

Using a Futures Method to Improve an Older Adult's Computer Learning Program: Lessons for a Beginning Futurist

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Introduction

Computers, especially the Internet, have had a significant role in changing human behaviours. A healthy knowledge-based net-society, with widespread computer and other technologies use, is a desirable future goal that potentially brings benefits to society (Duma & Monda, 2013). This must include older adults, those over 60 years of age, who are a growing cohort of computer users.

To anticipate their needs, futures studies methods offer ways of improving the practices of those who teach older adults computer skills. However, for a beginning futurist with no formal training in these methods, it meant drawing on the experiences of others in the field from journals such as this. I argue that it is possible for the beginner to apply futures methods to the problem of anticipating older adults' computer training needs. To demonstrate this I use Jennifer Coote's (2012) methods from "A Simple Guide to Futurewatching" published in this journal.

I also reflect on the journey of using futures methods drawing on the work of Peter Saul (2009) in his essay "My Journey as a Futurist" also published in this journal. The question asked in this essay is, with limited futures training and experience, am I on the path to being a futurist and can I contribute to this field? The idea to write about this experience is inspired by the challenge Ramos (2012), put forth. This challenge was that the futures field is, and should be, flexible to welcome new ways of doing futures studies that will benefit an industry or humankind. This essay seeks to meet this challenge.

Older adults' future computer needs: A topic for futures investigations

Technological change always affects human activity and one's daily life and will continue to do so. Therefore, it is important to study potential impacts of technological change on older adults. Building scenarios about how technology will affect people and planning for it is vital as computers and the Internet further infiltrate our daily lives. Older adults are in need of this support as they grow in numbers wanting and needing to use

the Internet and computer devices. Software and computing devices are complex inventions and will always require specialised skills that people need training in so they can become confident and comfortable users of them.

Older adults are a unique group of learners driven by seeking knowledge for its own sake and are willing to explore using technology. Underlying the need to have people to teach them is the trend towards living longer, illustrated by the prediction there will be 1.5 billion people older than 65 by 2050 (World Health Organisation, 2011). They will need to access computers and the Internet and be taught how to effectively use them. Despite stereotypical views that older adults, labelled “technophobes” (Gietzelt, 2001), have always resisted using computers, there is much evidence to dispute this. Russell (2007) observed that a motivation older learners have for wanting to learn computer skills was to have connectedness in their lives and feel part of a changing society.

There are many issues hindering older adults learning computer skills. A key problem is the Digital Divide. This divide is a gap between individuals, households, businesses and geographic areas at different socio-economic levels with regard to having opportunities to access information and communication technologies and to use the Internet for a wide variety of activities (OECD, 2001). Computer access and skills overcomes this divide, maximising opportunities to maintain meaningful interactions with others and allows older adults to find information and share experiences online (Gross et al., 2002).

Barriers to learning can be physical, attitudinal, social and financial. Table 1 shows a sample from literature of major issues for older adults trying to learn computer skills:

Table 1. *Examples of barriers to computer learning older adults encounter*

Barrier	Source
Not having a mentor to guide them	Cameron, Marquis & Webster (2001)
Formal and online classes often require prior competences and assumed knowledge to learn computer skills	Gietzelt (2001)
Complexity of software program user manuals and websites that confuse learners	Rose (2003)
Cost of lessons and costs of purchasing and maintaining a computer	White & Weatherall (2000)
Older adults unable, until recent years, to participate in debates on educational policy-making on creating effective, low-cost ICT learning	Hearn, Mandeville & Anthony (1998)
Reading text on the screen or using a keyboard due to visual impairments or other physical or psychological handicaps is difficult	Paul & Stegbauer (2005)

Accessing low-cost, relevant and informal training that community organisations offer has been a successful strategy to overcome these issues (Mayhorn et al., 2004).

