in my class of 80 the only one who touched [the computer] and I had class mates who became judges, who became mayors, in other words they were right out there, but they didn’t seem to be on the email. They complained at the end that they didn’t get their notices in time.” Evelyn stressed that the communication benefits aren’t considered worth the effort required to learn for many elders.
Alan said, “I was resistant [to computers] to begin with. So, *some how I got through a barrier.*” Evelyn walked into the living room and interjected, “We have excellent back up which most people don’t. And when they have a problem they don’t have our resources.” Alan agreed and added, “That’s made a huge difference.”

Peter’s response to my question about other elders’ resistance to computer use was, “It’s an interesting question because I have two friends in England and neither of them have computers. I talk to them on the phone because I have one of those deals where you can call Europe. They both, more or less say, ‘I don’t think I can get around to grasping the technology.’ I mean they have never actually tried, I mean that’s the point. Neither of them, I mean they’re not dim witted persons; there are very bright people actually. So I am sure they could, but they just sort of recoil at the thought of this thing. My other friend who I have known since 1954, she doesn’t have any body to help [with a computer]…her friends are mainly women of her age and not many of them have computers. Neither of Peter’s friends have children living close by to help or encourage them to use computers.

**Learning From Their Children**

Many of my participants have been taught to use a computer by their children, and they rely on them for continual support. Brenda has dialectical feelings about the help she receives from her two children. She responds to my list of possible computer activities such as social media, “I use email. I don’t use those other things unless there’re *forced* on me. I think my daughter *forced* [Skype] on me, but I don’t use it.” But when I asked her to share her first experience of using a computer she said, “Well I guess I must have experienced a computer first with my son. He’s a computer nut. And if I need any help I appeal to his better side [she laughs.] I would phone my son and say when are you coming down. And he would say, ‘What is the
When asked who helps him with computer problems, Peter said, “My son who now lives here. He used to live in Ottawa. I used to phone him up and say…and usually he would just solve it over the telephone.” Max, on the other hand, has received only limited help from his son-in-law. He said, “Clara [my wife] and I took a couple of courses in computer. They were in that school at the corner of Hillside and Blanshard, a public school for seniors. That got us started. Clara was not as adept as I was, and still is not. As time went on I learned a lot of things from friends and by personal experimentation.” He said, “And then I have another friend who is fairly well imbued with computer technology. We put out pamphlets and flyers together.”

Alan said, “My son has been a source of help because when you are starting you run into problems all the time. Because you can just pick up the phone and have your son...not only that but his son, my grandson, got a degree in computer engineering. So if Matthew wasn’t there I could phone Andrew. I mean this was—you know most people don’t have this backup [he laughs]. And you hit some horrendous problems. Sometimes suddenly the screen is full and there are no margins and you—what the hell do you do? And you know you are not supposed to turn the computer off. So then you phone Mathew, ‘Mathew what do I do!’ And there have been some extraordinary things that have happened. It’s amazing what can happen if you inadvertently hit a key [he laughs]. Depending on their relationship, learning from their children is a valuable resource for my participants.

**Lifelong Learning**

Several of my participants are interested in learning about computers. “I’m fascinated by the computer. But I’m getting so old now that I’m losing some of the potential interest I could
have in it,” said Bennett. This is in contrast to Marianne who said, “For me if there is something out there to learn, I want to be there. I love the ongoing learning experience at ease here in my own home, in my own time. Yes, it was because I felt that this is the way we have to live now, I must learn. I worry about being left behind, if I didn’t pursue [learning to use a computer]. I am pretty determined when I’m going to do something.”

84-year-old Alan expresses the same sentiments, “I’m content in being computer literate. Like when they introduce computers to the library, you just don’t think anything about it. Yeah, I just like being computer literate. I like the idea of sort of keeping up with the world.” Evelyn agrees, “I have a curiosity still. So you can satisfy your curiosity still [using a computer].” Into her late 80s, Danuta says, “I always loved to learn. Mind you if I screwed up [my computer] I called my friend who lives on the street down [from here]. But I always go about it myself first. Otherwise I would have no friends!” My participants expressed a strong desire to continue life-long learning into the “age of the computer.”

