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Title: Technological social inclusion of rural and regional seniors and well-being

Book: Rural lifestyles, community well-being and social change: Lessons from country Australia for global citizens

ISSN: 9781608058037
Year: 2014
Pages: 338 - 379

Editor: Ragusa, A. T.

Publisher: Bentham Science Publishers

Place of Publication: Sharjah, UAE

URLs:

TECHNOLOGICAL SOCIAL INCLUSION OF RURAL AND REGIONAL SENIORS AND WELL-BEING

Abstract
The focus of this chapter is on demonstrating the utility of communication technologies for increasing socialisation amongst rural and regional seniors. The chapter starts with a review of the literature showing links between increased social interaction and the well-being of seniors. Findings from two interpretive, ethnographic studies are presented. The first initiative, introducing technology at a rural retirement village, and the second initiative, introducing rural and regional seniors to online social interaction, both illustrate that technology can improve seniors’ well-being and decrease social isolation. Motivations of retirement village staff, peer trainers and seniors who were novice Internet users are explored. The value of peer training, accessibility, and the need novice senior Internet users have for more time to learn to use communication technologies, were amongst the key findings.

Keywords
Aged, institutional care, interpretivism, rurality, socialising

Acknowledgements
This author appreciates and acknowledges the contributions of fellow investigators to the research for the two case studies. The first was completed in the summer of 2012 at Westmont Aged Care Services Ltd, a retirement village in Baranduda, north-eastern Victoria. It was funded by a Charles Sturt University (CSU), Faculty of Business research grant, and conducted with Mr. Ken Eustace. The second, Households Study, involved seniors in southern New South Wales (NSW), and was completed mid 2012. It was funded by a CSU Competitive Small Grant, and co-investigated with Dr. Kirsty Williamson.

Introduction
Across the western world, governments have taken initiatives to cope with the expected rise in ageing populations. In particular, the costs of institutional care, both social and economic, have resulted in numerous initiatives to improve the well-being of seniors in ways that will increase their ability to live independently in their homes for longer. The literature supports the need to increase socialising amongst seniors to improve their overall well-being. However, it can be argued that whereas technology can help with increasing social interaction for seniors, that is particularly the case in rural and regional contexts. One support for such an argument comes from the New South Wales (NSW) Office for Ageing (OFA) who in 2010 claimed that 40% of rural households in NSW had seniors who had never used the Internet and that this was a contributing factor to the social isolation experienced by rural seniors (Office of Ageing, 2010). However, simply giving seniors access to online socialisation is not sufficient, because that does not ensure that they actually connect to others online. For instance, Fayard and DeSanctis (Fayard & DeSanctis, 2010) claimed that the social inclusion factors needed to create a sense of connectedness have not been investigated. Their research revealed that creating such connectedness amongst online community members was very important for the achievement of the aims of many such communities; their study was not aimed at seniors, but social connectedness online regardless of age. Although the literature (Hampton & Wellman, 2003; Maloney-Krichmar & Preece, 2005; Pfeil & Zaphiris, 2007; Pfeil, Zaphiris, & Wilson, 2009; Xie & Jaeger, 2008) has shown that people can develop significant feelings of acceptance and belonging, in online environments, how such connectedness develops has not been studied in the general population, let alone amongst rural and regional seniors.
The increasing age of populations in Western nations is a well-recognised phenomenon, and various measures have been put in place, and continue to be developed, to cope with this demographic change. Various government and research initiatives have investigated the societal implications of an ageing population. These include initiatives to reduce reliance on assisted aged care and promoting ageing well and successfully. Less well-recognised is the increasing use made by seniors of information and communications technology (ICT), such as through participation in online activities. Research in this area, particularly Internet usage amongst rural and regional seniors, is still relatively new. Although the chapter is focused on the Australian context, the ageing phenomenon is one that affects most developed nations and thus the lessons learned in the Australian context have the potential for wider applicability.

The following section sets the context for discussions in this chapter. It is followed by a description of the theoretical lens that guides the research presented here, particularly the importance of increasing socialisation for the well-being of seniors. Then the research methods and findings are presented, followed by the discussion of those results and a conclusion, including recommended avenues for further research.

**Background**

The combination of decreasing mortality and birth rates, means that the proportion of seniors in Western nations is projected to increase significantly over the next several decades. McDonald and Kippen (1999) showed that in 1870 only 2% of Australians were aged 65 and over, and that by 1998 this had increased to 12%. According to the Australian Bureau of Statistics (ABS) (ABS, 2008a, 2008b, 2008c) one in four Australians (23 to 25%) will be over 65 by 2056, up from 13% in 2007. By 2056, there will be twice as many aged-pensioners as there are now, with only half as many workers supporting the social security system, which provides pensions and health care along with other benefits to many seniors. According to Britain’s Office of National Statistics (Office for National Statistics, 2008, p. 1):

> Over the last 25 years the percentage of the population aged 65 and over increased from 15 per cent in 1983 to 16 per cent in 2008, an increase of 1.5 million people in this age group. Over the same period, the percentage of the population aged 16 and under decreased from 21 per cent to 19 per cent. This trend is projected to continue.

In the USA, Belsky (1999, p. 7) for example, noted that only 4% of Americans were elderly (over the age of 65) in 1900, while by 1999, that figure had risen to 13%. By 1999, the proportion of elderly Americans was one in eight, and this was forecast to rise to one in five by 2030. As stated above, western people are living longer and, because people of child-bearing years are having fewer babies, the proportion of older people is forecast to increase further.

**Technological implications of an ageing society**

The rise in ageing populations in Western nations also has implications for technology use among seniors. One implication is that more seniors than ever before will be accessing technology. This trend is likely to be encouraged as governments and other agencies involved with seniors require more electronic interaction in order to save costs. For example, in Britain voting access to news and access to learning were increasingly being provided over the Internet, and seniors were disadvantaged by this because only 28% of people 65 and older, had Internet access at home (BBC, 2006).
Technology uptake amongst seniors in Australia has been growing rapidly and continues to do so. Australian data showed a 220% increase in Internet usage between May 1998 and May 2000 for persons aged 55 or older (ABS, 2001). Many seniors are using social networks (Karahasanovic et al., 2009; Pfeil, Arjan, & Zaphiris, 2009), they engage with each other online and they participate in online communities (Ito, Adler, Linde, Mynatt, & O'Day, 1998; Lepa & Tatnall, 2002; Pfeil, 2007; Pfeil, Arjan, et al., 2009; Xie, 2008a; Xie & Jaeger, 2008). There are also many online communities that cater to the needs of seniors. Examples include SeniorNet (based in the USA), OldKids (based in China) and various online communities dedicated to older people in Australia, including Australian Golden Girls, Silver Surfers, and Seniors Helping Seniors.

The two studies reported here took place in the context of rural Victoria, and rural and regional NSW. Although the studies are specific to rural and regional Australia, the implications for other contexts are explored in the remainder of the chapter.

**The Village Study**

The Village Study focused on seniors in Westmont Aged Care Services Ltd, a nursing home in Baranduda, rural north-eastern Victoria. In planning for their new state-of-the-art facility in 2007, Westmont decided to include a computer room, not hidden away somewhere in the facility, but in the main thoroughfare of resident social activities, in the centre of the main facility. Its purpose was to increase the social engagement of Westmont residents. It was also a recognition of the fact that more and more retirees have acquired computer skills during their working lives and expect access to computers in retirement. The study investigated the extent to which residents in the facility were using that new technology for social engagement, and gathered information about the views of staff involved with the management of the computer room. Although numerous studies have examined the use of ICT for social engagement amongst seniors (Xie, 2008a; Zaphiris, Kurniawan, & Ellis, 2005), few studies have looked at institutional care (Hedström, 2007). To date, the focus has been on ICT in public spaces, such as libraries and information kiosks (West, 2002; Williamson & Stillman, 2000), and ICT available to seniors in their homes (Pfeil, 2010; Sayago & Blat, 2010; Wherton & Monk, 2008). No previously reported studies have investigated the views of the staff of retirement villages about ICT use amongst their residents.

