

E-learning for the Mature Age Worker

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Abstract

The current and projected skills shortage in many industries requires consideration of job seekers from the mature age cohort. In 2007 the Australian Flexible Learning Framework (Framework) commissioned research into E-learning for the Mature Age Worker (those over 45 years of age).

The aim of the research was to support the goal of increasing the use of e-learning practices, thereby supporting greater flexibility and efficiency in learning opportunities for the mature aged by

- Developing a picture of e-learning practice for the mature-age worker
- Developing a set of case studies that demonstrate good practice in e-learning for the mature age worker
- Developing guidelines to incorporate good practice in e-learning for mature age workers with a focus on up skilling or re-skilling.

Providers throughout all states and territories were interviewed, including private providers, industry/community services providers and VET public providers from rural and remote areas and in regional and metropolitan locations.

Introduction –the study context

Demographic change with an ageing population and workforce has created strong interest in Australia and overseas in strategies to maintain the motivation, skill level, and employability of older workers.

The importance of the mature aged to Australia's future workforce and prosperity is well illustrated by the following facts from a recent report: *Grey Matters*:

- Australia faces a potential shortfall of 195,000 workers in five years.
 - Between 1982 and 1992, 31% of labour market growth came from workers aged 45 years and over.
 - Between 2002 and 2012, 85% of the projected labour market growth will come from workers over aged 45 years and over.
 - Currently the Australian workforce increases by 170,000 per annum but Access Economics predict that the workforce will increase by only 125,000 for the whole decade 2010-2020.
 - The numbers of young people joining the workforce are declining.
- (Diversity Council of Australia, 2007)

Vocational education and training (VET) is the appropriate education sector to address the ongoing skills needs of older workers (NCVER, 2007). The role and use of Information and Communication Technologies or e-learning in VET for mature aged as a possible approach has been examined in a study on which this paper is based (Bowman and Kearns, 2008).

Study methodology

The *E-learning for the mature aged* study was for the Australian Flexible Learning Framework (Framework) in four parts-

1. *A review of relevant Australian and international literature to provide starting point sets of data to be taken up in the subsequent stages.*

The data sets included on possible segments of mature aged learners involving key characteristics and needs that could have implications for e-learning, and on key benefits, barriers, enablers and critical success factors in the provision of e-learning for mature age workers.

2. *The conduct of consultations with 30 selected VET providers of different types and across all states and territories to build a picture of current practices.*

The sample was identified by a range of networks consulted as to those VET providers most involved in e-learning with mature aged clients. A set of questions were developed that were used to guide all interviews.

Table 1 National consultations sample by jurisdiction

<i>NSW</i>	<i>VIC</i>	<i>QLD</i>	<i>WA</i>	<i>SA</i>	<i>TAS</i>	<i>ACT</i>	<i>NT</i>
7	5	6	4	4	1	1	2

Table 2 National consultations sample by provider type

<i>Private</i>	<i>Industry/enterprise</i>	<i>Public TAFE/Uni</i>	<i>Community</i>
6	5	13	6

3. *The conduct of four case studies selected from the national consultation stage to illustrate identified elements of good practice in a variety of contexts.*

The contexts included; an educational institute, a network of locations across small rural communities, a state-wide service organisation, and in adult and community education settings.

4. *The production of guidelines on good practice in e-learning for mature aged.*

The guidelines are brought forward as a draft set of guidelines that will benefit from being tested further in other industry sectors and community contexts. The guidelines aim to stimulate ongoing dialogue on how e-learning can best be adapted to the needs of mature age workers, including people returning to the workforce after an absence.

Key findings from the literature review

The Australian research base on the mature aged and e-learning is in an early stage of development.

The research environmental scan paper produced by Palmieri (January, 2007) found a large field of Australian literature on the topic of mature age learners and on the topic of e-learning literature. Intersecting literature on the topic of the mature aged in e-learning was found to be scarce. Connecting the topics of the mature aged worker and e-learning was a key objective of our literature review and overall study.

