



Efficient Seniors' Training Using Broadband Technology

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Dedication



This report is dedicated to the memory of Eric Whitehouse who volunteered for many years training seniors to use computers and new digital technologies. Eric was a teacher by training who then gained computing experience through his work at IBM. After retirement, he returned to teaching as a computer literacy trainer with the Australian Seniors Computer Clubs Association (ASCCA). He worked tirelessly to ensure that seniors were not left behind in the digital revolution of the twenty first century.

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We also thank:

Keith Harvey who moderated multiple sessions for ASCCA.

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The *Blackboard Collaborate* program used for interactive online learning and Adult Learning Australia for the use of virtual classrooms.

Take the Teacher Home program from Easy Computing (AUST) Pty Ltd. and GCFlearnfree.org that produces and makes available online thousands of courses as well as the educational websites of Microsoft, Apple and Google Corporations, that have conducted considerable research into online learning.

ASCCA wishes to acknowledge the outstanding commitment given to this project by the author of this report, Eric Whitehouse. Thanks also to Diane Brentnall who ran interactive courses from the ASCCA Learning Centre and to Mark Young who made the technical arrangements to enable the project to run.

Nan Bosler

President

Australian Seniors Computer Clubs Association

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Introduction

In July 2012, the Australian Seniors Computer Clubs Association (ASCCA) was awarded a grant under the Australian Communications Consumer Action Network (ACCAN) Grants Scheme. The grant enabled ASCCA to research the options available for training seniors to use computing technology. The project looked at the available computer literacy training being offered by ASCCA member clubs and provided advice to computer trainers and students for efficient computer training.

The Australian Seniors Computer Clubs Association is the national peak body for seniors and technology. ASCCA membership is open to any organisation, and club, promoting access to information technology by older people. ASCCA is represented in every state and territory of Australia. Member clubs remain autonomous, but gain access to a wide variety of ASCCA resources and contacts. Clubs offer a range of facilities and services in many locations across Australia.

Context: Computer training in a changing environment

Over the last five years, the computer world has experienced radical change. Some say we are entering a 'post PC' era where we will no longer need a computer on a desk.

From a predictable environment of desktops with Windows and Microsoft Office programs, seniors' computer clubs have had to adapt to one with laptops, tablets, smartphones, apps, touch screens, Apple, Android, cloud storage, wireless, issues of identity theft, social networking, and a world where the internet is pervasive.

With the wide variety of devices available, no longer can anyone expect to know it all, nor can clubs afford to own one of everything. Many students also want to bring their own device to clubs for help and advice.

Changing hardware

It is clear that today there is the widest ever range of computer based equipment available. Seniors are often baffled when considering the huge array of devices now available to buy and it can be very challenging for seniors to determine which equipment is most appropriate to their needs and the best value for money. Whilst many computer and mobile devices are expensive they are becoming less so, but have a correspondingly high and increasing rate of obsolescence. Mobile computing is the biggest area of growth, with smartphones and tablets taking over from desktops and laptops.

This leads to further challenges for clubs in determining what equipment to buy, and therefore maintain, as club training rooms filled with PCs may become irrelevant to the needs of students. So, too, is the network hardware as many devices need access to wireless networks to function effectively. Devices need to be always on and always connected. Clubs need to provide Wi-Fi access and work out policies such as if, and how, they will charge for internet access.

The cost of upgrades and new devices makes it difficult for clubs to keep up-to-date and relevant. The market has become fragmented and not as predictable as in the past. Trainers cannot know every device and application and it takes time to learn new items and create lessons, especially when technology can quickly become out-of-date. It is hard for clubs to plan ahead. Devices that are popular now will become obsolete. People can become fatigued by constant change, and there often seems that there is no reason to change things that worked well as they were. Changes often appear not to be for the benefit of users, but to gain market share by suppliers. There is a barrage of new versions of software and hardware, and software is often released that is not fully ready and is modified not long after it is released.

Changing software

People are finding that the technology skills that they have learnt may no longer apply as newer and different technology emerges. New operating systems are appearing. Android and Apple iOS are

gaining market share and an increasing number of seniors want to learn them. Microsoft's new Windows 8 has been a steep learning curve for many. There is a desire for something easier to use than the Microsoft desktop computing environment, like touch tablets and phones. Many modern software programs need an internet connection to work.

More online software, especially social media, is being used and seniors are increasingly more likely to use their computer or portable device for online information, email, photo sharing, social networking, maps, location software and shopping – rather than for typing and printing documents. Correspondingly, there are concerns about whether seniors can afford all of the communication bills, particularly those seniors who rely on pensions or low superannuation incomes.

Many modern devices have replaced larger programs with apps. Students generally find apps easier to learn, more imaginative and fun. They are cheap or free and do much of what is needed. When content is often shared online there is less emphasis on printing. More capable and costly software is becoming less important because students don't want to, nor need to, spend the time learning them. To make matters worse, many popular older programs are now no longer available.

Tutors and training resources

It can be hard to find people who know the latest devices and software well enough to teach them. There is a much greater diversity of devices, and trainers would really need to own one of them to fully grasp how it works, due to the complexity of many of these machines. Modern devices are highly personalised devices that need to be logged into and have personal information entered into and retained on them. This makes it very difficult for clubs to offer a suitable range for loan. In addition, clubs do not have a bank of previously created lesson notes for the new devices and there may be little help on the internet.

Some challenges for seniors training

In this project we categorised users as “absolute beginners”, “beginners” and “tech savvy” users. There are a number of much older “absolute beginners” who have never, or rarely, used computers at all but now find that they have very little access to information and services by comparison with those who do access the internet. These people can no longer avoid computers.

Even before starting the learning process, seniors face a range of obstacles:

- Difficulty in finding help at their level, even from family members
- Concerns with the way other people use technology
- Uncertainty about having a use for modern technology
- Regret in losing more familiar ways of interaction
- Concerns about internet security and managing these risks
- Confusion about the need to keep software current with online updates
- Needing to keep the potentially many passwords secure
- Preference to have a device fixed or set up rather than come to a course
- Wanting to learn on their own device
- Underestimating the time needed to learn electronic devices

Some potential students live in areas where there are very few seniors computer clubs and they struggle to find suitable training.

Many seniors are uneasy about the lack of privacy with modern computers. Many software applications request personal information and this leads to valid concerns about website tracking, tailored ads, location tracking, identity theft, synchronisation of accounts, transmission of data by networks, password theft and so forth. There are risks in every aspect of computing and seniors are often a vulnerable and targeted group. They need advice in dealing with these valid concerns and on how to avoid hidden traps. They often find it hard to get good – and authoritative – advice on how to minimise risk, in a form that doesn’t make people too afraid to try things and put them off participating effectively in the modern world.

Seniors, just like all other users, need to keep all the software they use up-to-date. Often, they see a message to update a program that they have installed on their computer and think: “Hmm, why bother! The program is doing what I need at the moment so I don’t need an updated version”. They may not recognise the need to update because the reason they received that message probably has nothing to do with improved operability, but rather to remove a security threat, for example, that has been identified in that product.

On the other hand, many seniors frequently do not understand what should be updated. The terms Java, Adobe, Acrobat, etc are foreign to them. Then, when they do update, many click without reading or understanding the prompts and suddenly find existing settings they are comfortable and confident with are changed. One common example of this is where their preferred home page and search engine are changed as part of the Java updates which set, by default, the search engine to Ask and installs the Ask toolbar; Adobe Reader defaults to installing McAfee software. Finally, many

seniors are on quite restricted incomes and smaller broadband allowance plans and some updates can use a lot of data and this may act as a further deterrent to updating software.

Striking the balance for successful learning

Successful learning outcomes for seniors taking computer training could be described as the alignment of three aspects which, when change occurs in one, will necessitate changes in the other two to restore equilibrium. These aspects were categorised as people, processes and technologies.