**The Households Study**

The Households Study focused on seniors who at the start of the project had at least one household member who was a novice Internet user, and who was therefore also a novice user of online communities. Participants were assessed initially, as to their computing and, particularly, their Internet skills. They were then trained to use Apple iPad2s, which had numerous in-built accessibility features, making them particularly useful for this project, given that with increasing age, people experience increasing disabilities that impair computer usage (Summer, 2000; Vanderheiden, 1997). Peer training was employed, meaning that the training of participants was conducted by a fellow senior. As part of the training they were required to join the GreyPath online community for seniors and to regularly access GreyPath throughout their participation in this research project. To enable them to do this, participants were lent Apple iPad2s for one month each and expected to interact on the GreyPath website at least once each week, keeping a diary of such interaction. At the conclusion of the month participants were interviewed about their social engagement within GreyPath. Thus, the
project tracked participant social engagement from joining GreyPath, to when they felt connected to that community, if they ever did.

**Theoretical lens and literature review**

The theoretical lens of this chapter revolves about the importance of socialisation to the well-being of seniors. Arising from that understanding is the exploration of the role of Internet-based Social Interaction (ISI) in supporting social connectedness, especially for older people living in rural and regional areas. Following a description of the theoretical lens, the wider literature applicable to the discussions in this chapter is explored.

The theoretical lens can be described as ‘enabling ISI’ in that it concerns both ISI and enabling. A longitudinal study of aging involving 678 nuns (the Nun study) that focused on social interaction (verbal tasks) demonstrated significantly lower rates of dementia than the nuns who were not verbally oriented (Snowdon, 2003; Tyas, Snowdon, Desrosiers, Riley, & Markesbery, 2007). Both groups of nuns had an equal likelihood of developing dementia. Autopsies revealed that 50% of the socially active nuns had the most common form of dementia, Alzheimer’s Disease (AD), even though their behaviours were cognitively normal up until their deaths. That is, histological examination of cortical and hippocampal brain tissue revealed significant amyloid beta plaque pathology, increases in Tau pathology, and neuronal atrophy, in those nuns. Other studies have confirmed the link between social interaction and good mental health for seniors and the converse, namely that seniors who are isolated from social interaction are more likely to suffer mental health problems (Sum, Mathews, Pourghasem, & Hughes, 2008; Worrall, Hickson, Barnett, & Yiu, 1998). Thus although social interaction does not prevent dementia, it appears to increase the capacity of the brain to deal with dementia related losses.

This link between online social interaction and the well-being of seniors has not previously been explored. To this author it appears as a logical next step of exploration. That is, the literature cited above reveals a demonstrable link between mental and overall well-being and social interaction. Other studies have also revealed that with increasing age people socialise less, often for pragmatic reasons to do with age-related frailties. For instance, Vanderheiden (1994, 1997) reported that by age 55, 25% of the population in the USA would experience functional limitations, 50%, by age 65, and 70%, by the time they reached 70 years of age. Australian data shows that 54% of over 65 year olds in 1998 had a disability, rising to 84% of people over 85 (ABS, 1998). However, ISI is an enabling technology by which people can engage socially, yet in ways that overcome many of the age-related functional disabilities.

Online social engagement involving seniors has proven successful in various global studies. In a study of an online community involving Japanese seniors it was found that social connectedness led to greater enjoyment of community activities, greater support to fellow members and increased feelings of companionship (Kanayama, 2003). Other studies have similarly shown that for seniors online social interaction frequently leads to offline interaction. Xie’s ethnographic study of the OldKids online community in China (Xie, 2007, 2008a, 2008b) showed that this online to offline interaction greatly affected the overall relationships of those seniors (Xie, 2008b, p. 7) and she went on to say that such movement to offline interaction strengthened later, further online interaction. Similarly, she found that when relationships began offline and then moved to online, it resulted in stronger social bonding. Her summation was that: “In general, those who interact with one another both online and offline are more likely to develop closer, stronger relationships than those who interact only online.” (Xie, 2008b, p. 10) A study of the GreyPath community (Burmeister,
2010) confirmed Xie’s findings in regards to the offline influences on strengthening relationships. However, that study found the same was true with webcam type interaction, which arguably contradicts Xie’s conclusion that ‘only online’ interaction does not strengthen overall relationships in the same way physical offline interaction does. In the Burmeister (2010) study all forms of virtual face to face social engagement were valued by members and seen to strengthen relationships and community building.

Although social interaction is thus demonstrably important to the well-being of seniors, the role of technology in enabling social interaction is less evident. After an extensive review of previous studies, Dickinson and Gregor (2006) claimed that, although causal links between computers and the well-being of seniors could not be empirically verified, there was some evidence, based on the results of two studies, that greater connectivity and social networking, facilitated by the Internet, could assist to reduce the isolation experienced by some seniors, and that therefore, computers contributed to improvements in the well-being of seniors. Furthermore, multiple studies have revealed that ISI does not make people less sociable, but instead, that ISI results in greater social contact via other means, especially face-to-face and telephone (Maloney-Krichmar & Preece, 2005; Wright, 1999; Xie & Jaeger, 2008). This research, when combined with that of the Nun study, reveals how disparate research findings, hitherto never before brought together, support one of the two components of the theoretical lens, namely that the social interaction of seniors can be increased with ISI, and that such social engagement will lead to increased mental and overall well-being for those seniors.

To gain the maximum benefit of ISI, the technologies involved must be both usable and accessible to seniors. Usable and accessible technology enables them to gain the social interaction benefits described above. Hence for the Households Study the iPad was chosen, because of its many inbuilt accessibility features, and in the Village Study, accessibility was also an important consideration. This is important because, as mentioned above, with increasing age come increasing age-related disabilities. This implies that, not only will many more seniors be interacting online, but that their particular access requirements may need to become a focus of technology design.

Thus the theoretical lens of this chapter is that of enabling ISI. The following four areas of literature build upon this lens, and serve to demonstrate that the literature supports that this lens relates to all seniors, not just those in rural and regional locations.

**Online socialising**

The literature has shown that people can develop significant feelings of acceptance and belonging in online environments (Hampton & Wellman, 2003; Maloney-Krichmar & Preece, 2005; Pfeil & Zaphiris, 2007; Pfeil, Zaphiris, et al., 2009; Xie & Jaeger, 2008). However as mentioned in the Introduction above, Fayard and DeSanctis (2010), based on a review of multiple online communities, claimed that a gap exists in the literature that needs to be filled, namely that the social inclusion factors, needed to create a sense of connectedness, have not yet been investigated. Fayard and DeSanctis (2010, p. 409) cited four earlier studies to demonstrate that, once members develop a sense of connectedness, there are benefits that flow to those members, including positive effects arising from the development of ‘collective identity’, and benefits from developing a ‘shared culture’. They claimed that it is crucial to develop such a feeling in online communities, because it is necessary to support participation and knowledge sharing within such communities. Furthermore, it has been demonstrated that once people have developed a sense of social connection in an online community, that such connectedness increases the individual’s confidence to navigate and explore the community,
to build relationships and to communicate with other members (Gotved, 2002). Hence a focus of the Households Study was the way in which participants connected, or not, to Australia’s largest online community for seniors, GreyPath.com.au.