**Computers and Self-Esteem**

Although Alan was confident in his computer abilities, he indicated self-disappointment because he had not fully embraced communication with computers. He said, “I’m at the age where old habits die hard. I still like to get my bank statement in the mail. And I know BC Hydro says ‘make your life easier, go online, we’ll keep you up to date.’ I know I should, but I just don’t want to.” I asked him why he felt that he needed to go online. Alan replied, “Because they are an authority. And I was brought up to obey authorities; one of the vestiges [of attending Christian boarding school in Colonial China].” Two other participants had physical disabilities that affected both their ability to use computers and their self-confidence.
Danuta is frail due to various medical conditions including recent minor strokes. She started our interview sitting inches away from an approximately 40 inch flat screen TV. This is one of her practical strategies to cope with losing most of her sight from Macular Degeneration. “I stopped using a computer completely about a month ago or something like this. Because my first problem with my aging is my eyesight and even if I try with glasses, you know I have to change my glasses, I can’t see the typewriter. But I do use the computer, for instance I wrote my memoirs on a computer,” said Danuta. “I write letters by hand under magnifying [using a projector]. I am going to get back to the computer now that I feel better. Really my big problem is my heart. My eyes are separate. Do you want to see my computer upstairs? And I will explain my problems [with using the computer].” We slowly made our way upstairs, “I played solitaire. I Skyped sometimes to my son. So this is how I type, I wanted you to view the speed I’m going.” She typed very slowly. “I haven’t used this computer in at least six months so…see I can’t see those now. It’s because my eyesight deteriorated. See, I can’t read those signs anymore.” We worked together to find a document—she opened her email and typed “Stupid Danuta” on the address bar. “Before I typed much faster as you can see with my memoirs. This is the only thing I used the computer for. I never paid bills or anything else, but for my personal typing.” I suggested she and her son think about getting a projector for the computer upstairs like she used in her kitchen area for reading. She replies, “The Force Law of Newton, ‘when at first you don’t succeed, stop trying!’ You know, I know exactly what is the problem. I have my [new] glasses on, so it’s not my old glasses—I could also have potatoes in front of my eyes and I would see as well. I mean they help me a little bit with my television. So this is why I don’t use a computer.” Because of what she had just typed, I asked if no longer being able to use the computer makes her feel bad. She replied, “You know I try not to think that way. I think what I can do. I have a
As a young girl I was arrested [during the Second World War] and for a month I couldn’t even lie down because they would observe me. I had to stand up. So, I survived that and I didn’t reveal anything, simply because I had nothing to reveal. They would try to put words in my mouth. And they sentenced me to life imprisonment.

Somehow, I befriended my executioner, and I shamed him and made sure I looked good when he was talking to me. And I remember one of the guards—my cell number was 26 so everybody called me Miss 26—and he would knock on my door and I could talk to him through the Judas window. He said, ‘when I am on shift, I will always come and say hello and you can lie down and I will wake you up when [the next guard] comes.’ So I would lie down and then he would say, ‘Miss 26 an enemy at the gate’ and I would stand up. He had a daughter my age, 19. I just had a baby and my baby died; and they put me in prison.” Her point, eloquently made, was that what she had survived earlier in life made her strong enough to accept her present disabilities. Yet contrasting her story of strength and endurance were those two words “Stupid Danuta” demonstrating that along with diminished sight was diminished self-esteem.

Brenda was also suffering the affects of a recent stroke. She was frustrated that she was not organized or on top of things for the last couple of months. She had a small stack of mail that she hadn’t read which she said is something she had never done prior to the stroke. She could not remember when she had first gotten a computer—“[Pause] I don’t know that I am the right person to do this. Since I have had that stroke my memory is very...” I cut the questions short because I could see that it disturbed her not to have answers for my queries. Brenda had been a women’s rights activist early on, and for years, along with the late Evelyn Martens, was a leader of the “Right To Die” (RTD) movement in Victoria. In front of her computer she carefully read out loud the latest news from the “Farewell Foundation.” Talking about her lifetime of activism
she said, “After a while you look at yourself and wonder, ‘have I actually done anything?’”

When you think of the years you’ve put into something like the ‘Right To Die’ and then you think...we haven’t gotten very far politically in Canada.” She recovers from these depressing thoughts and adds, “You can get on the sites if you want to keep advised as to what is happening in the world on the Right To Die...” It wasn’t until the end of our interview that she seemed to relax. I think she was glad of our time spent together, but I am sorry for the added pressure of our interview.

**Frustration**

I asked my participants what they found most frustrating about using the computer. Peter and Andy’s answers support a social-integration view of new media theory and media-equation theory where computer users interact with their computer rather than with other individuals. (Holmes, 2007, p. 9; Littlejohn & Foss, 2008, p. 292-3; Reeves & Nass, 1996, p. 5). Peter answered “The fact that their logic doesn’t coincide with mine [laughs]. Something pops up and gives you a message and you haven’t any idea what it means or why it’s popped up. That kind of thing, yeah [laughs].” Peter continues, “It’s hard to know if you did something wrong or not. I mean I don’t touch type—sometimes it’s hard to know if you hit the wrong key. If my son is not available, I have learned to struggle with it—wrestle it to the ground as it were. Quite often I can resolve it for myself, except it takes me an hour instead of five minutes on the phone.” Andy answers the question in a similar manner, “Nothing [frustrates me about computers] really now. Earlier I was frustrated because it treated me with implacable indifference. But once you understand its point of view, then you become the beast’s servant.”