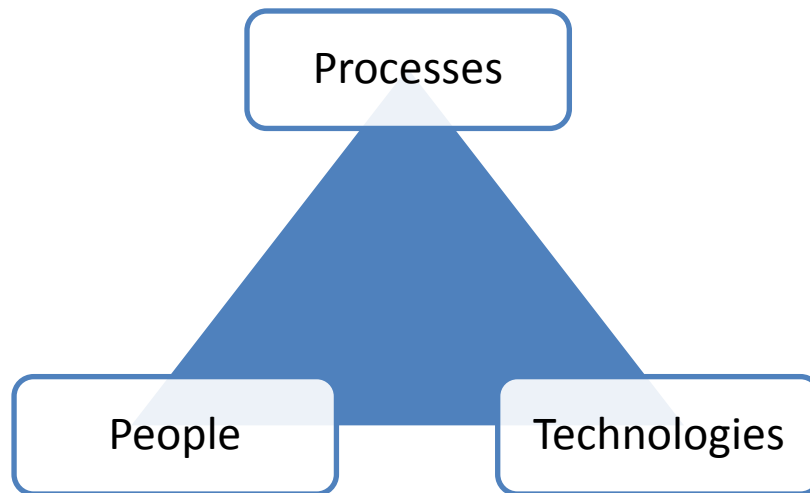


Figure 1 Learning Alignment Model

The **people** aspect looks at the students (seniors) undertaking the training, and in this project looked at “absolute beginners” (in small classroom or one-on-one training situations), “beginners” (who have achieved minimum recognised computer skills), “tech savvy” students who have defined higher level of skills, and “moderators” who possess greater than average computer skills. As we made changes in the processes and technology, we monitored the learning outcomes on each group of students.

Defining what category students fit into was one of the first activities undertaken.

“Absolute beginners” are defined as those who have had very little exposure to computing in the past and therefore lack computing skills altogether. ASCCA has determined a set of 30 basic skill areas that need to be covered and understood before a student can proceed with further training as a “beginner”. The skills cover PC understanding, use of WordPad, familiarity with the internet, use of email and basic filing. This is listed in *Appendix 1: Basic computing skills for “Beginners”*.

“Beginners” are those who can display skills in these 30 basic skill areas. They are also the ones who seem to learn best with the classroom model of learning and enjoy experimenting somewhat.

“Tech Savvy” seniors are harder to define in terms of skill sets. They display an overall confidence with technologies and frequently use various applications, and have an interest in computing enhancements. It was therefore determined that tech savvy students should self-identify by completing a survey of attitudes and skills. If they achieve over a certain level, they are ready to

move on. If not, they can talk with a Senior Trainer at our clubs to identify what to do about any areas of weakness they might have identified. After remedial training, they can be ready to move on. This survey is included as *Appendix 2: Readiness for online learning checklist*.

“Moderators” are those with a high level of confidence in their ability to use and experiment with computer technologies and have usually developed an expertise in one or more areas of digital technologies (which expands computing to cover digital cameras, smart phones, tablets, etc.). They are usually trainers in our member clubs, and quite often have had a background in teaching, lecturing or the IT industry before retirement. It was these people we identified to be trained in the use of online “virtual classrooms”, where skills in overcoming technical hitches in real time, while presenting on an area of their expertise, are important to the learning outcomes of the students.

The **processes** aspect looks at the learning steps most suitable to seniors in computer training, using the classroom delivery model as the best example of complete processes. The study detailed those classroom processes and then looked at how various changes in education technology (such as removing printed manuals, removing trainers, removing tutors, removing the need for classroom gathering) affected the learning outcomes (as subjectively indicated by students in course feedback forms).

The **technologies** aspect refers to learning technologies (such as the presence or absence of a classroom environment and trainer) as well as computer hardware and software technologies. In this study Microsoft based platforms and laptop computers with keyboard and mouse input devices were used because these are the systems and programs used by most seniors.

During this study, courseware on “Introduction to MS Word 2007” was used as a point of comparison because it was very relevant, popular with seniors, and online courseware was readily and freely available from a number of sources.

Review of Seniors Computer Clubs 2013 training offerings

ASCCA sought information from member clubs on the training they were currently conducting. This was done to determine how effective the offerings were, and how we might be able to most productively use online training initiatives to help meet any challenges.

Responses have been obtained representing the input from 102 member clubs (although the WA response was representative only of the clubs who are members of the same Community Resource Centre Organisation).

Details of what individual clubs offer can be found by accessing the ASCCA website¹ and clicking on the websites of the various clubs, some of whom have been referenced specifically in this report.

Summary of course offerings

Most clubs are constantly revising and extending the list of applications and special interests they teach. The original purpose was to teach enough of the "basics" to enable people to start using their computers effectively. The world doesn't stand still and technology moves at an incredible pace, and new things are happening on a weekly basis. Clubs keep up to date with the latest equipment and software but can't cover everything and the lessons are generally limited to the equipment and software installed. Some people bring their laptops to the lesson and are welcome to do that. The stated aim of many clubs is that of "mature dogs helping other mature dogs learn new tricks".

Club activities fall into three main groups:

1. How it works and how to look after it

These classes cover general principles, such as file management, device maintenance and the operating system (Windows and iOS) of the computer. Classes are generally 10 to 20 weeks of one-on-one or two-on-one (student to trainer ratio) in one hour training sessions, much of which builds on the "Broadband for Seniors" curriculum co-developed by ASCCA five years ago.

2. Use of the more common software applications

These classes centre on how to use the applications that are included with the operating systems – Windows Mail (formerly Outlook Express) for email, and Internet Explorer for internet browsing and those that are included in the Microsoft Office suite - Microsoft Word, Excel, and PowerPoint.

3. Special interests

¹ Individual club offerings can be found at:

http://www.ascca.org.au/index.php?option=com_mtree&task=listalpha&alpha=s&cat_id=0&Itemid=102

Some instructors teach more advanced applications and may be delivered individually, others in courses, or on particular days. Examples include:

- Digital photography and image manipulation including photo restoration
- Genealogy
- Graphic design and creation
- Video editing
- Movie Making
- Digital Camera
- Converting vinyl records to CDs
- Using the internet to make telephone calls (VoIP)
- Webpage design and creation
- Using the iPad and Mac
- eBay

Around a third of the member clubs have their own computer lab facilities or have rooms that enable members to bring and use their own laptop computers. With access to the internet, frequently via Wi-Fi, many clubs are now experimenting with a mixture of classroom learning and online tutorials.

Some of the member clubs have “Broadband for Seniors” (BfS) kiosks offering beginner courses alone. These clubs are usually based in Retirement Villages, RSL Clubs, Workers’ Clubs, or as part of a more generic Seniors Community Centre, where “Computers” are just one of the activities or courses on offer.

All of the clubs referred to above are based on volunteer management and volunteer trainers. Some are modestly subsidised by local councils, small grants from federal and state governments or from retirement village staff or community clubs (e.g. RSL). However, the larger and more established clubs receive no external subsidies.

State variations

Many of the 30 member clubs from **Western Australia** are different. They are part of the *Community Resource Centre* organisation and are set up and supported by the WA Government. They are regionally based and have full-time staff to co-ordinate activities. They have paid staff to deliver accredited courses in a range of subjects, including computing. A lot of the centres have satellite-based internet access.

In the **Northern Territory** the *Darwin Seniors Computer Club* has formed a strong alliance with the Northern Territory Library to access a wide range of online courses for their members.

In **Victoria**, the *Apple Users Society of Melbourne* is ASCCA’s largest group of members dedicated to using and training in Apple products (Mac, iPad, and iPhone). They offer one-on-one training, and have an excellent online courseware system called “AUSOM First Class”. They also maintain a large number of “Special Interest Groups” based around Apple Apps, or around interests such as moviemaking.

Tasmania has developed a series of offerings in both PC and Mac around their OPEN (Older Persons Electronic Network) system which receives limited government assistance.

In **Queensland**, many clubs are part of the “University of the Third Age” (U3A) movement, through which they offer courses such as “Computing for the terrified” and “Computing for the less terrified”. The U3A online program is based in Griffith University, and they worked with ASCCA in developing the BfS curriculum. By far the biggest ASCCA club in Queensland is “Brisbane OnLine”. As well as centre based training it has a system of mentors who travel widely to the individual homes of seniors who want to learn how to use a computer.