**Seniors prefer to learn about ICT from other seniors**

Although little has been written in the area of peer training for seniors, the evidence supports the view that where training seniors in the use of ICT is involved, they not only prefer to learn from peers, but that peer training is the way seniors learn best. Early research (Williamson 1997; Williamson, Bow, & Wale, 1997) mooted that this appeared to be the case, and such findings were later confirmed by West (2002). Studies of early adoption of online banking amongst seniors similarly revealed the greatest success was achieved for the Commonwealth Bank, who employed retired banking staff to conduct the training (Scott, Roberts, & Burmeister, 2002). More recently the value of peer training for senior users of ICT was again confirmed (Notess & Lorenzen-Huber, 2007). Thus, a peer trainer was employed for the Households Study and the peer trainer for the Village Study was interviewed as part of that study.

**Research methods**

An interpretivist/constructivist philosophy was chosen for both case studies, which emphasises the meanings of participants within the social phenomenon under study (Sudweeks & Simoff, 1999). As seen in the literature reviewed above, social interaction and well-being are linked, and therefore for both case studies it was important to explore how people in the particular social context interpreted ICT usage, and the researchers needed to understand the meanings that constituted those participant interpretations (Schwandt, 2003).

Ethnographic method was deemed most appropriate for implementing an inductive approach to understanding interpretations of socialising. The use of ethnographic method within an interpretivist/constructivist framework is well supported in the literature (Locke, Spirduso, & Silverman, 2000; Myers, 1997; Trauth, 2001; Williamson, 2006). Fielding (2001) described contemporary ethnography as inheriting from its traditions the importance of doing fieldwork and of contextualising research, but indicated that it no longer has its anthropological roots of actual/physical immersion in a culture. Contemporary applications of ethnography are involved in the daily world of the people being studied. Recently ethnography has become a mainstream method for many disciplines, including ICT, and those describing virtual settings (Dodge & Kitchin, 2001; Fernback, 1999; Sayago, 2009). For example, Sayago and Blat (2010, p. 3) claimed the benefits are:

(i) to make visible the context of system use, social practices of interactions and communities’ sensibilities which might not otherwise be encountered … and (ii) to provide explanatory frame-works for whatever is observed that offer us new ways of imagining the relationship between people and technology.

Ethics approval for both studies was granted by the CSU Ethics Committee.

**The Village Study**

In this project the research question was: “Has the ICT introduced at Westmont Aged Care Services Ltd, increased the social engagement of its residents?” That is, social engagement is seen as the key means to maintaining and/or improving mental and overall well-being amongst seniors. Studies to date have examined how social engagement can be increased in
conventional, non-ICT ways. For this study social engagement using technology was the main focus.

The sample
As stated in the literature review, studies of technology use for socialising in retirement villages are new, with only one study in Sweden (Hedström, 2007) directly examining this area, and one in the UK discussing the area as part of an investigation into another aspect of ICT use (Abbey & Hyde, 2009). Hence this project was a pilot investigation, at one retirement village. Investigations were undertaken to identify retirement villages that encouraged their residents to use ICT for social interaction, and then contacted to gauge whether they were willing for their organisation to participate in this pilot study. In this way the Baranduda facility was discovered and after a series of telephone calls and one face-to-face meeting, management there agreed to participate. Hence the sample of staff and residents was small. Of the five staff members involved in various capacities with the computer facility for residents, all but one agreed to be interviewed. Approximately 20 residents, out of a total of 125, made use of the facility, and only two were making use of it regularly in 2011. Both agreed to participate in the study in a group training situation, with their trusted volunteer, peer trainer present throughout. Although the original intent was to interview all residents who used the facility, retirement village policy prevented that possibility. Interviews were only permitted in public spaces, not resident’s private rooms. All participation by residents and staff was voluntary and no remuneration or other incentives were provided to research participants.

Data collection
Data collection involved observations recorded in the journals of the two researchers, individual interviews with staff and a group interview with residents. Observation journals were kept by the researchers individually, for telephone conversations with staff, face-to-face visits, as well as for interview sessions. Journal entries were only compared during data analysis, not during the data collection stage. The observation journals included field notes taken during a training session involving two residents and the volunteer peer trainer, which was the group interview referred to above, but with the field notes extending beyond the interview with residents, to include observations about staff interactions with residents, both within and beyond the computer room, as well as examination of technologies involved, after the residents had left. In keeping with the interpretivist, constructivist framework, the four staff interviews were semi-structured and in-depth. The interviews were audio-taped, with the permission of participants.

Data analysis
Data analysis focused on the two main types of documents produced, namely the observation journals and the interviews conducted with participants. The audiotapes of the interviews were transcribed by an experienced transcription service, thus converting them into documents that could be analysed. Fielding (Fielding, 2001) summarised the ethnographic approach to analysing such data as involving a search for themes and categories, then marking up the data, and finally, re-sequencing it to answer the research questions. Fielding claimed that, while there are several approaches to analysing ethnographic research, they all pass through these stages or variants thereof. A related, but more pragmatic view was expressed by Morse (Morse, 2008), who claimed that the analytic process for identifying categories and themes begins with the researcher identifying categories. The identification of themes comes at a later stage in the analytic process, employed to tie categories together. They emerge from reflection on the categories that have been identified. As she pointed out,
qualitative researchers mark-up similar chunks of data from interviews by various methods, and paste them together, ordering them into a separate document. Both of the studies reported in this chapter followed Morse (Morse, 2008), with the latter mark-up process, with the use of NVIVO computer software, and with the use of voice sheets.

Participant responses, as seen in the journals and in the transcripts of their interviews, were recorded in voice sheets according to the identified themes and categories. Voice sheets are so named because they record the ‘voices’ of participants, that is, quotations from them. They have been used in research projects whose methodological approach was similar to these two studies (Williamson, 2006; Williamson & Kingsford Smith, 2010). Quotations from participants related to each theme and category were copied to the relevant voice sheet. The voice sheet itself shows a table listing categories for a particular theme in the left-hand column, and exemplary quotations from transcripts that address that category in the same row, in the right-hand column. For this study, each voice sheet related to one theme and contained representative quotations for each category. The theme title and a brief definition of the theme are displayed in the top row of the table. A sample of a voice sheet for one of the themes discussed later in this article is illustrated in Table 1. It includes only a few illustrative quotations.

Table 1: Voice sheet illustrating the theme ‘Fostering social interaction’.

<table>
<thead>
<tr>
<th>Category</th>
<th>Quotations</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICT</td>
<td>[Name2] uses hotmail account that her daughter set up but [Trainer] prefers Gmail as the interface pops up ready to use and the good spam filtering, giving the uncluttered feel. The two that have kept going are the use of email and Skype because that’s basically all that they’re doing. I mean some of them originally we’d show them where their home was looking at the Google maps and all sorts of things we mucked around with.</td>
</tr>
<tr>
<td>Offline socialising</td>
<td>[Name1], had gone on a mystery bus tour and sat next to [Name2], a 99 year old, who turns 100 in Dec. Each week Westmont has a Friday mystery tour for 1½ hours, and when residents get on the minibus, they have no idea where they will go during that time. [Name1] encouraged [Name2] to attend the computer classes, and for the past 3 months [Name2] has been doing that. [Trainer] says that this is one of the main reasons that she keeps returning, because over the two years that she has been doing this, she has developed close friendships with all of the residents whom she has trained, and they with each other.</td>
</tr>
<tr>
<td>Online socialising</td>
<td>Family contact was the strong motivator for both participants. [Name2] with children and grandchildren, although she said she has great-great-grandchildren too, and might one day brave Facebook to learn more about what they are up to. [Name1] similarly enjoyed computers for the contact it gave her with children and grandchildren. They can reach people who are nowhere near them. The family, their friends they can still keep in contact with those from a long distance and...</td>
</tr>
</tbody>
</table>
at times they can handle.

My father; he’s an 83 year old, he’s Dutch background, he uses the computer to read the Dutch newspapers before they’re published in Holland, because of the time difference … he’s quite a consistent user of the internet, particularly and a little bit of email to keep up with things that happen in his home country.