Computer learning in a community training program

Community healthy ageing programs are places older adults attend to undertake activities, meet others and find information about issues of concern to them. Many programs offer assistance with computer training. It became clear to managers of these programs in the 1990's that the Internet and computers were going to be increasingly used by older adults. Community based training will play an important role now, and in the future, in the lives of older adults as a low-cost place to come to learn computer skills.

The community program where I began volunteering as a computer tutor and researcher in 2002 is located in an outer western suburb in Brisbane, Australia. It is a healthy ageing program for people over 60 years of age which organises a variety of groups and activities for participation in. It began in 1994 and has always had as a basis of its mission a social inclusion and health perspective, where health is defined as a state of physical, mental and social well-being, not just the absence of disease (World Health Organisation, 1946).

In 1996 the Brisbane City Council funded Internet access allowing the training to be established. The tutors who volunteered were of a mixed age range, though mostly they were younger Information Technology students studying at university who wanted to develop their skills in interactions with others. All are trained in the unique teaching strategies and personal qualities needed to develop a supportive and caring role with their older adult students. These include demonstrating high levels of patience, willingness to repeat instructions, taking a problem-solving approach to lessons and developing the empathy of understanding that not everyone is highly skilled in using computers and software.

As Cody et al. (1999) state, older adults overall prefer active and co-operative learning rather than quick fast-paced learning with formal exams and tests. Using this approach brought two successes to the program: the lessons have continued at the program and the interactions between younger tutors and older learners have reported mostly positive learning experiences. Consistently, the learners told management, coming to lessons gave a sense of purpose, something to do and eased their concerns about damaging the computer and making mistakes. Reassurance is a key strategy in fostering positive attitudes towards computers. The number of older learners attending since the program began numbered over 100.

Since 2002 the older learners began to ask for a greater range of topics to be taught to them. Table 2 shows the frequent types of topics requested in order of most requested.

Table 2. *Frequently taught topics at the computer training lessons in order of most requested*

MOST REQUESTED TOPICS	WHAT LEARNERS WANTED TO LEARN IN EACH TOPIC
Word Processing	Typing simple letters, making greeting cards, specialised applications such as newsletters, mail outs
Email	Differences between client and web base mail, how to open an email account, attachments, netiquette and how to compose emails politely, managing spam and malicious emails
Internet Applications and World Wide Web Information Seeking	Searching for information, specific and complex searching for music, overseas newspapers and images, Boolean operators use in search engines, advanced search on Google, managing viruses and other security threats, giving advice on Internet Service Provider plans
Photo Editing	Personal photographs scanned, repaired and printed
Virtual Forums, Interactive Chat Lines	Showing students how to join virtual forums, particularly on ageing issues, importance of passwords, managing insults from trolling and flaming, security of passwords, how to set up sound for interactive chat lines such as Pal talk
Social Media	How to set up Facebook, issues of privacy and data use, safety issues such as accepting friend requests, make student aware of Terms of Service
Spreadsheets	Simple use of Excel for lists and for financial data applications, simple calculation commands, formatting spreadsheets
Databases and other Software	Simple web page building, use of family tree pre-packed software, using smart phones, basic knowledge of what is a database and setting simple databases in Access, computer storage device advice

If students were unsure of what to learn a curriculum of topics was initially designed teaching basic Word Processing, Email and Internet use. Tutors responded to learners' questions but if they did not know the answers they would research them and contact the student with answers.

Wild cards: the emergence of the unexpected

The motivation for undertaking a futures method study of the computer training program came from what was regarded as wild card events that occurred over time. Overcoming stereotypes that older adults do not want to learn computer skills or only a limited amount of topics is still challenging. There was some resistance to the idea that older adults who sought out the program would wish to learn more than a basic core curriculum of computer skills the tutors had designed. The program had to take a futures approach to accommodate the changes in technology; namely, growing learner competence with technology and changing attitudes towards seeing

the usefulness of using technology.