81-year-old Bennett also expressed frustrations with his computer, “It’s just that there isn’t reliability there. And there is a threat of being hacked and other things. Polly [my wife] and
I both have been guilty of downloading stuff that was dangerous. We didn’t know it at the time, but it was dangerous. We had to take the computer in and spend hundreds of dollars to put it back together. It was very interesting.” Bennett gave another example of a frustrating experience, “I was very interested in camcorders. You could record everything and then you could come home and edit it all on the computer. That was quite a learning exercise. On one occasion for instance, I’m almost finished, I’m putting it into the box to have it complete, and it gets up to 97% complete, and the hard drive is full and it stops---and erases all of that just after all of the frustration you’ve gone through. I was ready to throw it out the window and me after it [laughs]. That was ignorance on my part. The hard drive probably had enough, had I looked at it and figured it out a little better. Everything about the computer you seem to have to learn the hard way [laughs]. Peter, Andy, and Bennett cope with their frustrations from using computers in good humor.

**Social Isolation**

Even though he suffers from severe osteoporosis, has diminished hearing and vision, and only one lung, Andy uses his computer about seven hours a day. I asked him what he finds most useful about computers and why. He said, “I guess the most important thing is you are able to communicate with society. To a lot of people, this is the biggest boon for seniors that you can imagine. For people who can’t get out of a wheelchair, get down the street. Look at [Steven] Hawkins; he’s got a brilliant brain working all the time. When you’re not able to go to meetings, [the computer] is still a way that you can get your messages out. I get my message out through Facebook, Twitter, and our group [the Victoria Secular Humanist Association]. I spend a lot of time on humanist list servers... I send out our newsletter to all those places and I also get
84 year-old Marianne answered the same question. She said, “I’d feel left out, for one thing. In order to have interaction with people it would take a different type of energy. I think you’d have to make a personal contact. Write letters. And all of these things are OK, but the convenience of the computer allows me to keep this communication open at 5 o’clock in the morning or midnight, or whenever, and eventually they receive it. I couldn’t see living without a computer now having reached this point. I feel I am in the world, not a senior left out in the cold because of my age.”

When asked about her reasons for using computers, 82-year-old Evelyn said, “I feel reassured that there is something or an avenue or what would you call it out there. If I’m on my own I could fall back on that for a lot of warmth. I would use it more if I didn’t have as much going on in my life already. My sister recently lost her husband and she’s using the computer constantly. [I’m] getting little forwards from her. She’s just, what you call browsing the sites and finding interesting things, and sending them off to me, so I know the computer is a big help to her.” Andy, Marianne, and Evelyn articulated that computer communication is important for their own well-being, and for other elders who are alone or have physical handicaps.

**Deskilling**

85-year-old Ron didn’t have many positive comments about computers; perhaps he felt threatened by the technology that was introduced towards the end of his career as a machinist. Wikipedia defines deskilling as “the process by which skilled labor within an industry or economy is eliminated by the introduction of technologies operated by semiskilled or unskilled
Computer numerical control (CNC) machine tools have been used to replace skilled machinists, and are specifically offered by Wikipedia as examples of deskilling. Ron’s negative attitude to computer use takes meaning in relation to his earlier working experience (Holstein & Gubrium, 1995, p. 67). While Ron might sound harsh, in reality the twinkle in his eyes and his sweet smile are constant throughout his storytelling.

Ron said, “I don’t like computers. In fact the last job I had was in a machine shop. Computers, except one, ran them all. And that was the machine they gave to me to fix everything that was fucked up on the other machines. When I first went to use the machine, it’s called a jig borer, a sort of special very close tolerance, a tenth of a thousandth, they wanted me for this job because I was an older toolmaker. The super brought me into the shop [to look at] the big pieces of aluminum, square with hundreds of holes in them. What they actually were was manifolds for aircraft to send the hydraulic oil to different places. He says, ‘What I want you to do is check all these over, one after another, because there’s been a mistake made somewhere on them, you know the hole isn’t deep enough or something like that. So I said, ‘You can’t use them.’ And he said, ‘Not ‘til they fix them. They cost roughly a hundred thousand dollars each.’ The amount of work involved in one of these… So he says, ‘When you are working on them don’t fuck them up.’ And I said to him, ‘They’re fucked already and if I do anything to them it will be an improvement. If I don’t do nothing it’s exactly where it was—fucked up.’ He said, ‘I suppose so.’ I said, ‘I know so.’ I was 57; I’d been working with tools most of my life. Nobody could tell me about tool making. No, a computer didn’t help me any except to give me a good job. I was the highest paid guy in the place.”
89-year-old Andy also saw early computers at work fail spectacularly, but he was still intrigued by them. Maybe his attitude was different from Ron’s because, as a supervisor, his job was not at risk by the introduction of computers. Holstein and Gubrium (1995) declared “the ‘same’ elements of experience can be arranged into differing configurations, taking contrasting meanings...” (p. 58). Andy said, “[In the late 1970s] we had a brand new kiln plant from Germany. Basically [computers] ran the plant. Now, the computer designers’ sensors in plants were pretty questionable. Because they were not familiar with it, they designed this whole plant without hardware back up. That would cost all 17 men to lose their jobs within the next three months. The manager was furious; he got a hold of me because I was the supervisor. He was showing us the diagram...and we started getting bits and pieces of the plant going. Then we finally got a real engineer to start with us. He was able to change the ones and zeros... The big problem with the computers was, say we had a well 40 or 50 feet long with 200 or 300 feet of rock, if a belt breaks and that keeps coming out, you can’t get a Bobcat in there. You’re down 24/7 for days, weeks sometimes, to clean up. When the computer looked at it, it wanted to start the belt but couldn’t get it to start, which happens when you have the belt stopped and you try to start it. We built a TDR (time delayed release) around it...and you could pick up correction from there, right. So by doing that we could get the belt running. They completely destroyed a brand new elevator because the [computer] controls couldn’t recognize they were doing something wrong. There were a lot of things like that. So that’s how I got interested in computers.” This experience inspired Andy to be an early adapter of computer technology.