Table 1 shows that within the theme, ‘Fostering social interaction’, there were three categories, **ICT**, **offline socialising**, and **online socialising**. Similarly, there were two other themes, each with their own categories, that emerged from the data analysis relating to the Village Study, which are presented in the Findings section of this chapter.

**The Households Study**

As seen in the literature review, although there is evidence that numerous benefits derive to individuals and communities from online social connections, how such connections are formed is poorly understood. GreyPath was chosen because it is Australia’s largest online community/social networking site for seniors. GreyPath Pty. Ltd. manages the portal greypath.com. Membership is restricted to seniors, which it defines as 50 years of age and over. For the Households Study the research question was “What are the key factors that lead to the creation of a sense of connectedness, among novice users of an online community for seniors?”

A purposive sample of twelve seniors (six couples) was developed and selected from the Wagga Wagga region of NSW, including nearby rural locations. The main selection criteria included that participants were seniors, were living independently in a household with at least one other senior, and that at least one of those seniors was a novice Internet user. The rural and regional nature of participants is reflected in the following two examples of the types of participants sought:

A 72 year old Currawarna farmer and his 65 year old wife. They live on their farm, which is on the market, and intend to retire to Wagga Wagga, upon its sale. The farmer has no computer knowledge, but is interested in learning. His wife has only used a computer for the farm finances, and has not used the Internet.

A 67 year old Uranquinty farmer and his 66 year old wife. They live in their farm-house, but the farm is leased to someone else. She has worked as a book-keeper, although not recently, and has therefore used computers. He is interested, but has no experience with computers. He wants to be able to use computers to communicate with his daughters and their children; one daughter is in the USA and the other in country Victoria.

**Participant training**

Participant training sessions were first conducted in the university’s usability laboratory in the library so the peer trainer could be present, whilst the researcher observed from an observation room behind one-way glass. The first couple to be trained included a man in his late 80s with hip and back difficulties, which made accessing to the room difficult. Library refurbishments required future training occur in participants’ homes, which proved successful. Training consisted of up to four, two-hour sessions, with each couple. Each training session was conducted by the peer trainer, facilitated by a research grant, and was
observed by the author. Two couples had no need for a fourth session, preferring to be able to contact the peer trainer for help, should they require it, during their month long trial of the iPad.

Participants interacted in GreyPath, to familiarise them with that online community. In the first session, they were introduced to it as part of the introduction to the Internet in that session. That first session focused on introducing the iPad, introducing email and joining them up to the Google mail application, Gmail. In the second session participant use of Gmail was reinforced, and that Gmail account was used to help them join up as members of GreyPath. The third session completed the introduction to the iPad, email and the Internet. The fourth session was for miscellaneous other things that interested participants, such as the use of Skype, accessing online newspapers, Google maps, GPS tracking, playing games, and more.

**Data collection and data analysis**

Data collection involved observations made during the training phase, participant diaries recorded during their one month Apple iPad2 loan period, and interviews conducted with each participant at the conclusion of that loan period. Data analysis followed a similar process to the one described above for the Village Study, including the use of thematic analysis, NVIVO and voice sheets.

From an *ISI* perspective, social engagement with the GreyPath online community was the primary focus. From an *enabling* perspective, the iPad was deliberately chosen because of its numerous in-built accessibility features.

**Findings**

First the completed Village Study findings are presented, then the preliminary findings from the Households Study. The findings are then brought together in the discussion section, linking the findings to the literature presented above.

**The setting for the Village Study: The computer room**

The computer room at Westmont had six computers and permitted users to negotiate the space with walking frames. That is, from an enabling perspective, design consideration had been given to architecturing the room itself and its location within the building, to facilitate utilisation and socialising. The entrance was via a glass door set within a glass wall facing the vestibule, which had exits to two courtyards and a small library in a similar sized room on the opposite corner. The vestibule had several tables and chairs for sitting, meeting or enjoying a cup of tea with others in a social setting. The room had bench top computers mounted in an L shape around the walls on two sides. Originally the room had six Dell Core Duo desk computers, each with a monitor, mouse and keyboard on the desk and the CPU box under the desk on the floor. By late 2011, three of the six computers were taken by staff to replace their faulty office equipment leaving only two fully usable machines for resident use. A third machine was intact but had a faulty monitor connected. This was permitted by management because only few residents were making use of the computers. Whereas computer classes in earlier years had up to six participants using six machines, now, with only two fully functional machines, fewer residents could attend. Reduced participation led management to reduce computer availability, which in turn reduced the ability of more participation by residents.
From an ISI perspective, although Internet access was encouraged, few controls governed its usage. Internet broadband access speed was at the ADSL2+ level, so access speed was sufficient for all participant requirements. There were no net-nanny type software controls, although there was a block on using Facebook. Nor, after almost four years of operation, did Westmont have a policy for appropriate usage of the facility; one was mooted and there had been recent discussions about developing such a policy.

The Village Study
The findings were grouped into three themes, only one of which is presented here, with exemplary quotations used as illustrations. The theme detailed here is that of ‘Fostering social interaction’, which has to do with how socialising took place amongst residents of the village. This is because the focus of this chapter is on ISI, its effects on the well-being of seniors, and whether it can help to reduce social isolation for rural seniors. As seen in Table 1 above, within this theme one category was that of offline socialising.

Offline socialising
Offline socialising is socialisation that took place within the village either as a precursor to later ICT use, or as the result of a shared common ICT interest. The following Journal observation illustrates the move from offline to online socialising:

[Name1], had gone on a mystery bus tour and sat next to [Name2], a 99 year old, who turns 100 in Dec. Each week Westmont has a Friday mystery tour for 1½ hours, and when residents get on the minibus, they have no idea where they will go during that time. [Name1] encouraged [Name2] to attend the computer classes, and for the past 3 months [Name2] has been doing that.

Another way in which the offline to online was exemplified, was that staff considered the computer room activity as just one more activity of the many that were available to residents:

[Senior Manager:] We’ve always had a philosophy that we will pursue inclusion in the wider community. So, whether its senior citizens on a Monday afternoon for the singing, or whether it’s a concert at the Commercial Club, one of the free concerts they put on for people.

[Senior Manager:] Some like the bus trips more, others like to go in the computer room and talk to their grandkids.

The movement also occurred the other way, namely from online to offline socialising, as seen in the Journal observation below:

[Volunteer, peer trainer] says that this is one of the main reasons that she keeps returning, because over the two years that she has been doing this, she has developed close friendships with all of the residents whom she has trained, and they with each other.

Furthermore, it was not always clear which was the precursor to the other, as illustrated in the next two quotations from a senior manager:

[Resident name’s] a card player on the computer. He was also a card player in the physical sense with one of his old mates he had here, they were regular card players,
but I think with the passing of that gent he’s become more of a Solitaire player. But, yeah that’s being used as well, absolutely. But I think most of it is generally, around communication; contact.

We haven’t put a huge amount of either capital or labour into it, and the types of interactions that people like [Staff name] or the activities officers would have with them are …. I would expect them to interact anyway, whether it was to help them with the computer or just to say hello and sit and have five minutes with them – that’s part of the expectation; don’t work in aged care if you don’t want to have 5 minutes with the older residents.

The last example demonstrates that as staff passed the glass wall of the computer room they could easily see when residents were in it, and they would then stop to chat with those computer room users. The comment above was from a senior manager within Westmont, and makes it clear that staff not only did this because they were friendly and sociable, but because this was Westmont policy and concerned a philosophical approach that encourages staff, no matter how preoccupied with their work, to take time out to socialise with residents. Residents soon learned which of these staff were computer literate and could be asked for assistance, and which staff knew little about ICT.