The wild cards came from two observed signals beginning in 2010. The first was a gradual increase in numbers of learners because people from other groups at the program became curious about the presence of the computers and lessons. The assumption had been that the lessons would mainly attract learners from outside the program. Other members at the program attending other groups sat near the computer lessons and would hear the positive benefits others reported from others attending and started approaching tutors for lessons.

The second signal was the wild card that also changed the attitudes of the younger tutors. After 2011 there were increasing requests to learn how to use social media, in particular Facebook. The older learners had seen family and friends use it and became curious about how they could use it. They also wanted to know about privacy issues and possible consequences of posting content which could be used by a corporation.

As Dewar (n.d.) states, a wild card's function is not to correctly guess something that will occur, but rather identify where something could occur. Steinmüller (2003, p.5) illustrates this:

Therefore, wild cards do not only change reality but also, and perhaps even more deeply, or perception of reality and our concepts. As it is often observed, they re-write the future, but they re-write also the past.

The wild cards changed the attitudes of the tutors towards older learners. They did not expect older adults to be interested in learning social media skills. To apply Steinmüller's (2003) observation, the wild card influenced the change in, or re-writes of, the types of topics that were going to be offered for learning. The tutors learnt as much from the older learners as the older learners did from them. This was attitudinal change was unexpected but benefitted everyone and influenced the choice of tutors hired in the future. The new tutors were chosen because they had, or could acquire, empathy skills towards a group they normally would not teach computer skills to.

When researching wild cards, Barber's (2006) work was helpful to understand why these had a direct impact on the human condition; in this case, the future direction of the computer lessons. The first was the impact and implications of computer learning requests and how they came from those who commented they were previously not interested in using computers. The tutors had to adjust their expectations that older adults only wanted specific types of simple basic computer skills.

Secondly, Barber (2006) stated that wildcards move too fast for the whole of the system to adjust to a shock. In this program the 'shock' was overcoming the assumption that a fixed curriculum was the only suitable path for older learners. It was obviously vital to consider future learner requirements would change as technology evolved. However, the shift in attitudes this wild card taught the tutors was to hire tutors not only with greater and wider computer skill sets, but to hire those who had empathy for older learners and not assume learners did not want to learn complex software. The tutors and staff may not have been able to fully grasp the concepts of wild cards; however, the effect on the future practices of the computer tutors influenced the type of tutors the program wanted to hire. These wild cards impacted on the future directions of the lessons away from core structured lessons to learner controlled topics accommodated as best as possible with the

resources the program had.

This outcome is important to acknowledge as it is a futures type question to consider not just changes in technology, but changes in older learners' attitudes to learning computers and the increased skill levels they bring to lessons evolving over time. The pressure this placed upon the program was changing from a set-based curriculum to a problem-solving learner-centered environment. Cohorts changed, and continue to, as long-term and new students had knowledge of, and used some form of, computers, laptops, mobile phone, the Internet and social media. Had the program remained unresponsive, numbers of students would have likely dwindled as more low-cost computer training programs began in Brisbane.

Wildcards will continue to occur for older learners and tutors to manage, but they will likely be from a combination of technology and attitudes towards learning and using the technologies. Recent research shows older learners' willingness to learn computers becoming greater from examining unexpected shockwaves or events. For example, Dickinson and Hill (2007) and Ling (2008) acknowledged the landline telephone still plays an important part in older adults' lives; yet also in their studies they show the momentum of older learners' willingness, despite some usability issues, to use mobile phones to text others is growing especially if the learner is trained in this and sees benefits in using text messaging. Broady, Chan and Caputi (2010, p.477) stated in their study of older learners' attitudes and abilities with computers that:

“Whereas younger people raised with computers may turn to the Internet or other computer programs to meet needs such as socialising, self-fulfilment, learning or relaxation, older people are more likely to meet these needs in more traditional manners, such as visiting friends, watching television, reading and gardening...”