New South Wales and the Australian Capital Territory hosts the largest number of member clubs (87). It was here that the “Computer Pals for Seniors” concept was launched 20 years ago. The ideal club offers one-on-one training to beginners by trainers who have some computing proficiency from their working life. It is based on the philosophy “I hear and I forget; I see and I remember; I do and I understand”. These clubs have a preference to use trainers who are also seniors as they have found that it helps break down many of the learning barriers. These trainers may be more patient and will repeat each learning module as often as necessary before moving on.

With such a large number of clubs, all self-governed, the range of approaches varies. Some clubs, lacking trainers, offer students online courses only and point students to a range of free providers on the internet. Others, such as *Avalon Computer Pals for Seniors*, start with really basic skills, offering beginners a tool (Mouse Tutor) that allows them to practice handling a mouse, not an easy skill for an elderly person who has developed the shakes.

At the *Heads Seniors Computer Club*, a series of resources covering training in popular applications has been developed. It relies on online forums to let members communicate. The only classroom courses are presentations at the monthly meetings and at the Special Interest Group meetings. *Hurstville Seniors Computer Club* augments their classroom courses with online sets of notes and exercises and an excellent “links” page to other courses. Meanwhile, the members of *Illawarra Computer Enthusiasts Club* have courses complemented with generated self-paced application modules and an excellent list of one-page help files for their members.

The *Southern Highlands Computer Users Group*, which caters for both PC and Mac users, has an excellent “Tips and Tutorials” resource to allow more experienced users to become even better. For example, one can move from “Google User” to “Google Power User” by completing some online tutorials. Similarly, *Penrith Valley Seniors Computer Club* encourages members to “do your own thing” using online resources. *Sydney PC Users Group* takes special interest offerings to an exceptional level offering courses in managing your own super fund as well as stocks and share trading.

The majority of clubs work on the buddy system (usually based on the strong relationships built between tutors, trainers and students) and offer structured training courses, as well as unstructured workshops and Special Interest Groups for interested members. A vast majority offer only PC and Microsoft training, mainly because Microsoft supplies software across a range of applications. Most clubs, however, abide by the principle “teach the skills the student needs, rather than the skills you decide to teach”.

Summary

Every club has a tiered system of course offerings, usually in classrooms, which allows students to progress from beginner status to more advanced users in whatever field takes their interest, providing that qualified – and usually enthusiastic – volunteer trainers can be identified.

While most clubs offer one-on-one initial training, some lack the volunteer resources to do this. However, the highest number of trainees in a beginner's class does not appear to exceed six, with two trainers sharing the load.

For more advanced training, on Microsoft applications for example, the number of students increases to about 12 per class (dependent on the number of workstations in the room), with a trainee to trainer ratio of four to one.

The vast majority of training offerings by clubs are in classroom-based training, for both long and short courses. Long classes are three hours per week for up to five or six weeks, while short courses tend to be two hour workshops. Special Interest Groups cater for those with a special interest and generally meet for three hours once a month.

Study details

The project undertook a review of the training methodologies generally used to deliver training by ASCCA's 150 member clubs around Australia. This review included the techniques used to deliver this training in both physical classrooms and via online (virtual) classrooms. Physical classrooms demand fixed time and attendance for the delivery of one-off events which may be repeated by the student. Virtual classrooms generally offer flexibility in time of delivery and can be repeated.

ASCCA has defined different types of learning and teaching within two groups: synchronous and asynchronous. Synchronous training uses the same material, at the same time, at the same or different location, and uses learning tools that encompass both classroom and "virtual" classroom aspects of learning. Asynchronous training uses the same material, but can be at different times and from different places, using learning tools to cover those situations where courseware is delivered without the need for students to gather. More information on comparing both styles of learning can be found in *Appendix 3: Synchronous and asynchronous learning*. This has been adapted from work done by the Australian government program which produced the Australian Flexible Learning Framework² in 2008.

In this study, we decided to compare the results (measured by subjective student feedback on the success of learning outcomes in building their skills) of a traditional classroom course with that of a similar pre-set course online.

Asynchronous style learning

A number of asynchronous pilot courses were conducted using a pre-set internet teaching program featuring videos, demonstrations and examples to see if the traditional classroom course could be replaced by an offline course run via the internet.

In these pilots, 35% of students (classified as "tech savvy users") were very comfortable using Windows 7, and somewhat familiar with Windows through use of previous versions and 65% of students had just completed ASCCA's "Fundamentals" course, but were not familiar with Windows except in general terms.

Synchronous style learning

A group of over 20 trainers (ASCCA Training Champions) from Seniors Computer Clubs around Australia were recruited to work with ASCCA professional trainers to determine how best to use online synchronous training. Over 100 seniors, many of whom were experienced senior classroom trainers, participated in online training using either "Blackboard Collaborate" (BbC) or "Skype" from all over Australia. BbC is an online application used by many Australian universities to facilitate interactive training. The objective was to introduce them to the online course environment and to have them evaluate outcomes through subjective feedback.

² See www.flexiblelearning.net.au

The sessions were in presentation/live demonstration mode, with lots of opportunities for student feedback. No video of presenters or students was used because of bandwidth constraints at various student locations. Students had the ability to ask questions using audio or via an online chat facility which enabled comments to be shared with the whole class or with specific individuals in the class.

After the session, students were able to:

- a) Revisit the session and replay any parts of it they wished;
- b) Download copies of all slides used;
- c) Download a copy of the chat sessions (which are time stamped);
- d) Download any URLs quoted during the session.

Sessions were also run using the “multi-access” version of Skype where up to 10 students at a time were able to participate and to view online presentations. These were run as workshops with notes emailed to students, who could then interact with the trainer and other students. This is a simpler approach to BbC without the advanced features.

The classroom model

ASCCA’s experience has shown that the most effective model for delivering computer skills to all categories of students is the classroom model. It is also the most inefficient because of the resources needed to deliver and the time taken for delivery.

Classroom **technologies** used by our clubs usually seat between six and nine students, each at a workstation equipped with a desktop or laptop computer. The classes are run by a trainer who is assisted by two or three tutors (on average one tutor per three students) who assist students that may be having difficulties. The classes typically run for four weeks and students attend once a week for 2.5 to 3 hours, including a break for morning or afternoon tea. Students are provided with a manual which explains in detail how to perform particular tasks and which also contains various student exercises. Each course is divided into modules of new skills to be covered, usually 24 – 30 per course.

The **process** steps involved in the training are as follows:

- Trainer revises – the trainer summarises any skills covered in previous lessons and answers questions as they arise.
- Trainer tells – the trainer then outlines what new skill the class is about to cover, and sets it in context by explaining why they are learning it and what use it is to them.
- Trainer shows – the trainer then slowly shows class how to perform the skill, carefully explaining use of keyboard, mouse, mouse buttons, etc.
- Trainer re-shows – usually with a different example that may demonstrate another use of the skill.
- Class does – the trainer gets direction from the class on what to do when, allows mistakes to happen if class direction is incorrect and class can see the result, then goes back to where the mistake occurred, and continues to the end.
- Class discussion – where any questions are explored and answered by other class members or by the trainer.
- Class does – class completes a student exercise following directions in the manual. The tutors are on hand to help with any student needing assistance.

- Q&A – opportunity for any class member to raise questions about skills learnt or to share anything else they may have discovered whilst doing the exercise.

The tea break is important to the learning experience because students enjoy sharing experiences they have had with the course, or related courses, and are generally a useful way for seniors to encourage each other.

The classroom model (or its one-on-one variant) is the most suitable way to teach “absolute beginners” basic computing skills. However, the growing problems of finding suitable trainers and tutors, the rate of change to traditional programs being taught in clubs, and funding the necessary classroom and computer laboratories necessary to conduct such classroom training are driving the need to find alternative learning models that work for seniors.

While this classroom model leads to successful learning outcomes in a vast majority of cases, the question arises as to what happens when classroom, trainer, tutors and manuals are removed and replaced with offline and online equivalents.