The final quotation used to illustrate offline socialising, also demonstrates how technology can become an integral part of a senior’s social life. This woman in her early 80s had begun computer classes with her husband, but he had died the year before. Whilst at Westmont she had a regular Thursday afternoon timeslot during which her children and grandchildren in Brisbane knew that she would be online and available for social interaction via Skype. But she also had family in Victoria, where she went annually at Christmas time.

[Peer trainer:] There's talk of (her family) getting [Name1] an Apple for – Apple computer so she won't miss out on a computer at Christmas because she’s going to a nursing home down there for two or three weeks.

This woman needs care of a sort that her family cannot provide, and therefore when she visits with them over Christmas, she stays in a local retirement village. However, the previous Christmas, the lack of computing facilities in that other village meant that for three weeks she was unable to Skype her family in Brisbane and therefore the Victorian branch of the family were looking at the Apple iPad as a means to providing her with the computer access that she had grown accustomed to and had grown to rely on for online social contact. Thus in the midst of offline social contact at Christmas, with family in one state, she still wanted to partake of online social activity with family elsewhere.

**Online socialising**

Another category, closely related to that of offline socialising, was that of online socialising. The main use of online socialising was to contact relatives, and to a lesser extent friends. The majority of responses was about this type of social contact, as is illustrated below:

[Journal observation:] Family contact was the strong motivator for both participants. [Name2] with children and grandchildren, although she said she has great-great-grandchildren too, and might one day brave Facebook to learn more about what they are up to. [Name1] similarly enjoyed computers for the contact it gave her with children and grandchildren.
[Senior Manager:] We’ve got a number of our residents, one of them who is 99, who is 100 next week, she actually writes and sends her letters via email to her relatives and friends back in England, and she says it’s fantastic because we get such quick responses. It’s not like mail, which takes a number of days or weeks to get there, and then a number of weeks to return. So, she’s consistently communicating with her relatives.

[Senior Manager:] … the biggest benefit. It’s not about necessarily, doing your banking or doing any particular research. I think a few might have read the papers a bit, but generally, it’s about communication with their relatives who are out of country and out of town.

[Administrator:] It allows the residents to have access to their family, if their family is away travelling they can send emails, they can hook up on Skype, that sort of thing.

It obviously assists them, yeah keeping in touch with their families who are distant, particularly Skype where they can actually, if someone’s had a new baby like a great granddaughter or a grand daughter’s had a new baby, they can see the baby on the computer. But yeah they only really, to my knowledge deal with their family and friends.

An advantage of online communication was that it gave residents control over the communication process:

[Peer trainer:] They can reach people who are nowhere near them. The family, their friends they can still keep in contact with those from a long distance and at times they can handle.

Another benefit of the online technology was that it enabled seniors to keep current with world events that were important to them, as opposed to only having access to television and radio news broadcasts, or paper-based newspapers. This is illustrated by the comment of one of the staff members interviewed:

My father; he’s an 83 year old, he’s Dutch background, he uses the computer to read the Dutch newspapers before they’re published in Holland, because of the time difference … he’s quite a consistent user of the internet, particularly and a little bit of email to keep up with things that happen in his home country.

The volunteer trainer also devised ways to make computer access memorable, so that residents whom she trained could access the computer room technology independently, on days when she was not present to assist them.

[Journal observation:] The trainer has each using Skype for contacting sons, daughters and granddaughters etc and has a motto – pink plug first when each attaching the headphones and microphone to the desktop box, as a way to develop the self-efficacy of each so that they can come and use the computer room anytime and not wait for training each week.

Overcoming the confines of village life was another important dimension to being able to
engages in online social activities, as reflected in the following Journal observation.

[Residents are] excited about using the technology to “break out” or escape from the walls of the home, even though they enjoy being there. It is a means to finding out what is happening in the world, and an excellent way to keep in touch with family and friends. Regular family contact is a big motivator.

Staff views on the importance of the computer room, to increase socialisation amongst the residents, are typified by the following quotations. They were concerned to increase social interaction, even if ‘bad’ socialising was involved, that is, if disagreements resulted between residents with each other, or between them and staff, or between them and those they were communicating with online.

[Manager:] Oh look, any socialising is good for residents. You know, whether it’s good socialisation or bad socialisation – I think good – any socialisation is positive - particularly those that don’t socialise a lot verbally. It can drag people right into another world and keep them – the mental stimulation is – the benefits of that must be immense.

[Senior Manager:] An absolute connection for the people who use it to connect with their family – that’s the biggest benefit.

**ICT**
The third and final category within the ‘Fostering social interaction’ theme was that of ICT. In particular this category concerned the types of ICT that residents made use of in order to socialise. The following examples illustrate the range of ICT that has been tried at Westmont.

[Peer trainer:] The two that have kept going are the use of email and Skype because that’s basically all that they’re doing. I mean some of them originally we’d show them where their home was looking at the Google maps and all sorts of things we mucked around with.

[Peer trainer:] Facebook is scary to [Name2] while all agreed that it has issues and is be blocked on the local network. [Name2] says it may be in the future to they get to use Facebook, after they have developed their self-efficacy with email and Skype as a the first step.

[Manager:] I’ve seen them playing cards. So they’re playing games.

Although not directly related to Westmont technology, during the conduct of the research the two researchers assisted with a training session. One had brought his iPad, to take notes during the session, and that technology fascinated the two residents participating in that training session.

[Journal observation:] [Name1] was fascinated with the key size of my iPad and with how small and light it was to carry around … she was able to watch the last 6 minutes on the New Inventors grand finale that she missed the previous evening.

As expected, email communication is highly sought after. In fact the then oldest resident at Westmont, who had never used a computer until she was 99 years old, was at the time of the
interviews a confident email user. At the time of writing this chapter she was just beginning to brave video conferencing through Skype. She was also interested in being able to view the Facebook pages of her great-great-grandchildren. An exemplary quotation relating to email use was:

[Journal observation:] [Name2] uses hotmail account that her daughter set up but [Trainer] prefers Gmail as the interface pops up ready to use and the good spam filtering, giving the uncluttered feel.

The last Journal observation, above, reflects that the trainer thought that easy entry to Gmail made accessing email more memorable when residents attempted to do so outside of the times that she was there to assist them. She was also concerned that one of the residents was using Hotmail, because of the amount of spam that person was receiving and that dealing with the spam distracted that person from the benefits of email and complicated its use.

ICT was a category under this theme, because it facilitated socialising, as is seen below:

[Peer trainer:] France, Italy, France and into England and I got up Google maps so I could show her exactly where they were and we could follow and then you could get the course of a few little pictures there and look at those. And then when they were in England I still have – usually have to help [Name1] save all the photos so we've got hundreds of photos probably saved.

The above quotation shows that although physically limited to the confines of a rural retirement village in north-eastern Victoria, this mother/grandmother was able to follow the overseas holiday adventures of her family in near real-time.

The reasons that more residents do not make use of the computer room vary, with some of those variances illustrated next.

[Peer trainer:] In many cases they're not exactly sure what you use computers for.

[Peer trainer:] There was one man came two or three times at the start of this year but his computer had obviously been an older one, he did use to have one. And we had a couple of hiccups where everything slowed down and I couldn’t him straight into eBay.

[Manager:] Once you’ve got a computer set up, generally there’s not too much that goes wrong. And you can – and people generally get smart – get the smarts about how you know “Oh bugger, I’ve got a frozen screen” or whatever. And oldies just is like – an older person says it like – just say “Oh dear. What am I going to do here?” And walk away. And I think a younger person’s a bit more intuitive and say “Oh, I’ll turn it off and turn it – turn it off, turn it on.” Unplug it or whatever we do. Yeah. But generally speaking once they’re going they’re not so bad.

In other words, even with assistance present, some residents were unwilling to put up with ICT challenges they experienced, and in part this was due to their not being able to recognise the potential benefits of persisting and mastering these challenges.
Not all residents with an interest in online socialising made use of the computer room. That was because a small number of residents had their own laptops and used wireless internet connectivity to access internet technologies from their rooms.

