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AGEING, LEARNING, AND COMPUTER TECHNOLOGY IN AUSTRALIA

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Learning is an important aspect of active ageing, yet older people are not often included in discussions of the issue. Older people vary in their need, desire, and ability to learn, and this is evident in the context of technology. The focus of the data analysis for this paper was on determining the place of learning and technology in active ageing. The paper describes results from 2,645 respondents aged from 50 to 74+ years, in Australia, to a 178-item variable postal survey. The survey measured aspects of learning;, work; social, spiritual and emotional status; health; vision; home; life events; and demographics. There was also an open-ended question about being actively engaged in life. Ordinal regression analysis showed that interest in learning, keeping up to date, valuing communication, being younger, and being male are predictors of learning about technology. The results are at variance with an earlier analysis of our data which showed that women are generally more interested in learning. The open statements contained mentions of learning about technology for the purposes of communication, learning, family links, keeping up to date, enjoyment, staying mentally alert, and just using the computer. These results are discussed in terms of the subtle but important differences between needing and wanting to learn about technology and the opportunities for such learning by older people.

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Globally, the population is ageing. Worldwide, the proportion of people age 60 and over is growing faster than any other age group. In 2025 it is predicted that there will be a total of 1.2 billion people over the age of 60 (World Health Organization [WHO], 2002, p. 6). McFadden (2002) asserts that this is now a part of the life span never before experienced by so many people and that, consequently, we need new models of aging. The WHO (2002) report defines "active aging as the process of optimizing opportunities for health, participation and security in order to enhance quality of life as people age" (p.12). Active means the continuing participation in "social, economic, cultural, spiritual, and civic affairs" as well as being physically active or being in the workforce. In the USA, older adults themselves defined successful aging as multidimensional including physical, functional, psychological, and social health (Phelan, Anderson, LaCroix, & Larson, 2004).

The ability to solve problems and adapt to change are strong predictors of active ageing and longevity according to Smits et al. (1999), cited in WHO (2002, p. 26). Butler (2002) cites the MacArthur Study on Aging as confirming that engagement in meaningful activities contributes to good health, satisfaction with life, and longevity as well as reducing the costs of physical and emotional illness. It is clear that learning plays an important role in productive aging (Ardelt, 2000; Dench & Regan, 2000; Withnall, 2000). Learning about technology should, therefore, aid problem solving skills and assist older people to adapt to change—if it is a meaningful activity for them.

AGEING AND TECHNOLOGY

Computer Technology Usage

One of the most significant phenomena of the 21st century is the rapid increase in the use of technology. It is recognized in government and related documents that it is important for older adults to have abilities and opportunities to use new technologies to support and improve their quality of life and their participation in society (The National Strategy for an Ageing Australia, 2001; National Office for the Information Economy, 2002). COTA (The Council on the Ageing) National Seniors (2004), in a submission to DEST (Department of Education, Science and Training) concerning adult learning in Australia, stated that information literacy and the use of the basic technology tools are a prerequisite skill for participation in Australia's economy but note that the current generation of older Australians has a relatively low rate of use of electronic tools and applications (p. 4).

Factors such as education, income, age, ethnicity, and geographical location are likely to result in a disadvantage for some groups (OECD, 2001). Issues of social exclusion have been identified in many investigations and commentaries about older people and information technology (Barnett & Adkins, 2001; Cameron, Marquis, & Webster, 2001; Foskey, 2002; Scott, 1999a, 1999b; Steinberg, Walley, Najman, & Madden, 1999; Tay, 2001). Lloyd and Hellwig (2000) found that retirees were the group most likely to remain without an Internet connection; 63% were unconnected compared with 29% of all groups that were not connected. This is similar to the figures for the United States where it was found that less than one-third of seniors have ever gone online and fewer than half have ever used a computer (Rideout & Newman, 2005). Statistics show that, as age increases, the likelihood of using a computer decreases. Yet, in the age group 65 years and over, the number of adults accessing the Internet has more than doubled since 1999 (Australian Bureau of Statistics, 2004). In 2002, for example, 13% of adults aged over 65 years accessed the Internet. Their online activity was dominated by e-mail or chat site use (77%) and general browsing (48%). The use of e-mail or chat sites by the 65+ age group exceeded the use by younger people (73%) (Australian Bureau of Statistics, 2003). These figures indicate that when older people use internet technology it is mainly for the purpose of communication. Some older people have a favorable disposition towards computers, while others may negatively respond to their design and operational features (West, 2002). Typically, technology researchers and developers are young, and they do not fully appreciate the needs of older users (Zajicek, 2004, Morgan, 2005). Zajicek (2004) suggests that age-related impairments such as loss of vision, hearing, memory, and mobility contribute to "loss of confidence and difficulties in orientation and absorption of information" (p. 413).