**Technology is Detrimental**

91-year-old Max judges computers through the tensions of dialectics; he is conflicted in his feeling about computer technology. On one hand computer use is a great convenience and he
enjoys the sense of accomplishment. He relishes the adventure of communicating with Skype and producing his own greeting cards and organizational pamphlets—but on the other hand he thinks that computer technology is part of our “capitalist consumption system” that is resulting in unemployment as individuals do more things like produce those greeting cards and flyers. Max suggested I ask, “How do you think computer use will affect the next generation? How do computers affect 3rd world countries? How much is technology a product of our system? How much of technology is driven by capitalist systems?” Then he adds, “I know I am falling off the Left side! I challenge any one who propounds technology. Technology is detrimental because we are destroying our world. We have absolute antagonistic politicos in Canada. We should be leading the world [in conservation]. We are destroying our world and warming the world...”

Further he objects to computer use because of the loss of personal interaction, “I got a Christmas greeting last year from my son who lives in Cranbrook and it was by email. I really took exception to that because I wanted a personal card, I wanted something personal. And of course if you send something through the mail then whatever you had in your hand is going to be in their hand. Then there is a personal attachment sort of thing, a propinquity as it were or something.”

Max continued, “I feel that by doing a lot of those things: banking on line, finding insurance or what ever, or investments, there is a certain loss of personal input and also privacy. And at the same time I feel that this kind of technology that we’re faced with nowadays is robbing us of a tremendous amount of jobs. We do things on a computer or on the ATM or wherever not thinking how many jobs or how many people we’re putting out of a job in that way. I have a personal objection to technology because in my opinion there must be a tremendous amount of jobs lost in the process.” Although Max used a computer several hours a
day, he objected to computer technology because he longed for personal contact, worried about the environment, and was concerned for the unemployed.

According to McCracken (1988) “qualitative research does not survey the terrain, it mines it. It is, in other words, much more intensive than extensive in its objectives” (p.17). With this in mind I have used my 10 participants’ own narratives to communicate their experiences using computers, keeping my voice to a minimum. Furthermore, I have included “numerous quotations” because “the validity, meaningfulness and insights of qualitative inquiry have more to do with the richness of information and the thick description in the cases selected than with sample size” (Patton, 1990 as cited in Larsson & Sjöblom, 2010, p. 277).
Narrative Analysis:

Lessons Learned

I came to this study with preconceived notions of how elders’ interact with computers. These beliefs were reinforced by many of the journal articles cited in my review of the literature concerning computers and the elderly. However, my findings dispute these prejudiced notions in the majority of my participants: They were not helpless, cognitively challenged, and aged victims. On the contrary, my participants are computer literate people who happen to be very old, and they face the challenges of aging with good cheer. Fisher (1985) argues, “The narrative paradigm is a proposed answer to...what is actually happening whenever something is said or written” (p. 76). My task now using narrative analysis is to “answer how and why particular outcomes came about” (Polkinghorne, 1995, In Hatch & Wisniewski, p. 19).

Computer Use Leads to Well-Being in the Elderly

Saunders (2004) determined that interaction with others through computer communication could help reduce loneliness (p. 575). Evelyn told a story about her widowed sister gaining comfort through using the computer. She described a relationship that confirmed Holmes’ social integration view of new media theory where users interact with their computers (Holmes, 2005, p. 148-154; Holmes 2007, p. 9). Saunders also described limited vision as a barrier to computer use by seniors. While this was the cause of Danuta’s inability to continue using her computer, it barely slows down Peter, who has limited vision in one eye and is totally blind in the other. I was surprised to learn that his only accommodation to partial blindness is to increase his preferred font size to 12 point from 11 point. Saunders goes on to talk about overcoming elders’ fear factor in using computers. Again, my participants showed no attitude of fear concerning computers, though they were sometimes frustrated with them. None of my
participants indicated that they were lonely and future studies could seek to learn if computer users are less lonely than non-computer users.