[Administrator:] The ones that use the computer room, they only do Skype and email. The ones, the residents that have got the computers in their room, well one lady in particular she uses Google and I presume that she would use probably, she might read books.

[Senior Manager:] Because of our wireless network we’ve been able to give them access and they can – yeah, they can use their laptop wherever they want, really. The original wireless application was two-fold, partially because of our phone system, which is a VOIP phone system and uses the access points routes its connection. And the other part was, we were, at some stage contemplating direct entry of notes in the room. At the moment they’re still done within the nurse’s stations, but we have the capacity to then do direct entry of notes or access to files while we’re roaming around the facility.

The last quotation, above, shows that wireless access was available to residents in their rooms, as a result of staff initiatives to improve staff workload efficiencies. It gave aged care nursing staff direct access to the main computer facilities from anywhere in the complex. But an unplanned, yet associated benefit was resident access to their Internet from their rooms.

The Households Study
As at the time of writing this chapter, five of six households with seniors had completed participation. One of the themes emerging from this study has tentatively been titled ‘noviceness’.

The setting: GreyPath
In sociological terms, GreyPath participation is not spatially determined, as traditional communities have been (Wellman & Leighton, 1979), but ubiquitous (Wellman & Hogan, 2004). The community has members in every state and territory of Australia, including some who are travelling, with no fixed address, and overseas members, with chat rooms regularly having seniors participate from Europe, the Middle East, Asia, and North America. GreyPath has 35 volunteers who freely give of their time and skills to maintain the site. All contributors, management, administrators, technical support personnel and ordinary members are seniors.

As at August 2009 GreyPath traffic ranked approximately 1.3 millionth according to the web information organisation Alexa (Alexa, 2009), placing it in the top 1.5 percent of world-wide sites by traffic. As at August 2009 it had more traffic, as defined by Alexa (Alexa, 2009), than any other seniors site in the world at that time.

Novice Internet users
The ‘noviceness’ theme contains categories that express the novel and unique experiences of seniors who are novice Internet users. It highlights some of the difficulties that need to be addressed to encourage more seniors, to participate in the digital age. Quite a number of these have to do with issues of usability, where seniors expressed difficulties that they experienced with the technology as their own fault, their lack of memory, their lack of understanding, and the like. Speaking as a technologist, this author sees these challenges as ones of design, but
the seniors involved blamed themselves, and two of the seniors almost stopped involvement in the pilot because they felt that they were so inept at using the technology – when in reality, better designed technology would not have led to their feelings of frustration.

One participant in his late 80s complained that people in GreyPath did not respond to his postings, when it turned out that although he typed up a posting, he had not submitted it, and so of course, GreyPath members had not seen anything to respond to:

It’s very hard even to make a first contact yeah and that’s was a little bit disappointing but never mind I thought oh well I mightn’t be doing the right thing or doing it the right way and just kept at it.

His wife, although a little experienced with technology addressed this issue as follows:

I thought I pressed send because you said press send which means again I want to try and find out where the send section is. Now I’m looking, I don’t think [husband’s name] sent one but he said he sent one and didn’t get an answer

The same woman expressed the view that there were challenges with the GreyPath site, with Google mail (Gmail), and with the iPad:

I’d be getting somewhere on that and then there’d be something technical about iPad that went off like then I just went like that and it suddenly went small or big and then how do I get back?

Novice Internet users expressed confusion about the constituents of the GreyPath site. Google advertisements were not recognised as such, but seen as an integral part of the site. This frustrated two participants. One stated that he had been assured that there was no cost to GreyPath membership, but then he clicked on one aspect of the site, and Telstra (Australia’s largest telecommunications provider) wanted his money. The other had seen an advertisement for iPads and when she clicked on it, was taken to an auction site that to her looked as though she could purchase a brand new iPad for only $30 AUD. However, in both cases they had clicked on a Google advertisement, which took them out of the GreyPath site.

Another usability related aspect that participants expressed frustration with, was the concept of passwords. For experienced Internet users passwords are an accepted fact of life, but to the novice user their necessity was not self-evident, as seen in the following two quotations from a novice Internet user in her mid-60s:

The problems with having, what do you call them, passwords and evidently that’s quite common, but because I hadn’t really worked with passwords before, I hadn’t gotten myself into a groove for that and that’s been problematic.

[After contacting GreyPath for help:] I was already feeling stupid and vulnerable and ready to throw it at the wall and stuff like that, just because it makes you feel stupid, because you can’t, you’re not doing – there’s something you’re doing wrong all the time … you keep making this mistake or you forget something or, and you can’t remember – anyway. So that’s what the frustrating thing is, yes, just. But no he was very nice and they were just very accommodating and sent us stuff so that we could get in as visitors until we got it all sorted out. And I think he suggested passwords or
something that worked for me, and so I sort of saw that and then I thought, oh okay, I could do that, that’s not too hard.

There were also issues of speed, as seen in the following quotation referring to GreyPath management. That is, the portal required that the temporarily allocated user ID and password be activated within a certain time frame.

They wanted things done too quickly. Because [Trainer] had logged in for me and they sent the acceptance with my – like an interim password, and because I was too busy and couldn’t sit down and do it all then and just had to leave it, then they just wiped us.

Despite the frustrations the novice participants experienced, they also recognised the benefits. For instance:

I just take the iPad and sit in bed in the mornings with my cup of tea, in front of the TV … [she compared it to her husband’s laptop] … yeah well his laptop, you can so often press the wrong button and then you’re up the creek and you don’t know what to do and how to get back … The iPad was just so much easier to navigate.

One man in his mid 60s who had experience with the Internet but not with online communities, expressed usability challenges with the use of a GreyPath chat room:

There were about five or six people going at the one time and what was being said disappeared from the screen, scrolled out of sight on the screen very fast which meant it was quite hard to focus on answering what you were answering for somebody and knowing what else was going on that site.

Participants also expressed wariness about revealing personal information. Two of the participants registered with GreyPath during the training sessions, using their full names. At the interview, at the conclusion of their month long trial period, it turned out that using their full names made them reluctant to participate as fully as they wished to, because particularly the wife’s name was so unique that she could easily be traced to where she lived. Therefore two weeks into their trial period they chose to re-register, using user names that did not at all reflect either their first or last names. From then on they both participated in debates in the Senate forum, explored chat and forum events more actively and expressed less wariness about their online interaction.

The following quotation shows what happened after another participant revealed that he lives in country New South Wales:

There was obviously somebody hosting it judging by the number of times this person contributed and the sort of things that were being said by it, so I presume that was probably the first person to respond to my appearing there as well and before you knew it people were finding out about Wagga and this region and where else I might have been and trying to get some sense of who I was, as I was trying to get a little bit of theirs. But of course what are you going to do – ignore all the questions?

Other indications of noviceness, not necessarily to do with usability, had to do with issues of time, memory, confidence and the training phase that preceded their private use of the iPads.
For instance, experienced users of computers will frequently experiment with unknown elements, but the novice seniors in the Households Study were reluctant to experiment. The following quotation demonstrates that the participant knew what he wanted to do, he wanted to establish connections with fellow war veterans:

For instance up here it says search. Does that mean you can put say Vietnam veterans into the search?

Instead of experimenting during the month that he had the iPad, or contacting the researcher for help, he only asked this when the month was over and we had the final interview. It appeared to indicate a lack of confidence to experiment, and to explore the features of the device (the iPad) and the Internet site (GreyPath). This was a highly competent and accomplished individual, who in his late 80s was still active in his community, but confidence in non-technology areas did not translate into confidence to experiment with technology.