Quality of Life

For individual older users, communication technologies have the potential to minimize social isolation and, thereby, improve quality of life (Swindell, 2002). Few studies have investigated the relationship between quality of life and the use of computer technology (Ito et al., 1999 cited in Findlay & Cartwright, 2002). One of the aspects threatening the quality of life of older people is exclusion from information in an increasingly digital world. This isolation will continue to increase as technology develops and becomes more pervasive. Timmermann (1998) suggests that the characteristics defining older participants involved in adult education, ownership of computers,

and online participation were associated with educational and socio-economic status. Barriers to learning included attitudinal aspects to being too old, embarrassment with lack of abilities, short-term memory loss, and declines of manual dexterity and visual acuity (p. 62). Research confirms that there are beneficial outcomes of using a home computer for people who are likely to experience increased vulnerability as they age. In residential care situations, for instance, computer-learning programs were associated positively with skills and confidence in spite of older adults own health perceptions (Timmermann, 1998). Studies that indicate positive outcomes for older people who use technology are particularly important to the policy of "ageing in place." Mynatt and Rogers (2002) found that technology use could potentially support the functional independence of older people and, thus, enable them to continue living independently in their own homes. Furlong (1997) described the creation of an online community for the third age where members would be able to address questions such as financial decisions, healthy lifestyle, management of disabilities and illness, friendships, relationships, passions, hobbies, work, and connection with family and friends. Computers in the homes of older people can provide significant benefits that improve their lives as they age. A study of frail older people's attitudes found that their use of a computer to maintain their home health care networks improved their self esteem, particularly when they received appropriate training support in their own homes (Billipp, 2001). Billipp also found, however, that while there were good reasons for including computers in home environments, some older people were more likely than others to respond positively to such an intervention strategy.

Promoting Use

Marquié, Jourdan-Boddaert, & Huet (2002) studied young and old computer users and found that among the older group, "non-cognitive factors, such as fears of computerisation and its consequences in the workplace, age-related negative stereotypes, attitudes and lack of confidence" impacted on the success of their mastery of new computer technology. However, many studies also attest to the capacities and abilities of older people to learn how to use technology (Williamson, Bow, & Wale, 1997; Scott, 2001). A study of blocked and random practice schedules showed that older adults are capable of learning to use new technology (in this case a simulated ATM) through random practice even though they were slower, less accurate, and more forgetful than younger users (Jamieson & Rogers, 2000). It is in these kinds

of contexts that one-on-one tuition for older users seems to offer increased potential for success. Older people have been encouraged to use ICTs (Information Computer Technology) in specific settings such as computer clubs and libraries (Williamson et al., 1997). However, such opportunities are often in group situations and are not always easily accessible for older people. There are also a number of older people who are completely computer literate and keenly interested in promoting computer education and tuition among their peers (Hazzlewood & Kilpatrick, 2001; Swindell & Vassella, 1999). Groups such as ASCCA (the Australian Seniors' Computers Clubs Association), COTA (the Council on the Ageing), U3A (University of the Third Age), and SeniorNet[1] in the US (Grodsky & Gilbert, 1998) for example, actively promote computer tutoring by older people for older people. These approaches focus on complete beginners who may be fearful of the technology (Barker, 2000).

Purdie and Boulton-Lewis (2003) researched the learning needs of adults over 70 years of age by interview and questionnaire. They found that the most frequently mentioned learning needs in the interviews were how to use a computer for e-mails and financial matters. However this ability was rated quite low as a priority for what they wanted to learn in response to the questionnaire—probably because of a range of perceived difficulties as described above. Thus, the least important learning needs were those associated with technology even though interview data suggested it was an important area for new learning. In general, participants were confident that they could successfully address needs related to health, safety, leisure, and transportation but not those associated with technology. Respondents also indicated in the interviews that they would prefer to learn in a one-to-one situation rather than in a class. For some, the cost of computer purchase and Internet access was also a problem. Motivation and confidence are critical to learning at any age, and this is particularly so as people age. A study of older adults in South England and Wales found that, rather than resisting new computer technology, older people's nonuse was due to the perceived irrelevance of ICT in their lives. A total of 78% of nonusers stated they had no need, and no interest, in using computers (Selwyn, Gorard, Furlong, & Madden, 2003). This attitude presents a challenge in terms of convincing older adults that they can benefit from and be comfortable with technology. It is an especially difficult challenge to convince those with low incomes, little relevant education, or who come from ethnic minorities.