There is a significant knowledge base internationally on mature aged and e-learning.

In 2002 Kearns undertook an international study of policy for technology in education and training in ten countries (including Australia). He observed that the role of technology in education and training progresses through three stages of development and that several countries (e.g. Sweden, United Kingdom, and United States of America) stood on the threshold of phase three. We reviewed recent progress for the mature aged and e-learning study.

Phase One. The rolling out phase- of computers into schools and colleges with some professional development of teachers and development

Phase Two. The mainstreaming and integrating phase- of building the role of ICT into education in a more strategic way with more concern for objectives, and with linkages forged to overall education strategies

Phase Three. The transformative phase- of the way we learn through technology

Our literature review analysis is that in 2007 the European Union countries have advanced into the transformative stage and have several active e-learning for the mature aged programs. We provided a brief overview of activities in European Union countries in an Attachment to the research report.

Our literature review analysis of the evolution of the role of e-learning in VET in Australia is that the benefits of e-learning are increasingly recognised, and e-learning in the VET sector has progressed to the threshold of a transformative third phase of development, at least in general terms. The needs of older workers have not, up till now, been seen as a priority but the potential exists to extend the e-learning role to impact on mature age workers.

We noted that the British Educational Communications and Technology Agency (Becta) has concluded that the general direction of development of the e-learning role has been towards the more personal, social and flexible (Becta 2007 Vol. 2).

More personal

Technology has enable more individualised approaches to learning to be progressed with increase regard to individual need. Personalised learning is now more feasible.

More social	Learning together in networks and communities with people connected to each other for learning enhances the quality of learning, the generation of new knowledge, and learning outcomes overall.
More flexible	New technologies enable learning anywhere/anytime to be a realistic objective.

We established that these are attributes that research shows are valued by older learners. There is some recent Australian research as well as much UK research on the views of the mature aged on work and learning that counters a range of stereotypes and myths that act as barriers to their participation (for UK research see Withall, McGiviney & Soulsby, 2004).

The real story on Australia's mature aged we concluded from the recent research evidence is that:

- many are interested in continuing to work or return to work;
- many are willing to augment their skills through training;
- becoming competent with new technology, particularly computer skills is a common and high priority; but
- they want flexibility, the opportunity to work part time and to learn new skill sets;
- supportive work and learning environments are important; and
- learning opportunities that stretch but not stress them, are suited to their level of capability, are preferred. (APIA, 2007; Diversity Council, 2007, Lundberg & Marshally, 2007)

A connecting piece of research by Taylor and Rose (2005) on the topic of the mature aged worker and e-learning summed up the "older learner profile" as follows:

The overall picture is one of generally independent learners who have decided that ICT can help them meet a purpose, achieve a goal or in some other way enrich their lives, and, often, the lives of others in their personal circles or wider communities. They have a clear sense of their own purpose for acquiring new skills. The barriers to learning are largely those faced by all adult learners, compounded by the factor of being part of a generation that has not grown up with computer technology (p3).

Findings from the national consultations

We found similar views on the older person as a learner among those VET providers interviewed in the national consultations. Overall, the interviews had considerable value in adding to the evidence from the literature review. Use of e-learning among the 30 interviewees dated back more than 5 and up to 10 to 12 years for some. The majority had four or less years of experience in e-learning.

Although those interviewed brought considerable expertise in working with older people, it was usually in mixed age groups. Older workers had not generally up to

now been seen as a priority area for building the evidence base on needs and good practice.

Mature age workers engaged in e-learning among the providers in our national consultations included form several market segments as defined by ANTA (2002):

- large numbers were from the “learn to earn” market segment seeking upward career moves or a change of career. Others were return to work aspirants or retirees involved in e-learning for income supplementation purposes;
- small numbers were in the “learning leaders” group, undertaking e-learning for personal reasons, including for volunteering. These were generally seen as willing learners rather than forced learners, although often they had low literacy levels and needed training in ICT skills; and
- regarding e-learning, a majority could be said to fall into the learner categories of “only if you make it easy” or “almost there” that is, they usually needed to overcome some barriers.