Comments from participants also highlighted inadequacies in the training that was provided to them, prior to their month of using the iPads. For instance, although the process for posting to a forum in GreyPath had been demonstrated once, that was insufficient, because it didn’t demonstrate how threaded forum messages are created through multiple responses to a forum posting. Thus one participant stated that there is a need to:

… learn how to get a response, send something and get a response and so on.

Similarly, although participants sent and received email to each other in at least two of the training sessions, one week just text and the following week they took photos of each other and emailed those to each other, yet that was not enough practice. One participant, referring to her husband, stated that he had “not even sent an email ever on anything” and that both of them had difficulty remembering how to do so, when they had the iPads to themselves.

Another comment was that “it's the iPad technical skill that we probably need to learn quite a bit”. Comments such as this reveal that although the iPad was chosen for its enabling of ISI, it was not as ‘enabling’ as was desired. That is, socialising was inhibited by lack of mastery of the technology. Thus this pilot study appears to indicated that longer training is needed, trials with the technology need to go for periods longer than one month and interventions need to be established, so that periodically through the loan periods, when participants have the technology for personal use, they also have access to expert help and advice. The latter was available to participants in the Households Study, but only if they initiated contact, and subsequent interviews showed that had they been contacted with offers of assistance instead, they could have engaged far more richly with the technology.

Social interaction
Despite the above mentioned challenges, the regional and rural seniors who took part in the Households Study did successfully engage socially in new and for them, novel ways. This is seen in another emerging theme, tentatively labelled ‘social interaction’. Within this theme there are categories of common interest, connection, control, exploration and motivation.

Just as in one of the above examples one participant expressed the desire to explore an interest in establishing contact with other war veterans, so others also expressed social interaction in terms of exploring possible areas of common interest with others online.
[Woman in late 60s:] Now somebody said has anyone else read Dick Smith’s book called Population Crisis etc? Now I saw different answers and I think what I did was opened up the answers but I didn’t put any comment in myself cause I hadn’t read the book.

[Same woman:] We've got quite interest in worm farms … it should be able to find people with those interests and we could do a lot of sharing about that.

[Man in mid 60s:] There’s a range of courses which were a potential interest. I think [wife’s name] found that more interesting than I did when I looked at the range of courses … There seemed to be short courses for dilatants. I am a dilatant really; I spend my life being one of those.

[Same man:] There was a third area too that was interesting; that was that forum/senate type thing … For political discussions on a range of things. I plugged into that for half an hour or so and read what other people were saying and put my own two bobs worth in on two or three of them.

Although these people may have found common interests in a number of online sites, it is likely that GreyPath was particularly conducive to this, because it is a site dedicated to seniors, and thus presents peer activities for the participants in the Households Study, given that they too were all seniors, ranging from their mid 60s to their late 80s.

Similar to the Village Study above, ne thing that participants in the Households Study valued was being able to exercise control over the extent of their social interaction with others.

[Man in mid 60s:] It’s an important part of my personal make up and desire. I like to be connected … I’m having to share the conversation or agenda with others and not be able to develop the things that have started at somebody else’s initiative or at mine, so I prefer the smaller setting.

The last quotation was about preferring forum interaction or one-on-one chat, as opposed to multi-chat, where there was less ability to control the direction of the conversation.

Finally, the following examples illustrate that participants in the Household Study were able to connect socially using the, for them, new means of interacting, namely iPads, email and the Internet.

[Man in late 80s:] It's interesting to know their histories and their past lives and where they came from, what they did and like their ancestry and everything like that.

[Woman in late 60s:] I'm a bit scared of going on Facebook or opening up and broadening out, and I really need to find out more about Facebook and haven't got time to anyway. But this one [GreyPath] means yes you're into a sort of a more select group because I'd like to feel they are people like myself.
[Same woman:] You are connecting and it does open up something new. It's got persons instead of just topics and once you get familiar you will focus in on a group of people that you are writing to.

[Man in mid 60s:] All the people there were being very friendly and encouraging there even seemed to be a hint there from somebody who was passing through Wagga sometime soon at the time that maybe – if I had said something just a little bit forthcoming that we could organise coffee or who knows what else but I declined to give my address and all that kind of stuff.

[Woman in mid 60s:] The phone’s the most important thing that I’ve got because it connects me with family and friends and I ring up friends in America and with the iPad I mean I don’t know whether I – I think I was chalking up to around 200 emails in the time I had it.

The final quotation above, demonstrates that until the use of the iPad, that participant had only known the telephone as a means of social connectivity with those beyond her physical community. The use of the iPad gave her a level of control, and access that was beyond her experience and something that she immensely enjoyed. Lastly, a testament to the friendly and welcoming nature of GreyPath and their understanding of how important it is to involve new members who frequently are ICT novices, is seen in a comment by this lady’s husband, who, when asked whether he felt involved and included in GreyPath discussions that he participated in, responded “Yes instantly”.

Discussion
In this section the findings presented above are related back to the theoretical lens of enabling ISI, revealing that enabling considerations extend beyond the ICT itself.

Enabling ISI through peer training
In the literature review peer training was shown as important (West, 2002), which was confirmed in both of these studies. However, management in the Village Study also expressed the view that one significant limitation for ISI amongst resident was their inability to source more senior trainers. That is, part of ‘enabling’ ISI is not the accessibility of the ICT, such as the iPad or Skype, but the availability of senior trainers who enable through their training. This is perhaps a bigger challenge to a rural retirement village, such as Westmont in Baranduda, than it is to an urban one in Sydney, Singapore or Madrid. This was also seen as a major reason why their facility was under-utilised in the first two years, when the facility was available to residents without training. During those first two years a person had been employed to conduct training, who was significantly younger than those he was training. However, success came when a retired teacher regularly visited her mother who was in care at the village, and whilst there voluntarily conducted computer training classes for interested residents. This was something she continued even after the death of her mother.

Integral to the concept of ‘enabling’ was that seniors become increasing frail as they get older (Vanderheiden, 1997). The Village Study consisted of seniors in a rural retirement village, and the main reason for admittance to such a facility is incapacity to take care of oneself independently of assistance. Thus in the computer room the equipment was spaced to allow the use of walking frames. However, as illustrated in one of the Journal entries above, the trainer had to use a mnemonic to help residents to remember how to connect colour-coded audio cords, which was further complicated in that before the trainer volunteered her
services, the computers were under the L-shaped table space, and the screens, webcams and speakers above it. That is, these frail residents were required to crawl under the table to connect audio cords, which was physically beyond their capability, and a likely contributing factor for poor usage of the computer room by residents before the arrival of this voluntary trainer. At her insistence the computers were placed on the table, in a way that made it easy for residents to connect audio cables. Note, for hygiene reasons permanent audio attachments could not be provided in the facility, and instead each resident had to connect their own headphones and microphone.

**Enabling ISI increases overall socialising**
Both the Village and Household studies appear to confirm other research that showed that increased online socialising led to increased overall socialising. There had been concerns that Internet interaction decreases social activity by drawing people away from kinship and friendship ties and by encouraging a global viewpoint, in which local community affairs and politics are less important. Research however, into online social networks has tended to dispel these fears (Maloney-Krichmar & Preece, 2005, pp. 219-224). The online environment according to Boase and Wellman (2006) does not lure people away from face-to-face contact, or make them less sociable and less able to relate to other people. Instead, research has shown that online involvement encourages greater social contact via other means, especially face-to-face and telephone. People still visit their neighbours, relatives and friends, and people still help each other (Arnold, 2007; Hampton & Wellman, 2003; Wellman, 1997; Wright, 1999; Xie & Jaeger, 2008). For instance, one participant in the Households Study stated that she found an old friend in England, whom she had lost contact with over 40 years earlier, and started to correspond with her via email. She then telephoned that lady, demonstrating the move from online to other types of communication. Finally, she had progressed to beginning to Skype that person, which meant that for the first time in over 40 years, she got to ‘see’ her friend, as well as talk to her.