[1]Further information available on the Web at http://www.seniornet.org or for Senior Net in Australia http://www.seniornet.com.au

OBJECTIVE OF RESEARCH

The overall objective of the Australian Active Ageing (Triple A) Project is to investigate the phenomenon of active aging in Australia. An earlier paper by Boulton-Lewis, Buys, and Lovie Kitchin (2006) found that significant positive factors in learning and aging were being female; having good physical, mental, and emotional health; being younger; living regionally; not being retired; being a high income earner; and being well educated. Following these results, the particular aim of this paper was to analyse selected data from the study to focus more closely on the place of learning about technology in the aging process. The work examined the relation of learning about technology to factors concerned with work; social; spiritual; emotional status; health, vision, and home; life events; and demographic details.

METHOD

Survey

A 178 -item survey (later reduced to 165 variables because some questions were skipped, depending on previous answers) covered the following areas: paid and voluntary work (14); learning (33); social (11); spiritual (9); emotional (24); health, vision, and home (50); life events (9); and demographics (14). The learning; social; spiritual; emotional; health, vision and home; and life events items were developed from existing surveys with permission. The other sections were developed by the research team. There was also an open question at the end of the survey asking respondents to briefly describe what being actively engaged in life meant to them. The learning questions (derived from Purdie & Boulton-Lewis, 2003) consisted of 8 items about interests, 7 about what people needed to learn, 7 about what they wanted to learn, and 11 items concerned with obstacles to learning. The whole survey was piloted with a group of friends and acquaintances of the researchers of suitable age to check for length, wording, and appropriateness.

Sample

A stratified random sample of 6000 people in the target age range 50–75+ years, from all states in Australia, was selected by a large Australia-wide seniors' organization to receive the postal survey. A total of 2655 responded. Of these, 10 were excluded as incomplete.

The data for 2645 respondents were analysed. There were more female (57%) than male respondents. The percentages of respondents in age groups were 50–65 (68%), 65–74 (21%), >74 (10%), <50(.34%). The majority were from New South Wales (32%), Victoria (24%), and Queensland (20%). The average incomes (in Australian dollars) were > $50,000 (33%), $30,001–$50,000 (26%), $20,001–$30,000 (18%), $10,001–$20,001 (14%), and < $10,000 (5%). The majority of the participants were married (65%) and living with a spouse or partner, in their own home (88%), in the metropolitan area (69%), were born in Australia (76%), and had tertiary qualifications (31%), grade 10 (21%), or further education (18%). In summary, the sample that responded could be described as including a reasonable balance of gender and geographical representation and being quite comfortable financially. The majority of respondents lived with a companion in their own home in a metropolitan area and were quite well educated.

ANALYSES

The data set was entered and cleaned. Then the Gamma test, by the two extremes of the age groupings (50–64 years, and older than 74) and learning was used; this is a nonparametric correlation coefficient for ordinal variables. It is an equivalent to the Pearson correlation coefficient and tests the linear association between two variables.

Ordinal regression modelling with complementary log–log link function was then conducted to see if different aspects of life such as working, learning, social, spiritual, emotional, health, and demographic characteristics predicted the likelihood of keeping up to date with new technologies or needing or wanting to learn to keep up to date with technology. This type of modelling was used since the dependent variables, keeping up to date with new technologies, needing, and wanting to learn to keep up to date with technology have ordered categories (1 = strongly disagree to 6 = strongly agree) and the responses would be more likely to be on the higher or positive values. The items on technology in the questionnaire were used as dependent variables to find out the characteristics of people who do keep up to date or need or want to learn to keep up to date with technology.

NVivo, an electronic means of analysing qualitative data using predetermined key words or ideas derived from the data, was used to analyze the responses to the open questions. Searches were undertaken for discussion of computers, e-mail, technology and learning about technology.

RESULTS

Gamma Test

The Gamma test by the two age groups showed that most of the respondents were interested in learning about new things such as technology, new activities, and leisure interests. Most said that health, transport, and lack of support would not be a major obstacle to learning. However, when trends were examined by age groups 50–64 and older than 74 some differences were found.