My findings confirmed Russell’s (2007) report that asserted elders wished to continue participating in society rather than be ignored (p. 382). Marianne said with the computer, “I feel I am in the world, not a senior left out in the cold because of my age.” Further Russell argued elders use computers to maintain and strengthen family relationships (p. 382). Bennett says, “I really enjoy Skype with my daughter in Australia. I can see when she comes on line, and I just watch it and I just punch it and bingo we’re talking. Four times a week we’ll talk. And my daughter in Calgary, she calls me every Thursday night around 7 o’clock and we have a nice chitty chat about the kids and everything else.” Six out of my 10 participants use computers to “stay in touch” regularly with friends and family.

Furthermore, Shapira, Barak, & Gal (2007) found that computer and Internet communication prevents feelings of powerlessness and isolation for the elderly (p. 482). Andy who has limited mobility, in addition to vision, hearing, and speaking difficulties, says that without computer communication he could not “get messages out.” His narrative continued, “[it would be] rough for me. I’d be isolated.” Confirming the results of Shapira, Barak, & Gal, Andy communicates with a wide audience using social media, while Danuta projected feelings of powerlessness with the loss of her ability to see her keyboard. Moreover, Gradis (2003) called for studies about how to encourage seniors to use email to prevent loneliness (p. 15); but this is not an issue for my participants. The exceptions to using email are Ron and Alan, whose wives perform that family function. In the same context, Bennett refuses to use Facebook; he said, “If it is interesting I just look at Polly’s [screen]; we have two computers.” In addition, Redsell and Nycyk (2010) were concerned about reducing a digital divide for seniors. A digital divide is not
COMPUTER USE AMONG SENIORS 80 YEARS

an issue with my participants. Evelyn said, “It keeps you current. We have our grandkids coming and we sit and talk to them on an equal—not just old people or young people, but having interesting conversations. The computer helps you there. It helps you in contact. I used to say there was no generation gap between us and our children. Not even so much with our grandchildren... I think the computer is the way of linking generations.” Redsell and Nycyk (2010) further argued that kind and encouraging teachers are needed for elders (p. 38). Alan, Evelyn, Peter, and Brenda have patient children that help and encourage them; in agreement with Redsell and Nycyk, each of these participants feels that this is a great advantage. In contrast Evelyn talks about her son’s father-in-law who has the same help but isn’t interested in using the computer. She said, “He just wasn’t getting enough return.” It appears that good teachers are only one element in encouraging elders to become computer literate. Elders need to believe that what is to be gained is worth the effort to learn. My participants learn to use what interests them on the computer—no more.

Wood, Lanuza, Baciu, MacKenzie, & Nosko (2010) stressed the importance of effective instructional programs. Max and his wife attended a public school for seniors to learn about computers. However, it was the early Atari video game console that sparked their interest and gave them the incentive to seek instruction. Max said, it “was kind of a game computer. And we bought a set and started to play with it. Then eventually we graduated into a Dell apparatus.” Furthermore, Wood et al. (2010) asserted that computers are a way for elders to stay socially active in their communities (p. 835). Max and Andy (and Brenda until her recent retirement from the Right To Die movement) are socially involved in their communities, as well as nationally and internationally, because as elderly activists they have the ability to communicate using computers. And both Peter and Marianne, as directors of various community organizations, use
the computer to stay involved in their communities. I assert that computers are a convenience that enhances elders’ abilities to communicate into their old age.

**Negative Role of Computer Use for the Elderly**

I found evidence that elders’ well-being can be adversely affected by pressure to communicate with computers. Prendergast and Roberts (2009) argued that technology should not be used to “deskil practices of importance to older people” stressing that elders seek to maintain their personal identity (pp. 60-61). For example, Alan says, “My preference is to write letters actually. Why, I don’t know. There’s email of course, but I prefer to write letters.” He continues, “We don’t do any of our banking on line. It’s not so much that I’m worried; it’s just that I’m unfamiliar with it. I’m at the age where old habits die hard. I still like to get my bank statement in the mail.” Decision makers need to respect elders’ right to refuse computer uses.

McMurtrey, Zeltmann, Downey, & McGaughey (2011) reported a diminishing digital divide; for my participants “return for effort” influences their decision to cross that divide. For example, Marianne said, “I think with a lot of people it is just too difficult, and they don’t want to waste their time, or can’t be bothered.” Brenda said, “I guess it’s [dependent upon] their need.” And, Peter said, “I am sure they could, but they just sort of recoil at the thought of this thing.” In addition, McMurtrey et al. (2011) found that over 90% of their respondents did not participate in any social networking. My data is similar; only Andy was enthusiastic about social networking; Evelyn used Facebook grudgingly to keep up with her grandchildren; and Bennett tried Facebook and said, “I was signed up for it and I wanted to get out of it. I just felt it was intrusive into my life.” None of the other participants was interested in social networking. McMurtrey et al. (2011) also found 1/3 of their 173 respondents had never used email. This is where my participants differ; seven use email, and two have spouses who use email.
Furthermore, McMurtrey et al. reported that none of their respondents considered themselves experts in computer use. Andy, as an early adopter, would consider himself as an expert. Moreover, 68% of the McMurtrey study respondents said that they were not “somewhat” or “very comfortable” using a computer. All of my participants have given narrative evidence showing that they are comfortable using a computer. This would include Ron who claims not to like computers; however, he is comfortable performing the only task that he chooses to use a computer for—“Googling.” McMurtrey et al. (2011) called for future studies of elders’ attitudes towards computer use with the aim of enhancing quality of life (p. 29); my study adds to this body of knowledge.