Online, multiplayer games provide a further means of increasing overall socialising, and thus well-being. One of the managers interviewed as part of the Village Study, when discussing how much residents enjoyed social games such as Scrabble, stated: “It’d be interesting to see with the distribution of some iPads about whether that will take off, just as a trial”. That statement was made in the context of him discussing how much his wife enjoyed using her iPad to engage in Scrabble online, in multi-player situations. Similarly, a study of iPad use amongst rural seniors found that online scrabble, with an associated online chat facility, led to increased socialising (Feist, Parker, & Hugo, 2012). Thus having tablet computers might increase access to social games, because then residents could interact with game players outside of their retirement village. Tablet computers provide a versatility that is particularly suited to regional and rural areas.

Other studies have similarly shown that for seniors online social interaction frequently leads to offline interaction. Xie’s ethnographic study of the OldKids online community in China (Xie, 2007, 2008a, 2008b) showed that this online to offline interaction greatly benefitted the overall relationships of those seniors (Xie, 2008b, p. 7) and she went on to claim that such movement to offline interaction strengthened later, further online interaction. Again this is illustrated in the aforementioned example of the Households Study participant who made contact with a friend after over 40 years, where the contact began online through email, moved offline to the telephone and then back online to Skype. Similarly, Xie found that when relationships began offline and then moved to online, it resulted in stronger social bonding.
Whereas the research by Xie addressed relationships generally (Xie, 2008b, p. 7), the seniors who participated in the two studies reported here were predominantly interested in familial relationships. This is illustrated by one of the novice participants in the Households Study, who was very reluctant to return the iPad that she had used for one month. She had sent over 200 emails, and had sent and received many photos – most of her communication had been with children and grandchildren interstate, in Melbourne. She had also travelled to Melbourne with the iPad during that time. It came as no surprise to this researcher that within a couple of weeks of giving up her new found toy (as she called her iPad), she had bought one. She contacted this researcher in March 2012 and she proudly spoke of how proficient she was becoming on the iPad, and that from her own point of view, she could be listed as a ‘success story’ for the Households Study. Still another participant in the Households Study, on surrendering the iPad at the conclusion of her trial month, stated that although she had not used technology for video-conferencing before this, she and her husband were planning a five to six week holiday, and she now saw having an iPad as an indispensible item for the trip, so that she could stay in contact with her grandchildren.

Enabling ISI through accessible technology
Across the two studies tablet computing holds promise for rural and regional seniors. One characteristic of such seniors is that they tend to travel large distances from time to time. This can be due to the need to access specialist medical services, which are either not available in their locations, or the specialists are so overworked that the only way to access such services is to travel to an urban centre. It can also be that travel is necessitated for social events, such as to visit with children, who as adults frequently leave country areas, to pursue educational and employment opportunities that are more varied and abundant in urban centres. However, due to age-related frailties, carrying a lot of luggage is not practical and carrying heavy items can of itself be hazardous, in that there is a danger of falls and resultant fractures. Tablet computers, such as iPads, are light weight, small and relatively easy to bring along on trips. Furthermore, mobile wireless connectivity to the Internet allows easy access to the benefits of the Internet from almost anywhere, with fewer and fewer rural and regional localities affected by poor coverage. Lastly, a strength of the iPad is the high design focus on accessibility, making it easy to cater to age-related disabilities, such as poor hearing (text can be read aloud), poor eye sight (displays can be enlarged), arthritic fingers (there are pointing device and typing/data entry alternatives). Both of these studies appear to support the concept of an iPad being a device that enables ISI.

In the Village Study one participant leaves her retirement village in north-eastern Victoria for 2-3 weeks at the end of every year, to spend that time with her family in south-western Victoria, but she does not want to lose Skype contact with her family in Brisbane during that time. Her family was therefore investigating the purchase of an iPad for her and she herself expressed great interest in the iPad on which we took research notes.

The use of iPads with rural seniors is not unique to the Households Study. In a study of 48 rural seniors in South Australia, who were given the choice of a laptop or an iPad to use during their participation in that study, 16 seniors opted for the iPad (Feist et al., 2012). The researchers in the South Australian study found that seniors “adapted to the iPad technology very quickly” (Feist et al., 2012, p. 7). In the Households Study that was not as apparent, with one couple choosing not to continue on to the one month trial with the iPad, when they completed the training phase.
Finally, the findings about novice Internet users reveal that seniors need longer period than that allowed in the Households Study, to learn to use ICT. This finding is supported by Baltes and Smith (2002) who cited work by Schaie (1996) to claim that, in developed countries, people maintain mental achievement levels until about age 70. However, beyond that age, new learning can be severely impaired for some seniors: these researchers later claimed that sizeable losses in people’s ability to learn can occur for people over 85. One implication of this for training is that particular care needs to be taken with those seniors over the age of 70, and that the older users are, the more time needs to be allowed for them to learn. That is, it is not that seniors are incapable of learning new things, but rather that with increasing age above the age of 70, more and more seniors will require extra time to learn new things.

Enabling ISI connects people with common interests

Participants in the Households study sought to locate people online with whom they shared a common interest. This is illustrated by a retired General Practitioner, who had trialled the use of iPads for one month, together with her 87 year old husband. Although she was self-taught with computers and reasonably competent, he was virtually a complete novice. However, his attempts to use the iPad to make contact with other war veterans like himself, led her to envision new possibilities that she had hitherto not considered. The final question in the interview was about the extent to which participants felt they had made a connection to the wider Australian society. Her response, while referring specifically to her use of the GreyPath portal, looked beyond that:

Going onto the internet is impersonal you find a topic you look at it that’s that. … You are connecting and it does open up something new. It's got persons instead of just topics and once you get familiar you will focus in on a group of people that you are writing to. Now for instance I have a real passion for locums and the shortage of doctors in the country and the locums. Nobody hears from the locum. They go and talk to everyone else, but they forget to ask the locums some of their ideas. Now whenever I talk to locums we share a lot, and where before this came in we had a group going through the Rural Doctor’s Association of Australia, called the Locum Special Interest Group … we could now probably do it through this.

This illustrates that rural and regional seniors have a lot to contribute, but that they are frequently not asked for their views, or that they work in isolation. As a retired General Practitioner, because of the shortage of rural doctors, she was often called upon to engage in locum work. She saw the special interest groups that interacted within GreyPath as a vehicle for connectivity. In other words, there is no need to reinvent the wheel, and create dedicated websites for various special interest groups, when sites like GreyPath already provide a means of connecting people who share a common interest.

Conclusion

This chapter illustrated how ICT can assist to increase socialising amongst rural and regional seniors. Research in medical, ageing and other fields, has demonstrated that increasing social interaction has benefits for the quality of life and well-being of seniors (Dickinson & Gregor, 2006; Tyas et al., 2007; Worrall et al., 1998). The two case studies showed that ICT, particularly Internet-based social interaction, can increase connections, and that increased online socialising amongst seniors also leads to increased offline social activity. Such socialising can be accomplished by people who experience increasing disabilities with increasing age, because ICT design caters to many functional limitations. The asynchronous nature of technologies such as email and forum postings, give seniors a measure of control.
over the communication process, that is not available to them through other forms, such as the telephone and face-to-face communication.

The implications of these findings and future research areas arising from them are closely tied to literature that links increased socialising with increased well-being for seniors. As the Dickinson and Gregor (Dickinson & Gregor, 2006) review found, there is as yet inconclusive evidence that ICT facilitated socialising has the same benefits to well-being that physical social interaction has, although research does appear to support such a view. Building on such research findings, the two studies reported here suggest that particularly important to the ability of ICT to increase socialising for rural and regional seniors are peer training, accessibility to and of technology, and in the case of novice senior Internet users, having more time to learn to use communication technologies.

References