Asynchronous offline learning

This learning model is aimed to allow student self-study at a time and place to suit them. There are no trainers or tutors involved at the point of delivery of the skills training. The materials have been previously prepared for student use.

One example of such courses is the series of books called “XXXXX for Dummies” which are popular amongst adult professionals to get a quick insight into the workings of various applications. Although they try not to use computer jargon, seniors often find them confusing after the first one or two chapters.

Some material comes in DVD format. For instance, Telstra and the New South Wales Department of Ageing have produced a set of DVDs aimed at “Tech Savvy” seniors to cover specific topics, such as social networking. Each topic consists of a video which sets the scene and then explains how to perform that skill. The language is simple and is subtitled in large capitals at the bottom of the screen. There are no manuals but the video encourages re-watching until the student is happy they understand the concepts and actions to take.

Other courses may be found online. There is a wide range of courseware available free of charge on www.gcflearnfree.org. This site offers modules of instruction, covering a range of computing skills, including video instruction and step by step illustrations. Many courses which cover application skills (such as “Using Word 2007”) ask the student to open a copy of Word in a second window and “toggle” between the application and the online tutorial. Needless to say, only the “tech savvy” students were able to deal with that. However, when “beginner” students in classroom courses were asked to visit the internet course and modules as part of home revision of what the class covered, they agreed that the material was a really great way to revise what they had learned, and that it made a lot of sense to them.

The **people** aspect of this model suggests it is suitable only for more experienced or “tech savvy” seniors.

The **process** steps preclude trainer interaction, and must rely on video or some introductory reading material to set the scene. As these are typically not aimed at seniors, they tend to be delivered quickly (in order to reduce video time) and use a great deal of jargon. The steps involved in performing a skill do seem to be well illustrated and use, for example, screen dumps and arrows to indicate where the cursor is.

The **technologies** used are stand-alone or rely on the internet, depending on the media used. The “modified” approach discussed below makes use of trainers in workshops, and tutors are available for assistance if required.

The traditional course was “Introduction to Word 2007” and takes four weeks of 2.75 hours per week (including afternoon tea break). There is an instructor and four helpers. The class is for up to 12 students, who have prepared for the class by completing a 15-20 hour “Fundamentals Course” on desktop computing, including the use of the internet and Windows 7. For our replacement online course, we chose a course that is available free of charge on www.gcflearnfree.org/word2007. It is one of many such courses on the site. It offers modules of instruction, covering how to use Word 2007. It includes video instruction and step by step illustrations.

Observations

The “tech savvy” users enjoyed the freedom of completing a course offline at their own speed. Some were happy they did not have to keep up with the rest of the class while others were happy not to be held back.

The “beginner” students struggled with understanding whether they were in a “live Word 2007” screen, or an internet “Simulated Word 2007” screen and had the usual trouble dealing with folders and files on their flashdrive. After completing the first four modules of offline training, all “tech savvy” users were able to complete the exercises they would have been doing during day one of the traditional classroom course but less than 10 per cent of beginner students were able to do so.

There is clear need for all students undertaking such offline learning to:

- a) Have a clear understanding of Files and Folders used by Windows;
- b) Be able to recognise when they are in an “internet” window where they can watch a demonstration of things, compared with when they are in an “application” window where they can do things;
- c) Be able to toggle between “internet” and “application” windows;
- d) Be aware that instruction material on the internet often has arrows with instruction boxes with instructions such as “click here”. Students have to realise that nothing will happen if they click that box while in the internet window watching a demonstration;
- e) Be aware that when video material is used at the beginning of modules, not all 12 students should click to download such material at the same time as this will cause internet response to slow considerably;
- f) Use headphones to listen to audio-visual material so as not to interfere with other students’ learning.

As a result of this, the approach was modified so that:

- Manuals would be produced;

- A workshop would be run at the beginning of the exercise to reinforce:
 - Files and folders
 - Accessing and using the website pages and material
- Tutors would be onsite at the club so that, if students wished to attend the club to complete the offline course, they would have access to timely assistance.

Modified asynchronous offline learning

Methodology

As a result of earlier observations, earlier approaches were modified to improve the learning outcomes. This included:

- Supplying manuals with printed versions of material covered in the offline modules so that they could refer to it while working in the Word 2007 application. This meant students no longer had to toggle between windows. This was of greater benefit to the “tech savvy” users and helped them complete the course more rapidly. The benefit for “beginner” students was limited, with feedback indicating they were still feeling unsure of what they were doing.
- Having a two hour workshop which:
 - Set the scene for the course of study ahead
 - Reviewed the manual and the exercises that students would complete. These were the same as they would have completed during the classroom course.
 - Reviewed how to manage files, folders and drives – storing and retrieving material.
 - Accessed the website and reviewed how to complete offline learning modules.
- Making a tutor available so that students attending the computer club to do the course could get immediate assistance. This helped a few, but most (beginners and tech savvy alike) wanted the enjoyment and bonhomie of the classroom experience.

Most students reported that they had finished the offline course modules and completed the exercises (although less than half brought the exercises to tutors to check they were accurately completed) and the average score out of 5 was 3.4 (a typical classroom score is 4.6 out of 5). It was noted that, within 6 months, many of those who had completed the modified offline course had enrolled for the traditional classroom course. However, it is not unusual for seniors to enrol twice for courses offered by clubs as the second round often reinforces the learning.

Changes were also made to the traditional classroom course. The weekly revision exercises in the classroom course manual were replaced with pointers to relevant modules of the www.gcflearnfree.org/word2007 course. Students agreed that the material was a really great way to revise what they had learned.

Lessons learned

This study concludes that the modified offline approach is best targeted to “tech savvy” students who have the self-confidence in their computing skills to succeed. They use social media (typically Google+ or Facebook) to get help from other club members whenever they strike a problem, and will share “learning gems” with others. It is a rewarding self-help approach to computer skills building.

Overall the study demonstrated:

- a) A workshop covering basic files, folders and drives knowledge is essential to build confidence in offline learning.
- b) It is essential to have helpers available as people using online courses often get confused.
- c) Good oral/demonstration instruction at every phase of the learning process is essential.
- d) It is important to decrease the amount of detailed written instructions and encourage experimentation to get students accustomed to trying to work out solutions for themselves.
- e) This type of learning is best suited to “tech savvy” users.

Synchronous online learning

Methodology

This learning model is aimed at replacing the physical classroom with a “virtual” classroom online, where, at a given time, students can enter the session and have audio-visual communication with a trainer (a “moderator”) and fellow students. Students may sign-in from their home, from a club location or an internet café. Only the time and the material to be covered are set.

The application software chosen initially for this was Blackboard Collaborate (BbC) because it is used by a majority of universities and many TAFE colleges around Australia, and ASCCA’s membership of Adult Learning Australia gave it free access to the application.

At the core of BbC is web conferencing, which gives the functionality needed to support a virtual classroom teaching and learning environment. It has two-way telephony (using VoIP), multi-point video, a built-in phone conferencing system, an interactive whiteboard, application and desktop sharing, rich media, breakout rooms, mobile collaboration, and session recording. Its developers claim that “educators and students can engage as if they were in a traditional classroom, with as good as, or even better, outcomes.”

With the willing assistance of Keith Harvey, a life-time member of Muswellbrook Seniors Computer Club and a Moderator for Adult Learning Australia, we started offering courses online to selected “experienced tutors” in member clubs across Australia. Later, we invited less experienced members to attend, and demonstrated a live session before a 40-person audience at the 14th Annual ASCCA Conference in Sydney.

The **people** we involved in this study were initially “tech savvy” tutors and senior tutors from clubs, and later more “beginners” became involved. Feedback from students has always been positive with an average rating of 5.6 out of 7, and all rated the session content as very useful, and the presenter as excellent. Online problems were considered minor due to the fact that if a student dropped out the BbC software would reconnect them promptly.