Although my participants were accomplished in using the functions of computers that interested them, there was subtle pressure to use the computer for more tasks causing some unease. For instance, Brenda did not appreciate being “forced” by her daughter to Skype. She said, “I use email. I don’t use those other things unless there’re forced on me.” Similarly Max said, “I personally have a dim idea [that Facebook and Twitter] are something that you use to be visible to the outside world and for me that is a lamentable loss of privacy. I have no intention of pursuing those new systems. Having said that, in some cases you inevitably are forced to go into those and I would hate to think that I am being forced by technology to do that.” Alan retorted, “BC Hydro says make your life easier, go online, we’ll keep you up to date. I know I should, but I just don’t want to.” Further Evelyn admits, “Matthew [her son] is a bit disappointed in me [because] I don’t do online banking.” Dickinson and Gregor (2006) reviewed the literature cited by Saunders (2004) and other secondary study authors. They disputed evidence that claimed computer use plays an important role in improved well-being of elders (pp. 746, 748-750). I am in agreement with Dickinson and Gregor: Decision makers should not foist unwelcome
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technology on elders. Billipp (2001) went further claiming that elders that are computer-illiterate gain no positive effect to their well-being from computer use. All of my participants were computer literate so I could not test Billipp’s assertion. What I can say is that Ron, Brenda, and Peter each said they could live easily without computers. When I asked Brenda how she would feel if she couldn’t use a computer, she laughed and answered, “Oh, I’d get over it!”

Understanding Communication Needs in Very Old Age

McMellon and Schiffman (2000) found that senior friendly websites and Internet products could encourage seniors to go online and help them overcome physical limitations (p. 143). I found no evidence that my participants required any special senior friendly websites. I was surprised when Peter who has limited vision said, “I don’t worry about pop ups when looking at web sites, I just ignore them. I get the New York Times every day and Slate everyday. They have these pop ups. If they are in the way, I just click them out of the way.” Danuta and Andy had acquired larger screens as strategy to continue using computers with diminishing vision, again giving no indication that they required special websites for the elderly. It is certainly the case for Andy, as continuity theory explains, that elders compensate for lost mobility by using computers to communicate (McMellon and Schiffman, 2000, p. 143). McMellon and Schiffman used, as an example of elders continuing to conduct their business at home, of online banking. I would agree that this is vital for Andy even though he lives close to all amenities. Also Brenda and Bennett take advantage of online banking. But seven participants said they would not bank on line with reasons ranging from Max’s ethical concerns about unemployment, Evelyn’s it’s not worth the “hassle,” to Peter’s “wouldn’t trust it.” Although Peter no longer drives and has “bad” knees, he uses the public transit system to go wherever he wishes; it is a different story for Andy who lives in considerable pain from his osteoporosis. He
uses his computer to communicate with other people seven hours a day and takes full advantage of the Internet. “It gives me something to be interested in. I’m a retired person; it’s something that keeps me going every day. I feel I have more say in the country. One of my Tweets about the need to get rid of Harper got sent around 3,500 times. So you have a real effect. You can show a lot of people your point of view and it really seems to work. In the [news] paper you get one letter in and a small percentage actually read it. And 10 % of them might change their attitude. That’s why I use twitter [because it’s a lot more effective].” Andy “travels” by communicating with a computer—no matter his age or mobility. McMellon and Schiffman (2000) asserted that public policy should be developed to encourage seniors to go on-line (p. 143). In contrast, my participants don’t need encouragement; they are computer literate and go on-line for research or for social participation.

Lovden, Ghisletta, & Lindenberger (2005) asserted that social participation slows the decline of perceptual speed in the elderly (p. 430). However, they admitted that this is only one of the factors that affect cognitive function. To illustrate, Ninety-one-year-old Max, like Brenda and Danuta, had minor strokes in the past. Max also had an accident causing a head injury a couple of years ago. His strategy is to speak slowly and deliberately; I found what he had to say to be original and enlightening. Each of my participants are actively involved with family, friends, or social causes. Although Lovden et al. (2005) were not specifically looking at computer use, I would argue that most of my participants feel that computer use is beneficial to their mental acuity. My research did not reveal factors, other than social participation using computers, which may contribute to maintaining my participants’ perceptual speed. (With the exception of Ron who credits his health and longevity to factors such as copious amounts of tobacco and alcohol, while avoiding all vegetables!) Remembering that a goal of my research is
to understand the communications needs in very old age, I agree with Lovden et al. (2005) that future studies should include not only elders’ social participation using computers, but should search for other strategies to maintain cognitive strength.