Yet this current scenario does not take into account what may happen when these younger people reach older age and what wild cards will occur in their lifetime impacting on their use of computers. Possible mobile technologies that are depicted currently in movies, such as the Internet on a wrist watch, will in some way occur, so a computer training lesson may need to be how to use a smaller computer whilst doing more 'traditional' activities such as gardening.

Love (2009) observed that the leaders of the future may have interacted with video games in their young lives, so the digital and the physical environments blend which will need new ways of teaching technical competence of hardware combined with teaching ethical use of such technologies. A community program can lead by being aware of wild cards at a minimum and respond as best as possible as changes occur when learner cohorts present with more advanced skills and knowledge, wanting to know more about how technology will solve their issues and better their lives.

Undertaking a Futurewatching method

The challenge to find a practical method to use to undertake a future's method session was difficult. It was in the March 2012 edition of Journal of Futures Studies that I found Jennifer Coote's (2012) article "A Simple Guide to Futurewatching". Her collection of methods stimulated discussion and were understandable and

useful. Her argument influenced our decision to use her methods (Coote, 2012, p. 107):

“However, anyone can futurewatch if they are prepared to make the necessary effort, can access a suitable range of information and can apply themselves to master the skills over a period of time. It is stimulating, at times scary, and provides helpful information about ourselves, our society and our prospects as humans on this planet. For individuals, as well as interested groups and businesses, it is an essential way to anticipate changes, either with protective measures, or to take early advantage of new opportunities.”

Technology and its teaching is a part of an ever-changing environment particularly as older adults grow in willingness to learn as much as possible about computers and the Internet. Environmental scanning, which Slaughter (1999) argues is a factor in the success of the longevity of any business or activity, is crucial to continued survival of the program. The environment for teaching older learner computer skills is subject to pressures not only from learners keen to learn specific skills, but also other training providers in the community, as well as the influence of family and friends on decisions to use computer technologies.

The initial brainstorming sessions resulted in developing a set of environmental factors that could influence the content and delivery of future learning. These are the reasons in the environment that may influence future decisions of what to teach. Table 3 shows the eleven reasons ranked in order of importance that the team created:

Table 3. *Environmental factors influencing possible future content and delivery of types of lessons*

RANK	POTENTIAL ISSUE
1	Reconnect with others and stay in contact with family and friends
2	Pressure to learn to use web sites for things such as keeping in contact with government agencies, finding out who their elected representatives were and finding general information on any topic
3	Seeing friends, grandchildren or others using computers and phones and want to use them
4	Enhancing personal safety by knowing how to use their smart phones
5	Finding people from the past through using search engines and social media
6	Finding and reading newspapers from around the world
7	Finding music and movies from YouTube
8	Scanning and restoring old photos
9	Creating family trees using specialised software
10	Finding out competitive Internet connection deals and cheaper computers
11	Fixing hardware issues

Doing this exercise gave clues to what Coote (2012) states as the process of futurewatchers finding out what is ‘occurring in peoples’ minds’. The conclusion the team came to was that the clues pointed to the need to never discount the requests from older learners. The research literature on computer training for older adults suggested they would begin seeking use beyond emails and web searching to see how software and the Internet, particularly social media use, could benefit them in their daily lives.

Where Coote’s work was also valuable was her suggestion to develop broad categories of clues lists. These gave us clues to seeing if there ‘is there a future in this’ (Coote, 2012) when finding topics to teach. Using seven broad clue categories, we choose to speculate on older learners wishing to learn how to use online social networking applications. As the program’s participants were increasingly buying smart phones, we did a scenario on teaching the photo uploading social media software Instagram.