Respondents aged 50–64 were more likely to be interested in technology, need and want to learn to keep up to date with new technology, make an effort to learn new things, aim to fulfil a personal goal in the next 12 months, be open to learn new activities and new things for interest and enjoyment, organize holiday/travel arrangements, and find people to trust and manage their money. They are also more likely to say that fear of change and finance keep them from learning new things.

Respondents older than 74 were more likely to be interested in political events which affect Australia, need and want to learn to discourage violence against themselves, and organize their own transport, and say that general health, transport, and prior learning can keep them from learning new things.

Ordinal Regression Analysis

Ordinal regression analysis showed that interest in and enjoyment of learning new things and activities, interest in current affairs and keeping up to date, making an effort, personal goals, feeling there is more to do in life, confidence and not letting things get them down, learning to discourage violence, communication with families, being younger, better educated and being male were predictors generally of keeping up to date, needing to keep up to date and wanting to learn to keep up to date with technology (Tables 1–3). There were subtle differences between needing and wanting to learn to keep up to date evident in Tables 2 and 3 as follows. In Table 2 it can be seen that needing and wanting to learn to be open to new activities and needing to learn new things were significant. However, wanting to learn to enjoy new things was not as significant. In Table 3 it can be seen that people did not need to learn to discourage violence against themselves but wanted to do so.

Table 1. Predictors of keeping up to date with new technologies

Questions	*b*	Wald
How many hours of voluntary work did you do in the last week?	.093*	5.468
How much do you enjoy doing voluntary work?	−.079***	11.893
Are you interested in news or current event programs on radio or television?	.145***	22.214
Do you make an effort to learn new things?	.942***	633.000
Do you enjoy activities that make you think?	.210***	28.989
Does knowing what is available keep you from learning new things?	−.068***	12.918
How many times did you talk to some friends, relatives, or others on the telephone in the past week (either they called you, or you called them)?	−.040**	8.910
Do you know what is going on with your family and friends?	.153***	12.238
Do you not want to try new ways of doing things, as your life is fine the way it is?	−.106***	23.902
Do you accomplish less than you would like because of your vision?	−.096*	6.006
Age	−.084*	4.645
Level of education	.033*	4.025
Gender	−.369***	48.320

***$p < .001$, **$p < .01$, *$p < .05$.

Table 2. Predictors of needing to learn to keep up to date with technology

Questions	*b*	Wald
Are you interested in news or current event programs on radio or television?	.080**	6.948
Do you make an effort to learn new things?	.212***	50.825
Do you aim to fulfil a personal goal or goals in the next 12 months?	.092***	14.311
Do you need to learn to be open to new activities?	.518***	151.897
Do you need to learn to enjoy learning new things for interest and enjoyment?	.167***	16.749
Do you need to learn to find people to trust to manage your money?	.052**	9.804
Do you want to learn to be open to new activities?	.225***	25.836
Do you want to learn to enjoy learning new things for interest and enjoyment?	−.112**	6.638
Do you want to learn to organize holiday/travel arrangements?	−.091***	18.093
Do you feel in control of your life?	−.063*	4.074
Do you have confidence in your own opinions, even if they are contrary to the general consensus?	.103**	9.305
Do you sometimes feel as if you've done all there is to do in life?	−.085***	15.658
How much more difficulty do you have reading ordinary print in newspapers (with glasses or contact lenses, if you wear them)?	−.094**	7.384
Level of education	.049**	9.528

***$p < .001$, **$p < .01$, *$p < .05$.

Table 3. Predictors of wanting to learn to keep up to date with technology

Questions	*b*	Wald
Are you interested in news or current event programs on radio or television?	.088**	8.053
Do you make an effort to learn new things?	.308***	96.604
Do you need to learn to be open to new activities?	.149***	24.317
Do you need to learn to discourage violence against yourself?	−.128***	23.044
Do you want to learn to be open to new activities?	.756***	516.384
Do you want to learn to find people to trust to manage your money?	.043*	5.735
Do you want to learn to discourage violence against yourself?	.143***	25.330
Do you feel contented at this point of your life?	−.095**	8.730
Do you have confidence in your own opinions, even if they are contrary to the general consensus?	.153***	19.554
Do the demands of everyday life often get you down?	−.071***	10.511
Are you the kind of person who likes to give new things a try?	.164***	28.255
Do your daily activities often seem trivial and unimportant to you?	.064**	8.264
How much difficulty do you have driving during the daytime in familiar places?	.070**	7.986
In the past year have you experienced the death of a spouse or partner, and if so how did it affect your life?	.168**	9.700
Level of education	.062***	13.939