Danuta is essentially blind because of macular degeneration, but she is not lonely, living with her son. Still, she was happy for the company of another woman and to be part of my study. Danuta mentioned, “I am not terribly social. I am a loner and always was. I was an only child, so I would have one very close friend and my boyfriend at the time. I was a very serious young woman.” Further, Peter shows no sign of loneliness; he has made the necessary adjustments to carry on with his life and takes his partial sight loss in stride. He talks to a number of close friends everyday over the Internet. Andy is the same, but depends on the computer for social participation more that any of the other participants. Alma et al. (2011) found that visually impaired elders have a higher rate of loneliness than other elders and suggested that coping skills be taught to prevent their loneliness (p. 585). Andy and Peter have acquired coping skills on their own. Danuta has had help through the engineering abilities of her sons and consultation with CNIB [Canadian National Institute for the Blind]. Their website reads, “CNIB can help you maintain your independence and keep you doing the things you love” (http://www.cnib.ca).

In the past, Danuta was able to use a computer with projector magnification and large keypads; now she is being helped with voice recognition software so that she can continue dictating her memoirs, benefiting her self-esteem.

My research data has shown that computer communication plays a significant role in the self-actualization and self-esteem for the majority of my participants. Specifically, Andy, Max, Marianne, and Brenda use their computers to communicate their messages in hopes of leaving the world better for younger generations. Majercsik (2005) studied geriatric hospital patients and
found that their hierarchy of needs was opposite of Maslow’s hierarchy of needs. He found that elders value self-actualization and esteem more than physiological care. Only safety was unchanged for them. I contend that the computer is an extension of my participants’ ability to communicate their social messages as they age.

After reviewing the research literature, Rodewalt and Tragakis (2003) asserted, “Everyone’s self-esteem is contingent on feedback from the social environment” (p. 67). I argue that computer use can provide community feedback necessary for elders’ self-esteem as they stay in touch with friends and family. My participant’s narratives demonstrate a connection between computer use and well-being, although according to a social integration view of new media theory, some participants interact with their computers rather than with other individuals (Holmes, 2005; Holmes 2007). For instance, Bennett and Evelyn ritually play certain computer games daily. Furthermore, Andy has interacted with computers since the late 1970s. He said, “In those days the only thing you could go on the net for was the Free Net, strictly through the telephone lines. You had to use...languages to communicate. I didn’t do a great deal with the computer in those days. I was just playing around with calculations and mathematical stuff. You could put it in there and it was amazing how it could do very complex mathematical problems. It was really something to see. Yeah we used it just like a calculator. It wasn’t really worth the trouble; you had to keep putting the tape back in. Back when the Atom [computer] had an all in one word processor, I used the TV for the screen, and with that I wrote my first letter to the editor.” Andy has 100’s of his “letters to the editor” published, benefiting his self-esteem.

Chu, Huber, Mastel-Smith, & Cesario (2009) studied seniors 65 years and older who were socioeconomically deprived of access to health care information. Guided by Bandura’s four major sources of efficacy expectations, “the study documented positive difference in computer
anxiety, computer confidence, and computer self-efficacy scores after a five-week [instructional] intervention” (p. 18). My research participants were generally well-educated, lower middle class to upper middle class individuals, and expressed computer confidence. Chu et al. (2009) found that seniors “were persistent and refused to quit until they had mastered the task at hand” (p. 17). Although I studied a different population of elders, my results confirm their finding. For example, when talking about her experience of learning how to use a computer, Marianne said, “I am pretty determined when I’m going to do something.” Further, in her story about being VSHA Secretary, she said, “I wanted that perfect, even though it wasn’t always, but yes it was a good learning experience.” Chu et al. (2009) recommended future studies to determine if lower income seniors would continue to access health information on the Internet and to evaluate their abilities to find quality sites (p. 18). Andy summed up the problem for elders: “Acquiring information is not the problem with the computer; it is the lack of depth of information. The problem is deciding what is valid and useful to you.”
Conclusion:

Study Reflections

I have explored how computer usage impacted the lived experiences of 10 Victoria, B.C. elders by examining the role of computer competence in their well-being, while considering a reduced ability to communicate with aging. Narrative style open-ended interviews were used as “a social medium for active construction of knowledge” (Bleakley, 2005, p. 537). Further, I chose narrative research as my methodology because of its ability to “gain an in-depth understanding of people’s lives” (Larsson & Sjjoblom, 2010, p. 272). My intention was to “give voice to [my participants] through listening to their stories” (Larsson & Sjjoblom, 2010, p. 273).

Specific functions of computer usage were included in their stories (Appendix A), with email being important to almost all and generally used to stay in touch with family and friends. In addition, most of my participants are well educated and Google regularly to obtain information. Further, using computers for writing personal letters and articles is important to half of them. However, social media such as Twitter and Facebook was almost universally rejected.