We decided that older learners would be willing to learn this program. Table 4 shows the environmental scanning and clues exercise undertaken:

Table 4. Jennifer Coote's Futurewatching method – scanning and clues for teaching a topic

Event Interpretation, contexts and background	Older adults find out about the ability to edit and share photos through the online application Instagram. Sparks interest as they travel and go on outings and like to let others see their photos.
Trend Leads to significant changes over time	Increasing use of phone applications especially as smart phones are user-friendly to older adults and easier to use.
Emerging issue Those that arise from events or trends	Learners want specific and explicit step-by-step operational knowledge of using Instagram but also know about the consequences of privacy and terms of use so they can decide if they want to use it.
Weak signals Hard-to-detect below public awareness but may become issues	To an extent, this was the consistent challenging of the outdated stereotypes that older adults would not be interested in using social networking applications or would not be interested in technology seen as aimed at younger generations.
Ideas and Visions <i>Those that spark and sustain change</i>	The consistent ideal that the program responds to requests for training beyond the basic software use and obtains resources to do so.
Alternative Possibilities <i>'What if' other ideas</i>	Asking what if another application may be more suitable for older learners to learn to upload photographs in social networks; that is, offer an alternative.
Historical Investigations These deepen our understanding of how other societies managed, or failed to manage, changes	Drawing on older adult computer skills learning literature to avoid the mistakes of competitors' computer training program. Some training competitors had taken the view that older adults enrolling in their courses had sufficient cognitive and prior knowledge skills to learn specialised software. We found that it was important to avoid a strict curriculum and be flexible when asked to teach unique and different software applications. This meant not only teaching them how to use the application but the possible pitfalls and issues associated with using it that can be overlooked by others, such as privacy issues and terms-of-us.

The outcome of using Coote's method was a greater awareness of the importance of paying attention to the evolution of older adult learners in the future as the technology and learning landscape continues to change and they want to explore different topics, not just basic computer and software use.

The program team was now skilled in periodically scanning the technology and adult learning environments for potential changes. Coote's method also made us aware to hire, in future, empathic and patient tutors who were open to older learners exploring advanced computer skills. However, there arose some counter argument to this process. First, we had to keep the exercise learner-centred. We could not assume that learners actually wanted to learn about advanced computer and software topics. Second, we had to consider the cognitive and health issues of the learner. Declines in memory and ability to use computers were an issue that had not been previously considered and how the tutors may handle them if they emerged during lessons.

I argue that Coote's method, combined with considering the wild cards

previously mentioned, was valuable as an exercise to improve the program. It made those at the program think about the future needs of learners without imposing their own preconceptions about what older adults need to learn. To date, we are still getting requests from the older learners to learn different types of software as they continue to discover what technology can do for them, on their own terms and how we can respond in the future to meet those needs.

Reflections on using futures methods in the program

Peter Saul (2009) discussed the important role of mentoring new futurists over a long period of time. In non-academic settings this is difficult, so the reliance on journals and other futurists' writings is crucial. Undertaking Coote's method meant thinking in a 'futures' way but I had not the long-term skill or experience, and importantly another futurist to assess my use of the method. To call myself a futurist at this stage may be presumptuous, yet Coote offered a low-risk way to try a futures method and assist on the journey in understanding this field and applying a practical method to a significant problem.

I was encouraged by many of the articles from authors in this journal, particular Peter Saul, who urged organisations to not only employ futurists, but provided practical examples of how to undertake a futures method. He had previously written in 2001 a comprehensive guide to doing futures studies as a strategic device to plan for future developments. Similarly, Conway (2012) wrote a guide for environmental scanning. Both these futurists conveyed the information on how to do this, but in the absence of funding to hire a futurist our program had to decide if it was worth undertaking a futures method. We found Coote to be the futurist that could help us best to accomplish this as newcomers to the future studies field.

Working with older adults and with computer technologies is a fertile ground for futures thinking because the attitudes towards ageing, and the fast paced developments in technologies, will change how teachers of computer skills deliver their skills to educate older learners. The ability to scan the environment in teaching computer skills is something that must be done as learners continue to ask more questions on how to use technology and what value learning it is to them in their daily lives.

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