***$p < .001$, **$p < .01$, *$p < .05$.

Predictors of Keeping up to Date with Technology

The most significant predictors of the likelihood of keeping up to date with technology are listed below. Other significant predictors are included in Table 1. Respondents who were likely to keep up to date with technology were those who had the following characteristics:

- **Do voluntary work but have less enjoyment in it.**
- **Are interested in news or current event programs on radio or television.**
- **Make an effort to learn new things.**
- **Enjoy activities that make them think.**
- **Say that knowing what is available does not keep them from learning new things.**
- **Know what is going on with their family and friends.**
- **Want to try new ways of doing things.**
- **Are more likely to be men.**

In summary, those who were more likely to keep up to date with technology were men and were interested in learning and doing new things and in current affairs and their families. This indicates

that they are mentally engaged with issues of family and wider social life and proactive in learning.

Predictors of Needing to Learn to Keep Up-to-Date with Technology

The most significant predictors of needing to learn to keep up to date with technology are listed below. Other significant predictors are listed in Table 2. Respondents who said they needed to learn to keep up to date with technology were those who do the following:

- **Make an effort to learn new things.**
- **Aim to fulfill a personal goal or goals in the next twelve months.**
- **Need and want to learn to be open to new activities.**
- **Need but don't want to learn to enjoy learning new things for interest and enjoyment.**
- **Don't want to learn to organize holiday/travel arrangements.**
- **Feel that they haven't done all there is to do in life.**

In summary, those who reported they need to keep up to date with technology make an effort to learn new things and new activities, want to fulfil personal goals, and feel they have more do in life. These characteristics indicate an engagement with the future and with ways to enable that engagement to continue.

Predictors of Wanting to Learn to Keep Up-to-Date with Technology

The items that were the most significant predictors of wanting to learn to keep up to date with technology are listed below. Other significant predictors are listed in Table 3. Respondents who are more likely to want to learn to keep up to date with technology are those who do the following:

- **Make an effort to learn new things.**
- **Need and want to learn to be open to new activities.**
- **Don't need but want to learn to discourage violence against themselves.**
- **Have confidence in their own opinions, even if they are contrary to the general .consensus.**
- **Say that the demands of everyday life don't get them down.**
- **Like to give new things a try.**
- **Have higher educational attainment.**

These findings indicate a positive outlook and attitude in respondents. They like to learn and try new things and new activities, want to learn to discourage violence, are confident, do not let things get them down, and are better educated.

NVivo Results

The open statements at the end of the questionnaire, about being actively engaged in life, contained mentions of using technology for the purposes of communication, learning, family links, keeping up to date, enjoyment, staying mentally alert, and just using the computer for a range of reasons at home or at work. More specific analyses by the terms computers, technology, e-mail, and learning about technology are summarised below. There was a great deal of overlap here, with people sometimes using two or three terms and describing more than one use. These overlaps occurred across all ages, gender and socioeconomic contexts. The results complement the statistical analyses and, in particular, give more understanding of why people want to use technology.

Computers

There were 39 voluntary mentions of computers. They occurred in the context of using e-mail, keeping up to date, acquiring new skills, taking courses, enjoying new technology and software, using computers in employment, making digital movies, photographs and art work, banking, surfing the net, involvement in computer clubs and library courses, general use, teaching, or intention to use computers.

Technology

The term technology was used by 26 people. It was applied to keeping up with new ideas, new technology, new software, learning skills, meeting technological demands, enjoying new technology, using it at work, digital movies, and photography.

E-mail

Only 8 respondents specifically mentioned e-mail. It was raised in the context of use in the workplace and communicating with family and friends.

Learning about Technology

A total of 36 respondents talked specifically about learning and technology; 22 of these were female. The ages ranged from 53 to 82 with the majority in their 50 s or 60 s. The reasons given were to keep up with changes; improve learning about life; get information; to keep learning about new things; enjoy new technology; learn about computers, movie making and photography; banking; keep mentally alert; keep using and improving skills; and intention to learn. It is interesting that more females than men mentioned learning about technology, and it fits with the finding that older men are more likely to be current users.