Those interviewed were invited to rate barriers to e-learning for mature age workers in terms of a four-point scale. Teachers tended to see lack of IT skills and literacy problems, and mature aged attitudes to education as the main barriers. These were not regarded as insurmountable. Those interviewees with broader management responsibility tended to view cultural barriers such as stereotypes about ageing, and the attitudes of the employers and younger workers, as more significant.

Table 3 Interviewees’ ratings of barriers to e-learning for mature age learners

Barriers List provided for comment-	<i>Very Important</i>	<i>Important</i>	<i>Some relevance</i>	<i>Not Important</i>	Number*
Stereotypes about Ageing and Retirement	6	8	4	5	22
Attitudes to Older Workers	7	6	7	4	24
Attitudes of Employers and Younger Workers	6	6	4	7	22
Negative Attitudes to Education	6	9	7	2	22
Lack of IT Skills	9	9	7	3	28
Literacy Problems	6	6	9	3	24
Other Barriers Contributed by interviewees-					
— Access to Infrastructure	2	1	0	0	3
— Lack of Self Confidence	0	1	0	0	**1
— Technical Barriers (Bandwidth and Computers)	5	0	0	0	2
— Poorly designed e-learning resources and programs	1	0	0	0	**1
— Hardship/cost of training/funding	1	0	0	0	***1

*n=30 but not all interviewees gave answers because they had observed a range of views.

** This was mentioned by several interviewees in relation to other questions asked.

There was a stronger consensus on the importance of various identified benefits of e-learning from the learners' perspective than was the case in respect of the barriers question. All the listed benefits were regarded as Very important or Important by the majority of those interviewed. However, several commented that these benefits were achieved only if e-learning was done well.

Table 4 Interviewees' ratings of benefits of e-learning for mature age learners

Value and Benefits List provided for comment-	<i>Very important</i>	<i>Important</i>	<i>Some Value</i>	<i>Not Important</i>	Number*
Individualisation	17	5	5	0	26
Building Identity Capital	18	5	2	0	25
Flexibility	19	5	0	0	25
Fostering Lifelong Learning	11	11	2	0	24
Quality of Learning	11	8	3	0	22
Other contributed by interviewees-					
— Improving communities/connections	4	1	0	0	5
— Learning to Learn	1	0	0	0	1
— Accelerated Pathways	0	1	0	0	1
— Enhancing Reflection	0	1	0	0	1
— Can track individual progress	1	0	0	0	1

*n=30 but not all interviewees gave answers because they had observed a range of outcomes

There was a general agreement that e-learning can support an individualised approach to learning and that for the mature aged this was important given their diverse life and work experiences. The observation was made however that this was still a game in progress with the goal not yet achieved. Some commented that all learning should be individual client-focussed.

Identity capital was defined in the questionnaire as involving such qualities as confidence and self esteem, and hence a strong influence on the motivation and capacity of students to tackle and master new skills. This was a major theme during interviews. Once mature age learners have confidence in using technology, they generally go on to learn more uses of the technology and adopt more technology for learning purposes. This was a comment made by several providers. However, as one interviewee noted, a bad first e-learning experience is likely to put a mature age learner off this approach forever.

The importance attributed to flexibility was to be expected, with all those interviewed regarding this as Very Important or Important. A common theme here was that it enabled people to work at their own pace and to absorb learning.

The strong recognition given to the impact of e-learning in fostering lifelong learning, with 22 of the 24 who gave a response regarding this as Important or Very Important is a significant finding in the context of an ageing workforce.

That e-learning improves the quality of the learning experience was a notion contested by a few people interviewed because they had observed that e-learning can be done well or badly. E-learning has the potential of increasing the overall quality of the

learning experience if online resources and programs are well designed and other identified critical success factors are present.