The **process** aspect allows many of the same procedures to be followed as in a traditional classroom, with the possible exception of the “class does” step. All the sessions that were run were more oriented towards information giving than doing. Students were encouraged to replay the session (which was taped and stored online), and to pause at various times to practice what had been shown and discussed. It is possible to break the session and allow students to practice what had just been

discussed. This typically enhanced the Q&A session which followed. Sessions run in this way would also often incorporate a tea break and stretch over a longer time period.

The **technologies** aspect is internet dependant and the measure of satisfaction with the experience is somewhat determined by the speed and reliability of the connection to the Internet. Many of the features of BbC were not used during the sessions. Frequently, video access was disabled because of the slower speed of some student connections. The sessions did make good use of 2-way VOIP, whiteboard and application sharing, but made little or no use of breakout rooms, mobile collaboration or desktop sharing.

In some sessions, a small audience was gathered in club classrooms, where the session was projected onto a screen, but only one person in the class was actually connected to the virtual classroom. That person acted as the conduit for questions arising from the class. The biggest benefit of this approach was that students could be logged onto a computing resource and be using the application being presented and “doing” whatever was being shown simultaneously. This, in effect, was a way of replacing the “trainer” with a virtual “moderator”, solving the club’s problem of finding someone with the skills to train a particular subject area or new development, etc.

Lessons learned

This approach offered a number of benefits to clubs in delivering training and sharing resources. Overall the study demonstrated:

- a) 1.5 hours is too long for a session that is just a presentation/demonstration.
- b) Learning must include “seeing, hearing and doing” sessions concurrently, so breaks must be incorporated where students can “do” what has been covered. Students who attended a BbC session on Android tablets were very happy because they could follow what the presenter was doing as the presenter had a tablet with her during the session.
- c) The ability to ask the Moderators questions on the material presented is very important.
- d) Moderators need to be subject matter literate, but also need to feel comfortable driving the BbC application and this could be very time intensive for clubs and ASCCA as a whole. Fortunately, the BbC application has a facility to allow trainee presenters to set up their own virtual classroom (for 1 presenter and 2 students) so that they can practice.
- e) There is quite a deal of work needed to turn a classroom course into a form useful to training seniors using BbC. Students would need hardcopy of material available for them to use as reference, or they may not remember material covered during the session.

Moderator training

Following the success of the BbC pilots, we decided to train more moderators. While many of our members were most happy to use BbC as a learning tool and attend classes, very few felt confident enough to take on the role of moderator. This role needs general technical computing skills for problem solving on the fly, and in-depth knowledge on the subject being presented. The sort of general knowledge needed by Moderators is outlined in Appendix 4: Skills for a “Moderator” or “Presenter”.

The training of moderators is enhanced by BbC as prospective moderators can set up small virtual classrooms (maximum three attendees) to practice their delivery. They can see what is being

displayed on their “moderator” screen, and what is actually coming across the internet to the student’s screen. Sometimes, for instance, a video which is perfect on the “moderator” screen is very jerky on the student screen.

We were able to recruit eight people who completed the initial moderator training, which is run along traditional processes. However, only four completed the training by presenting (for critique) a 10 minute BbC session. The people who are trained as moderators will continue to offer online courses using BbC, but no more moderators will be trained. It is felt that the investment in time needed to find and train moderators on the BbC system is not warranted.

Multi-student access using video

ASCCA is now trialling the use of multi-access Premium Skype as the vehicle for delivering workshops and courses. Sessions are easily arranged, flexible in duration, and inexpensive. Combined with email communication to append notes and manuals as required, Skype offers all the tools commonly used by our online trainers, and is very familiar to many members. Participants who are new to it find the learning the software is much easier to understand and use than BbC. For student participants, the Skype access application is free of charge.

Features of Premium Skype of most interest to ASCCA trainers are:

- Group video calls (up to 10 per session)
- Group screen sharing
- Group calls (for those who only want to listen in)
- For the best video quality, a high-speed broadband connection of 4 Mbps down/512 kbps up and a computer with a Core 2 Duo 1.8 GHz processor. The minimum needed is a high-speed broadband connection of 512 kbps download/128 kbps upload and a computer with a 1 GHz processor. Most seniors have these in place, but will certainly be available after the National Broadband Network (NBN) is available
- The ability to use Skype on a wider range of mobile devices. BbC may not work on devices such as iPads without an app

There are some disadvantages when compared with BbC. Firstly, substituting headphones and a microphone for speakers and a webcam microphone will disable the sound so that the YouTube video may not be heard. In reality, it is not necessary to present YouTube through Skype as this is readily available to everyone with an internet connection.

Secondly, the shared screen does not allow true collaboration, meaning the student cannot place input into the shared screen, but can, however, discuss, ask questions and make known any participant concerns in the chat window, which is all seniors want to do.

Thirdly, there are many more tools available in BbC that are not available in Premium Skype, but many of these were not used in the sessions we examined.

ASCCA tested Skype outside its normal video and chat capabilities, and looked at screen sharing using internet connections, Google, YouTube video, PowerPoint and Word. The test was conducted with *Westlakes Computer Club*.

Four trainers were in the training room participating as students and giving feedback. We were able to demonstrate how to perform tasks in all programs and in a classroom situation: participants had their own PC and applicable training notes which would be emailed to the club prior to any presentation. Any existing training material could be used as is (usually in Word or PowerPoint format) since it was not going to be loaded into the Skype program.

Skype, as a freely accessible program, makes planning, preparing and running online sessions very easy and participant numbers do not have a large bearing on the actual presentation. ASCCA will now run a Windows 8 online training session using Skype offered to clubs who are new to Windows 8 and who would benefit from an overview of this new operating system.

Other application software solutions

ASCCA will continue to investigate other alternatives to BbC and Skype. A review of “Google+ Hangouts” has commenced. As well as multiple interactive video streams and screen sharing, it seems that sessions are recorded for easy access by participants to review the session afterwards. This replay is of great benefit to seniors while they learn and practice new skills.

The solution used by ASCCA Clubs will depend on:

- What the trainer is comfortable with;
- What the students are familiar with using;
- The complexity of the subject being taught (i.e. the level of interactivity needed, the need to break into small groups for discussion, etc).

The greater the need for complexity in the course and higher the level of skill in participants, the greater the chance BbC will be used. For other courses, less complex solutions are preferred.

Keeping in mind student needs

Tips for trainers

1. A classroom or one-on-one training experience of up to 15-20 hours is the best introduction to computing for beginner students. If the beginner is not able to participate in a class, or a club is not available, recommend the purchase of *Take the Teacher Home* training program. This training material is not difficult to use and gives the learner complete control over their learning activities.
2. Plan for use by students with physical disabilities. Have a section that deals with how to do things like change the mouse double click speed, mouse speed, button swap, cursor size. (see ASCCA Train the Trainer manual, pages 3-7, also the ASCCA accessibility manual).
3. When students are stuck encourage them to step back and think about:
 - What operating system?
 - What program?
 - What were they doing at the time?
 - What do they want to do?
4. Encourage students to explore and try. A first time accident is a learning opportunity. Only when it's repeated over and over is it a mistake. How does the student learn not to repeat errors?
5. Encourage students to use first principles. New computer users will take a while to learn, but increased confidence will enable DIY fixes.
6. Be familiar with file management. The file system structure and navigation is a skill that many seniors struggle with and really need to become comfortable with.
7. Do encourage trainees to write down steps and it's much better that they write the steps in their words. While many passwords are safe to record, stress that they should NEVER write down any passwords relating to financial or personal details, and they should NEVER divulge them to you or others.
8. Break explanations into simple distinct steps with a logical flow. Once they are happy using the steps to solve their immediate problem, indicate where else these steps might be used.
9. Do check out the ASCCA training manuals. They are fully available on the web page www.ASCCA.org.au.
10. Explain when to use Windows Explorer during use of learning program.
11. Explain the special folders: 'My Documents', 'My Pictures' etc. These are for users to store files that they create. Only students can decide how to arrange them.
12. Remind students how Windows can have many windows open and that each one will have a matching button on the taskbar and that a 'minimized' window will only have a button on the taskbar.

13. Explain that there is only ever one 'active' window, that it will be on top of others, and that its button will be depressed on the taskbar.