DISCUSSION

The interests in computer use and technology described above mirror the reasons found in research both in Australia and abroad. The open-ended responses about what being actively engaged in life means (keeping in mind that some of them are from the same people) were made by only a very small number of the total of 2,465 respondents——about 0.025%. Admittedly, the question was voluntary and people may have believed that there were more important things that made life meaningful for them in terms of active ageing. However, it does suggest that computers and technology use do not seem to be the most important factors in being meaningfully engaged in life for older people in Australia. The number who voluntarily raised the issue is less than is suggested by the data from the USA and Australian research, which indicates that about one-third of seniors are connected to the Internet. It is possible that older people currently are not aware of the advantages of Internet use and, therefore, undervalue the possibilities. This situation should change over the next 10 years or so as people who currently use computers more in their everyday lives become older.

The predictors of technology use derived from the regression analyses give an indication of the kind of older people who will engage with technology. It is more likely to be those who are interested in and enjoy learning new things and activities, have an interest in current affairs and keeping up to date, make an effort, have personal goals, feel there is more to do in life, have confidence and do not let things get them down, want to learn to discourage violence, maintain communication with families, and are younger, better educated, and male. These findings indicate a positive, self-motivated engagement with life and an ongoing interest in future goals from better educated men, either in

preretirement or early retirement age groupings. This is a little different from the predictors for learning generally (Boulton-Lewis, et al., 2006) where being female was significant, as well as having good health, being younger, living in regional areas, not being retired, being a high income earner and being well educated. Consistent indicators from both studies show that being younger and having better education are significant in technology use for both older men and women. The picture, then, is complex with regard to predictors for learning and using technology. However, it seems that of those younger, better educated, older people, the men who are interested in keeping up to date generally, are confident and want to keep in touch, are currently more likely to use computers. It could also be that they are more likely to have experience of using technology in the workplace. In this context, it should be remembered that many occupations, for instance, construction and blue-collar work, may allow little contact with computers and only for limited administrative purposes. Lower education and income levels may also lessen the chance of having home computers. The sample for this study was generally well educated and financially secure.

The people who were using technology gave a range of reasons for their motivation to do so. Across the findings of this study, the connection between learning and technology seems to be underpinned by a positive attitude toward the future and continued engagement with a range of issues. To achieve various needs and wants, continuity of learning is, therefore, seen as essential. The obverse relationship between learning and technology may be understood as involving low educational and socioeconomic conditions, dispositional attributes that minimize interest in the new, and declines in cognitive and visual acuity that create anxiety and fear of failure with technology.

It has been asserted that there is a close relationship between quality of life and use of computer technology with regard to such issues as skill, confidence, financial management, healthy lifestyle, management of disabilities and illness, friendships, relationships, passions, hobbies, work, and connection with family and friends. It would then seem that there is a need to promote computer technology (particularly with women) despite possible fears of computerization and perceptions of lack of relevance by some.

Models for the promotion of access to computer technology, for example, are being pioneered by entrepreneurs and communities in the USA (Morgan, 2005). Computer companies and peer teaching (Grodsky & Gilbert, 1998) are two such activities. Intergenerational learning has also been successful with children helping older people to master the necessary skills (Morgan, 2005). Many seniors' organizations in Australia such as ASCCA, COTA, University of the Third Age, and

SeniorNet actively promote computer tutoring by older people for older people. Some of these organisations in Australia are listed in the Appendix. The approaches focus particularly on complete beginners who may be fearful of the technology (Barker, 2000). It seems that these programs are particularly important for females who want to learn generally, want to learn about technology, and are not as likely currently to be using it. The need to facilitate access to computers for people with lower incomes also needs to be addressed.

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APPENDIX: SAMPLE WEBSITES FOR SENIORS

SeniorNet

SeniorNet Assn. Inc. is an incorporated association of seniors in Ipswich, Queensland, Australia, dedicated to helping seniors use computers and the Internet.

http//www.seniornet.com.au
http//www.seniornet.com.au/links/links_index1.htm

Seniors

This is a Seniors Website with information about a range of activities and concerns for seniors including answers to questions about computing.

http://www.aboutseniors.com.au/

Aged and Disability Care and Information Services: Lifelong Learning

Provides information about adult and lifelong learning promotional bodies.
http://www.adcis.org.au/quicklink/ll-a.html.

COTA National Seniors

Bibliography on older people and ICT.
http://www.cota.org.au/bibliogICT.htm

Information Economy: Older Australians Online

http://www2.dcita.gov.au/ie/participation/older

Network for Education Ageing Technology

http://www.ruralfutures.une.edu.au/projects/socchange/retire/neat/neat.htm

The Australian Seniors Computer Clubs Association—National Peak Body for Seniors and Technology

http://www.seniorcomputing.org/

U3A (University of the Third Age) Online

http://www.u3aonline.org.au/index.html