My participant’s narratives have shown me how computers, like television, can be used as a “substitute for face-to-face communication among those older persons who are physically isolated” (Real, Anderson, & Harrington, 1980, p. 82). Dialectically, participants longed for personal contact and resisted pressure that deskilled their communication rituals. I argue that computers benefit elder’s self-esteem by providing them with lifelong learning and the opportunity to continue communicating with society.

All my participants had computer skills and they did not self-describe as lonely. Future studies are needed to compare the well-being of elders who are non-computer users with those
who communicate using computers. Furthermore, future research should examine the computer usage of elders that are unable to continue living independently.

Those future studies, coupled with the findings of my research, could be extended to help elders who, because of deteriorating health, are forced to give up their homes. To illustrate, years ago my mother-in-law lived thousands of miles away, in a U.S. nursing home. Although she was peripatetic, for unknown reasons she lost the ability to express speech. However, with computer access and skills, she could have been empowered to email concerns about her care; computer communication would have given her voice and social participation. The denouement of my narrative research is that computers give voice to elders; nevertheless, decision makers need to respect elders’ right to refuse computer uses.
References


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# Specific Functions of Participants’ Computer Use

Number of participants out of 10

<table>
<thead>
<tr>
<th>Function</th>
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<td>Banking</td>
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<tr>
<td>Contact Politicians</td>
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</tr>
<tr>
<td>Dictionary</td>
<td>2</td>
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<tr>
<td>Email</td>
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</tr>
<tr>
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<tr>
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<tr>
<td>Favorite Websites</td>
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<td>Google for Information</td>
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<tr>
<td>Music</td>
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<td>Organizations</td>
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<tr>
<td>Coordinate Organizational Activities</td>
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</tr>
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<td>Keep Organizational Records</td>
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<tr>
<td>Own Website</td>
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<tr>
<td>Photos</td>
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<td>Store Photos of Own Paintings</td>
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<td>Store Photos</td>
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<td>Produce</td>
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<tr>
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RESEARCH CONSENT FORM

My name is Nancy P. Swartz and this research project is part of the requirement for a Master of Arts in Professional Communication at Royal Roads University. My credentials with Royal Roads University can be established by telephoning Colleen Hoppins, Research Ethics Coordinator, Office of Research Royal Roads University, or by email to __________________________. This document constitutes an agreement to participate in my research project. The objective of the proposed research is to describe, understand, and interpret the socio-cultural significance of computer use and ageing.

The research will consist of open-ended interviews and possible group interviews and is foreseen to last 2 hours or less, with an additional approximate 2 hours for possible group interviews. The proposed research aims to investigate why and how an older person chooses to use a computer; for what purposes; how their life would be different without a computer; in what ways does using a computer add to their social life; and what is their history and experience of gaining computer skills. In addition to submitting my final report to Royal Roads University in partial fulfillment for a Masters of Art in Professional Communication, I will also be sharing my research findings for future publication and distribution for educational purposes.

Information will be recorded in hand-written format or with photos, sound recordings or videos at the option of the participant, and where appropriate, summarized, in anonymous format, in the body of the final report. At no time will any specific comments be attributed to any individual unless specific agreement has been obtained beforehand. All documentation will be kept strictly confidential for an indefinite data retention period. The data/information will not be retained pertaining to an individual who has withdrawn at any time. A copy of the final publication of the study will be available to you by email at your request. You are free to have your true name OR a fictitious name used; to have your voice but NOT image recorded, or to have both your voice AND image recorded. Please circle your choice.

You are not compelled to participate in this research project. If you do choose to participate, you are free to withdraw at any time without prejudice. Similarly, if you choose not to participate in this research project, this information will also be maintained in confidence.

By signing or replying to this email, you give free and informed consent to participate in this project.

Name: (Please Print): __________________________________________________________

Signed: _______________________________________________________________________

Date: ________________________________________________________________________
SAMPLE INTERVIEW QUESTIONS and PROMPTS

Name/ Pseudonym. Age. Physical condition/disabilities.

How many hours per day do you spend on computers? If none, why? Is time wasted using a computer?

What type of communication do you perform on computers?— (Examples—email, Facebook, twitter, video chat, Skype, chat rooms, favorite websites, online banking, contact elected officials, order groceries, online shopping, etc.)

Would you share your first experience with the computer? How did you learn (class, family, friend)? Who helps you with the computer?

What do you find most useful about computer and why?

What do you find most frustrating about using the computer?

What tasks does computer use make easier for you?

Is there anything you would not want to share on your computer?

How does computer use affect your social engagement?—make new friends, keep up with family, etc.

Could you give an example of how you communicate with a computer and what it means to you?
How would your life be different if you didn’t communicate with a computer?

How does using a computer affect your life? How does it make your life better?

What does it mean to you to be able to communicate using a computer?

Why do you think some seniors take to computers and others don’t?

What are your reasons for using computers or for feeling as you do about them?
Can you imagine your life without a computer?