An interesting feature that emerged was the way in which the people interviewed had directed their own professional development and fostering of expertise in respect of the role of e-learning in VET delivery. There were also indications of issues that remained to be addressed. Barriers mentioned in the interviews included:

- the sheer busyness of VET staff in meeting a growing range of tasks that sometimes led to professional development being crowded out by activities seen as more immediate priorities (i.e. not core business)
- some provider administrators not being positive about the use of ICT, perhaps for cost reasons ,and there also are dilemmas for administrators about web 2 technologies that are banned in many institutions.
- small providers being without a capacity to develop a professional support system. In comparison, TAFE organisations and larger community based and enterprise organisations had support networks built up and in for ongoing professional development in e-learning.

Guidelines for good practice provision of e-learning for older workers

The teachers and managers interviewed were of the view that anyone can develop the necessary skills to undertake e-learning. There was a strong consensus across the interviews on a few key points related to effective e-learning engagement and delivery strategies and resources for the mature aged that became the basis of the suggested guidelines in provision for older workers-

- view the mature aged as they really are;
- use blended learning strategies preferably, that is, a combination of e-learning and face-to-face learning;
- be clear about the reasons for and benefits of the learning; relate it to the previous life experience of older learners;
- conduct a careful orientation/induction process;
- build confidence, self esteem, and a sense of capacity to succeed (identity capital) in the orientation phase;
- provide supporting, engaging, and rewarding learning environments;
- take older learners slowly along the technology use for learning pathway, do not force the pace with Web 2 technologies such as blogs and wikis but do test their suitability to your particular group of mature aged;
- build motivation for lifelong learning;
- look at strategies to link e-learning into workplaces; and
- gain support from the top levels of the VET organisation.

The guidelines illustrated-four case studies

The four case studies undertaken demonstrate identified good practices in e-learning to support training and learning for the mature aged worker in a variety of contexts. The full case studies are contained in a separate report.

Case study 1 Community Services and Health Program: Gilles Plains TAFESA

E-learning is being used in CS&H programs at Gilles Plains Campus of TAFESA Adelaide North largely for reasons of effectiveness, in order to achieve quality outcomes- a trained CS&H worker with the employability skill of being able to use technology. A Blended Delivery Approach is used -a complimentary mix of traditional face-to-face classroom teaching and new, e-learning approaches.

The critical success factors for mature age student achievement through e-learning in this program include: a respectful approach, the use of an induction program in the use of computers and on learning styles, constant practice of ITC skills in the process of building course knowledge in the classroom under lecturer supervision; and the ready availability of support at all other times.

The case study is a good example also of how to embed innovative e-learning practice within a VET program. It involved:

- an effective change agent;
- an early adopter approach, with full implementation being achieved through others seeing the outcomes and benefits of the early adopters efforts and being encouraged to join in; and
- an active promotion strategy of the innovations to management to gain their support and to have e-learning embedded in the organisation's mission statement and practitioner performance measures.

Embedding e-learning in VET is a key strategic initiative of the Flexible Learning Framework from 2008 that will build on research by Jasinski (2006) in a follow up practical strategy development project managed by McCulloch.

Case Study 2 Certificate III in Aged Care: Barrier Reef Institute of TAFE

The Certificate III in Aged Care program has been developed in accordance with the Blended Distributed Delivery strategy adopted by the Institute Barrier Reef Institute of TAFE in response to the needs of students in smaller rural communities where barriers to access, including the supply of specialist teachers, could not be overcome by traditional classroom methods. The program was being undertaken by small groups of students in regional and rural communities in Cannonvale, Charters Towers, Burdekin, Cardwell and Palm Island, and especially by older women returning to the workforce after an absence of some time.

Key features of the program include:

- employing a team approach to facilitate a Blended Distributed Delivery model
- using video-conferencing as a means of linking all of the people involved; and

- a strong emphasis on a careful, initial orientation phase with individual support provided through a learning support team of the Institute backed up by the Learning Futures Department of the Institute.