14. Two useful internet sites that explain how to complete tasks:
 - i. Wikihow: www.wikihow.com/Category:Computers-and-Electronics
 - ii. eHow: www.ehow.com/computers/Their (or similar) sites might be referenced in your learning program.

15. The days of writing complex pages of ASCCA training notes are no longer warranted. There are good examples of training manuals, such as <http://www.mousetraining.co.uk/training-manuals/> which are free. The manuals may not be quite up to date, but they are still useful. In future, ASCCA notes will be short, succinct and numbered, easy to follow without excessive printing costs.

Tips for students

DIY Fix #1

Right Click Menu – using the middle finger. The trick is to recognize which ‘object’ to right click on to get the appropriate menu. Objects are often ‘contained’ or ‘sit’ on other objects – eg icon objects are on the desktop object; file objects are inside folder objects.

DIY Fix #2

The Mouse Cursor – watch its shape. It can change quickly so watch its shape when you click or drag with it. The shape gives a valuable clue as to what is happening, or about to happen.

DIY Fix #3

Control Panel – don’t be afraid to tweak it. Don’t put up with a recalcitrant mouse, an oversensitive keyboard, a difficulty in seeing the cursor or having an annoying screen saver. The settings are yours to play with.

DIY Fix #4

Cut, Copy, Paste and Undo – practice using. They are one of the best features of Windows.

DIY Fix #5

The ‘My...’ folders – YOU have to organize them. These are folders especially for your use. You need to decide on a folder structure and create it. Just like organizing the furniture in your house to suit your way of living. And, just like furniture, when you have organized suitable folders and sub folders, don’t be afraid to alter it!

DIY Fix #6

Windows Explorer – the tool for organizing your stuff. Get comfortable with using it. Create a Sandpit folder, add sub folders, put copies of files in there, create a Sandpit 2 folder, move files and folders, move them between sandpits, copy them, rename them, and delete them. Anything to master Windows Explorer and its commands.

DIY Fix #7

Multiple Windows – let your mouse do the walking. You can drag objects between windows. Size and arrange the windows to suit yourself or RC the Taskbar to tile them.

DIY Fix #8

WordPad – it has all the important basics. Practice, practice, practice! Try all the menus and toolbars and ruler settings. Once you get conversant with them then writing emails or using Word will be a breeze.

DIY Fix #9

When you're in a hole – stop digging. Stop and have a coffee and work out what you've possibly done. Will Undo work? Can you go back to an earlier Save? Is a phone call better? Always remember that the first time you stuff up is a 'learning opportunity'. A mistake is when you repeat the action, having failed to learn from it.

DIY Fix #10

Don't ever give up - it's just a dumb machine. Don't let it bluff you. The creators just happened to be over endowed with logic genes; however you don't have to be a nerd to use it for what you want to do.

Remember:

Any reference to clicking, double clicking, selecting, dragging is ALWAYS the left mouse button.

The right mouse button opens a menu of commands '**relevant to what object was right clicked on**'

Drives are the physical storage device.

Folders are 'containers'. They reside on 'drives'. They can contain any mix of (sub) folders and files.

Files are documents, pictures, programs etc. They can reside on a drive (undesirable) or in a folder or sub folder.

When "googling" for a solution:

- Be specific about what program is involved – eg Picasa, Publisher, Word, Excel. (With Microsoft products, it's sometimes a good idea to enter it as MS Publisher or MS Word etc).
- Remember the one word action you are trying to do – eg create, fill, draw, burn.
- Remember the one word 'object' you are dealing with – eg CD, DVD, shape, text, file.
- If it's an error message you're trying to find out about then enter exactly a small amount of the error message. Even enclose these words within quotes.
- Keep it simple. Remember less words = more results
- Do skim through the first 1-2 pages of results seeing if anything looks like what you are after. Sometimes the answer will be at the top of the results but more often somewhere on the first couple of pages.

Recommendations for online training

Session structure

In summary, ASCCA is working on developing “Seniors Online Training Pathways” and something that will be developed and adapted to suit needs as we move into this form of delivery. It must always be remembered that a senior totally new to computers and the internet will always gain the most benefit from a small group including hands-on introduction with a trainer, and preferably helpers, especially where a number of participants are in the group.

All the online training in the world cannot prepare a senior for their first steps. Given that the Broadband for Seniors (BfS) kiosks are operating Australia wide, there is an opportunity here to reach beginners through volunteer tutors and help them move onto the next level. The BfS program runs webinars on a regular basis for trainers. One thing to note is that the kiosk computers can now access Skype (which was previously locked out) so that students can be prepared for participation in further training using Skype.

This project has found that to obtain the best results it is best to identify a suitable software application to deliver the training directly to participants online from one main location (the ASCCA Learning Centre) such as Skype, Google Hangout or BbC, taking into account the following through a needs assessment:

- Target Group – Who are they? – How do we reach them?
- Subject Relevance – What do they want to learn?
- Affordability – How much will it cost?
- Practical Application – Can the participant practise hands on after the online demonstration?
- Support – Where does this come from?
- Follow on – What happens next?

AND

Use any of the existing online training programs in a classroom situation with a tutor where participants can work through at their own pace. These could also be used in an Open Access program, which is good when you have a vacant room with the equipment available and trainers are not available. Just one person needs to be responsible for the booking, taking fees (where appropriate) and making sure the participant can follow the lesson as it progresses. Administration and co-ordination challenges to implement this will need to be solved.

<http://www.gcflearnfree.org/computers>

<http://www.win8training.net/> (Windows 8 Online Training Program)

<http://www.mylearningnow.com/courses/freecourse.html>

<http://www.top-windows-tutorials.com/cloud.html>

<http://www.forwardit.sa.gov.au/home>

<http://www.necseniors.net.au/training-resources/online-lessons/>

<http://windows.microsoft.com/en-au/windows/how-to>

Future session content

The following suggestions were collected from participants in online sessions run during the pilot period.

- Calibre and ebooks
- MS Office
- Photo editing and management
- Genealogy
- Freeware and Shareware
- How to create and run a BbC session
- Cyber Safety and Scams
- Windows 8
- Google Hangout
- Dropbox
- SkyDrive
- Paint.net

Conclusions

A great deal of time, and volunteer effort, is expended every day in many locations throughout Australia to deliver basic computing training to seniors. By far, the majority of effort is directed at beginners who are receiving one-on-one training in topics such as how to access and use Microsoft-based desktop computing environments, to file and restore information, write emails, access the internet and understand the potential of using computers.

There needs to be a better way of getting seniors to accept online computing technology as a way of dealing with the world, given:

- The amount of change in the computing environment
- That even Microsoft itself is moving from desktop computing to cloud-based offerings
- That Apple and Google have become major players in tablet and smart phone technologies that are rapidly taking over from desktop computing as far as senior computer users are concerned (few require serious computing)
- That the Trainers of these seniors are themselves tested by the rapidity of the changes and are also no longer using their older desktops in favour of the much more affordable tablets, laptops and smartphones
- The ease of use of cloud-based solutions (albeit with its increased security risk)
- The rising costs for computer clubs to afford physical locations for training of seniors

Our present training only goes so far in meeting the challenges. Any new training must, however, be based on what we have learned about how seniors are best trained, so that they understand and confidently use computers. Therefore, we need to train our trainers on new approaches and new courseware involving the needs identified.

In order to meet this need, ASCCA intends to create an efficient, senior-effective online training scheme for our club trainers using Premium Skype (or similar), to give them the confidence to adapt what is delivered within our member clubs.

Appendix 1: Basic computing skills for “Beginners”

Appendix 1 shows what minimum standard of computer experience a senior student should have before being classified as a “Beginner” rather than an “Absolute Beginner”. (Our thanks to the Woodrising Neighbourhood Centre BFS kiosk group for this work).

PC - Start and stop a PC correctly
PC - Identify that an active anti-virus program is functional and up to date
PC - Use the mouse competently; open a right click menu and use a command on it
PC – Locate and open programs from the desktop and Start menu (orb)
PC – Manage multiple windows using max/min button, taskbar button and click to front.
PC – Resize a window and move it on the desktop
Internet – Go <i>directly</i> to a web page, eg www.abc.com.au or www.bom.gov.au
Internet – Navigate on web pages – eg Australian Holiday Stories at www.australia.com
Internet – Fill in fields on a web page – eg plan a bus, train trip on www.131500.com.au
Internet – Use a search engine to find items of interest eg great ocean road
Internet – Use the home, back and forward buttons
Internet – Save and use favourites / bookmarks
Wordpad - Type 3 paragraphs of text.
Wordpad – Navigate and edit text using the mouse, arrow, backspace and delete keys
Wordpad – Select text and change its font, font size, font colour, bold, italics and underline
Wordpad – Use the menus and toolbars to edit text
Wordpad – Save a document; locate and reopen a saved document
Wordpad – Use cut, copy and paste to edit text
Wordpad – Use the Shift, Caps Lock and Tab keys correctly

Email – Create a gmail (or Hotmail) account:	Eg jsmith12@gmail.com or jsmith12@hotmail.com
Email – Log on and off the new email successfully. (Ensure name and password recorded)	
Email – Create and send an email using both direct typed addresses and saved contacts	
Email – Create contact(s)	
Email – Send an email with attachment(s)	
Email – Receive an email with attachment(s), save them and then open them	
Email – Forward an email, making sure to removing extraneous email addresses	
Filing – Create folders and sub folders in My Documents or similar	
Filing – Save a file(s) to the created folders	
Filing – Move files between folders; delete and rename files and folders	
Filing – Restore deleted folder/files sent to the Recycle Bin	

Appendix 2: Readiness for online learning checklist

To help you decide if you are ready for online learning, respond to the following statements by clicking "Agree" or "Disagree" or "Neutral". Your responses can certainly help to identify strengths and weaknesses for success in the online learning environment.

Question	Agree	Neutral	Disagree
(e.g.) I am self-motivated and self-disciplined.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am comfortable with e-mail.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am comfortable with word processing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can read analytically and critically.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am generally comfortable using the Internet to find specific information.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am confident in my academic abilities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am comfortable navigating the World Wide Web using a Web browser.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have commuting problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have conflicts with work, athletics, or child care and school activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have convenient and frequent access to an adequate computer with an Internet connection.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am willing to try something new.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am willing to express my thoughts and opinion in writing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am willing to actively participate in the learning process by doing tasks, projects, etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am willing to interact with my peers in a collaborative learning environment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I do not give up easily, even when confronted with obstacles.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Number of Agree answers: Neutral answers: Disagree answers:

If you had 12 or more "Agree" answers, you are probably well prepared to take advantage of an online opportunity. Otherwise, you will need to talk to your Club Trainers prior to enrolling in an online course.

Appendix 3: Synchronous and asynchronous learning

This appendix shows the differences in classroom and online delivery for training classes and our assessment of what works/doesn't work so far for seniors.

This has been adapted from work done by Australian Government Program (see www.flexiblelearning.net.au) in producing the Australian Flexible Learning Framework in 2008.

Methodology	Training Goal	Traditional Classroom	Online Delivery for Seniors
1. Lecture	<ul style="list-style-type: none"> To convey large amounts of information Information sequenced for full understanding Assumption that students do not have the information 	<ul style="list-style-type: none"> Instructor presents verbally Presentation tools and technology used for clarity and visualization 	<ul style="list-style-type: none"> 2 or 1 way Interactive Video Audio chunks with graphic clips Not a good learning option for seniors
2. Demonstration	<ul style="list-style-type: none"> To show Object To show Process To show Relationships 	<ul style="list-style-type: none"> "Items" brought into classroom from "outside" Application demonstrated Role play/drama enacted 	<ul style="list-style-type: none"> 2 or 1 way Interactive Video Produce streaming videos Provide "storyboard" visuals with narrative Suitable for computer savvy seniors
3. Dialogue – Trainer and Student	<ul style="list-style-type: none"> To ask questions To answer questions To elaborate concepts To clarify meaning To see if students are awake and following the flow 	<ul style="list-style-type: none"> Have discussion about topic Hand raised by student during discussion Questions asked of specific student 	<ul style="list-style-type: none"> 2 or 1 way Interactive Video Asynchronous email Synchronous chat Asynchronous forum Suitable for computer savvy seniors

Methodology	Training Goal	Traditional Classroom	Online Delivery for Seniors
4. Dialog --Expert Resource and Student	<ul style="list-style-type: none"> To bring in different points of view To share expert opinion and knowledge 	<ul style="list-style-type: none"> Experts invited to speak and discuss in class Students asked to find experts outside of class 	<ul style="list-style-type: none"> Students asked to find experts outside of class Experts contribute to forum Videotape Expert and put on-line This could be useful option for seniors in group sessions
5. Resource Access is Asynchronous	<ul style="list-style-type: none"> To have students gain exposure to more in-depth knowledge To allow access to on-line pre-set courses with video/audio demonstrations and sample exercises. 	<ul style="list-style-type: none"> Assignments of Web Resources, Multimedia & other experiences for online class exposure 	<ul style="list-style-type: none"> Trials during the study showed this works for computer savvy seniors but no other seniors
6. Resource Access is Synchronous	<ul style="list-style-type: none"> To provide more robust & authentic experiences that require instructor interpretation To offer comparisons and contrast 	<ul style="list-style-type: none"> Film and Video presentations Present information and/or data that are in conflict and students must process in class to resolve 	<ul style="list-style-type: none"> During online sessions, present short pieces of information and/or data that are in conflict, and students must process in class to resolve Does not work with seniors online

Appendix 4: Skills for a “Moderator” or “Presenter”

This is a brief checklist of skills that a budding moderator might need. Do the checklist without panicking. If there is anything that's a bit hazy or you don't feel confident about, then see one of the more experienced moderators or trainers.

WINDOWS

- Minimize, maximize, resize and move a window
- Explain what these different mouse cursor shapes mean
- Locate and open a program from the Start menu
- Create or put a shortcut on the desktop
- Recognise the difference between a shortcut and a 'real' file
- Change the desktop background using the right click menu
- Turn the screensaver on/off and adjust its time or other settings.
- Adjust the mouse speed, double click speed, pointer shape etc
- Open Windows Explorer. Show / hide the Folder view
- Change the View in Windows Explorer. Sort the files.
- Create a new folder in 'My Documents'. Add some sub folders.
- Move files from one folder to another
- Copy files to/from a USB memory stick to the My Documents area on the PC
- Safely remove a memory stick from the PC

INTERNET

- Google for instructions on how to change the desktop background
- Locate the webmail link on the Bigpond or other Internet Service Provider site
- Open a website from a favourite or bookmark
- Save a site as a favourite or bookmark
- Be able to change the home page

- Explain what the back and forward buttons do in a browser
- Be able to open a new tab in Internet Explorer and/or Firefox
- Open an existing link in a new tab in Internet Explorer and/or Firefox
- Be able to use the NEC Seniors training system

WORD PROCESSING

- Select or highlight text using the mouse
- Select or highlight text using the keyboard
- Colour text; using the text highlight pen
- Bold, underline and italicize text
- Left, right, centre and fully justify text
- Change font and print size
- Use bullets and auto-numbering
- Save a file in a new folder
- Use the 'undo' tool
- Use and explain common keyboard controls such as:
 - CTRL + A; CTRL + Z; CTRL + X; CTRL +C; CTRL +V
 - CTRL +U; CTRL +I; CTRL + B; CTRL + Page up/down
- Print one page of a multi-page document
- Save a file to removable media such as a USB thumb drive
- Cut, copy and paste text and pictures
- Copy text from a document or webpage and paste into a document
- Drag and drop text
- Use the spell checker; the grammar/punctuation checker. Explain their limitations.
- Change page orientation from portrait to landscape
- Add clip art to a document
- Add a picture to a document
- Add a text box that is independent of the other text on the page

- Add text to headers and footers
- Change tab and margin settings
- Explain the 4 different kinds of tabs on the ruler
- Add text over the top of pictures
- Crop pictures
- Use find and find/replace

POWERPOINT

- Create a PowerPoint presentation on given subject area
- Generate script notes for presentation
- Create exercises for students to “do” during presentation
- Practise and time delivery (allow 30% for time on student questions, fixing problems, etc)

SPREADSHEET

- Create a simple formula to add the contents of 4 cells.
- Format cells – eg so numbers show 2 decimal points, or are shown as \$
- Fill down and across
- Put a border around cells
- Select multiple cells: by dragging over; by Ctrl clicking; by Shift clicking

PICASA

- Crop a photo
- Adjust lighting in a photo
- Rotate a photo
- Add a tag to several photos
- Add photos to an album
- Import photos from a camera or scanner
- Move photos from one folder to another

Appendix 5: Profile pieces

Keith Harvey – Moderator



Figure 2 Keith Harvey running a Blackboard Collaborate session

In Figure 2 Keith demonstrates Blackboard Collaborate. His “moderator” session is on the upper screen. On the laptop screen are applications open and ready for sharing with students (participants).

Before he retired as an operator in a power station, Keith Harvey, the lead “moderator” for the ASCCA online training pilots, had experience in teaching, including time giving industrial training and Toastmasters. After retirement in 2006, there followed eight years as a tutor at *Muswellbrook Seniors Computer Club* where the normal training was one-on-one 'on demand' type tutoring, with some classroom based basic computing courses. He organised the Broadband for Seniors (BFS) kiosk program there, and created (and still continues to run today) the club’s website and manages the Google documents of members and tutors.

He no longer lives at Muswellbrook, but 130 kilometres away at Bolton Point near Toronto where he is very active at the local BFS kiosk. As a life member of the Muswellbrook club he keeps in contact with members by email and through online teaching. To show how adaptable the system is, he once ran an online session from his caravan whilst on holidays on the NSW south coast and has also participated in a session from Canada.

Keith has definite opinions on how seniors learn best.

"I feel that computer training of seniors is a two stage process. Stage 1 is getting the basics of windows, mouse, keyboard, internet searching, email and My Documents under their belt.

My experience is that at most 50% (Group A) will pick-up these basic skills in a hands-on classroom environment provided they have already been exposed to computers, can use a mouse well enough and may have had previous typing experience. The other 50% (Group B) will leave confused and dissatisfied with classroom type training however most are too polite to say so. I feel the BFS model is essential for Group B.

I liken this getting of basic skills to that of learning to drive a car, in particular mastering the steering, clutch and gearbox to the point where the car becomes an extension of the driver. If we think back to when we learned, (or we taught our children) to drive, it was very much one-on-one type training. Exactly what seniors need for the basics. I feel anyone only becomes comfortable with the computer when it becomes an extension of them in being able to reach out for knowledge, communicate, try a new program etc without struggling with a mouse, being baffled by standard windows things, not able to control files, unable to find a command etc.

So why do seniors struggle with classroom training for basic computer training? Hearing, eyesight, dexterity, new terminology, the 'plasticity' of the WYSIWYG interface, OS differences, different to their home PC, thinking they are too old, poor prior attempts at learning it- all play their part.

Stage 2 is much wider ranging and depends on what the seniors' interests are. Family history, photography, Skype, emails and more detailed searching the internet are popular topics with many; spreadsheet, word processing and Publisher with others. All these depend on the senior having mastered those stage 1 basic skills."

Keith is confident that ASSCA will succeed in training others to become Moderators and expand the online offerings to members.

"I will be very surprised if some of your champions don't pick BbC up pretty quickly. Presenting/moderating a session is not hard. Preparation for a session is little different to creating a PowerPoint based session where, besides creating the slides using good design principles, you figure out your patter, questions to ask the audience, ways to stop them getting bored.

Online interactive training gives you more opportunities for audience participation. The actual presentation (moderating) is not much different to knowing how to drive any program on a computer - practice and knowing its features and constraints."

ASSCA thanks Keith for his dedication to the training of seniors over many years, and his efforts in championing online training as a vehicle of the future.

Diane Brentnall – Training Co-ordinator

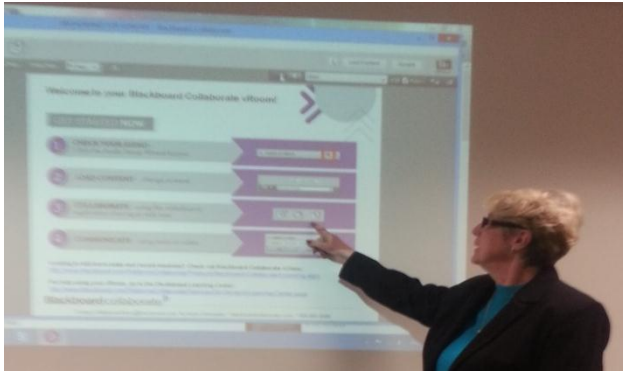


Figure 3 Diane Brentnall in presentation mode

Diane Brentnall is the Training Co-ordinator for ASCCA and has been responsible for driving the assessment and implementation of all classroom and online initiatives within the organisation.

“Seniors Online Training Pathways is a work in progress for ASCCA, and something that will be developed and adopted to suit the needs as we move into this form of delivery. One thing that must always be remembered is that a senior totally new to computer will always gain the most benefit from a small group hands-on introduction with a trainer (and preferably helpers if a number of participants are in the group). For the “tech savvy”, we have left time available in our next program to run online sessions, either as a demonstration or purpose driven on a particular topic. We just need to have a go and see where it takes us.

We tested Skype outside its normal video and chat capabilities and looked at screen sharing using Internet connections Google, You Tube video, Power Point and Word. This was most successful with accessibility and responds almost instantaneous. It worked beautifully, is simple, accessible and most people already know how to use it. We are looking at effective ways to offer an online session via Skype to clubs. The trainers must have a thorough knowledge of not only the topic they are presenting, but also the training software and how it all works.

Online trainers need to remember not to cover too much detail, and give students time during the session to practice what has been covered. Incorporating, ‘seeing, hearing and doing’ in the training program means all participants would need to have a hard copy of the material available for them to use a reference during the presentation, because they will never remember what was demonstrated, even in a 30 min session. And don’t forget the tea break if the session is going for 1-1/2 hours or more.

Another vision of an online training might be using the “virtual presenter”, a subject matter expert, with a number of ASCCA clubs (classes). Each club would have a trainer and a training computer connected to the data projector, and the whole group would then be able to see and hear the demonstration. Class members would have the opportunity to ask questions of their trainer who in turn would communicate them back to the online presenter. Maximum support for distant clubs, delivered economically.”

Appendix 7: Example notes used in conjunction with online courses

The Start Screen & Apps

- After logging in, Windows begins with the Start screen
- This replaces the traditional Start menu
- The coloured tiles represent apps
- Apps are short programs obtained through the Microsoft store
- Some tiles can be active and show information
- This part of Windows is mainly about consuming media
- There are many hidden controls to learn



The Desktop environment is similar in many ways to Windows 7. The biggest differences are: the Start menu has been removed and replaced by the Start screen; and ribbon menus have been added to the windows

Finding Programs

1. Move the mouse to the bottom left corner and click the Start screen icon when it appears
2. Find programs by one of two ways:
 - a. Start typing the program's name and the Search screen will appear with some results
 - b. Right-click then click All apps at bottom right, scroll sideways through the program icons
3. When you find the program you want, you can click on to icon to launch it. The computer will choose the correct environment: Modern UI or Desktop
4. Instead of starting the program, you can create a shortcut to the program to launch it quickly next time
5. Right-click to see buttons at bottom left:
 - a. 'Pin to Start' creates a new Start screen tile
 - b. 'Pin to Taskbar' puts a button on the Taskbar

Finding Files

6. The Taskbar still has the yellow folder that opens the Libraries window. Its label has changed to File Explorer
7. Right-click on it to see Frequent or Pinned items
8. You can also type on the Start screen or go to Charms > Search and click 'Files' below the search box
9. Files, folders or locations can be dragged onto the File Explorer icon to have them appear in Pinned items