The team approach involves teachers and tutors located in the communities in the network, the Learning Support Team, with the Learning Futures Department in an advisory role. The Learning Support Team provides support where needed in areas such as literacy and communication. Video-conferencing plays a key role in the program linking the coordinator, teachers, tutors and students across the six communities in the program. These characteristics support a learner-centred approach which is very well suited to the needs of older learners, for provision that is personal, social and flexible to a considerable extent.

The Blended Distributed Delivery model is very relevant to mature age workers in small rural communities which are often disadvantaged in access to education and training due to thin markets.

Case Study 3 Queensland Ambulance Service

The Queensland Ambulance Service (QAS) has harnessed e-learning as a tool in providing education and training to staff and volunteers in 277 Ambulance response locations across Queensland, including over 150 isolated, rural and remote locations (including those serving Aboriginal and Torres Strait Islander communities).

The Service is faced with the challenge of frequent developments in medical science and clinical practice with the consequence that updating the knowledge and skill of staff and volunteers is essential to achieve ongoing improvement in the work of the Service. For this reason, the Service is committed to developing as a learning organisation.

QAS staff are encouraged to invest in their ongoing development with the role of technology supporting their lifelong learning aspiration. The education and training strategies adopted combine the role of the School of Ambulance and Paramedic Studies located in Brisbane with the Education Online resource developed and available across the State, and the work of Regional Staff Development Units located in the seven regions of the Service.

The QAS Education Portal has a key role in providing access to a broad range of education material, supporting self-directed learning by staff, and enabling flexible access to learning resources whether at work or home.

Meeting the needs of staff in isolated, rural and remote locations has been a particular area of concern for the QAS. The needs and preferences of rural and remote staff in the over-45 age group have been identified and relevant support provided through a Rural and Remote Practitioner Program. The QAS study showed that older staff in such locations were eager to learn, but in their own preferred ways. Their preferences involved:

- provision at the low end of the technology continuum that includes face-to-face and personal contact;

- using technologies such as CD roms, email notes, powerpoints, and video-conferencing in ways that met the timeframes and pace of learning of the staff; and
- assessment strategies that recognise prior learning more fully.]

The QAS case study illustrates how e-learning has been mobilised in a careful systemic way to meet the in-service education and training needs of staff and volunteers, including many mature-age workers in a range of locations across the State. E-learning is used as an instrument for organisational development and the continuous improvement objectives of the Service. This case study holds insights and lessons for other statewide organisations with staff scattered in a range of locations.

Case Study 4 Adult community education providers

In this case study we outline aspects of the activities of four adult community education (ACE) providers that demonstrated good practices in drawing mature age people back into learning through e-learning.

The ACE providers interviewed spoke of their just in time, just enough, just what they want approach to initial engagement. They invariably saw their role as to create spaces where mature age learners will feel at home and to respond immediately to the need that they articulate when they come into their centres (for example, “I want to learn the email to keep in touch with family”) and then to encourage them to return to do more e-learning.

To draw in mature age learners the ACE providers go out into the community. Those interviewed spoke of letter box drops, newsletters, word of mouth, one on one encouragement discussions and engagement through social activities, for example a weekly open day lunch during which learning needs and solutions are informally discussed.

Successful engagement also involved taking time to induct the learner about e-learning and providing considerable support. They use a blended delivery approach. For example, supervisors and mentors are made available for face to face tuition at set times, many of whom are volunteers. Learners come together regularly to discuss issues of common interest and engage in peer learning.

The commitment of ACE providers to encouraging lifelong learning among the mature aged was also illustrated by this case study. The ACE providers in the study knew how their learning programs map to accredited VET courses and were seeking to create pathways into these courses for those mature age learners who wish to achieve credentials associated with their learning. They had, or were developing, partnerships with VET organisations (TAFEs in particular) to extend formal learning opportunities through e-learning to their rural based adult clientele.

Nationally, VET should consider investing more in community education and training providers with their proven potential to increase the number of adults participating in e-learning for personal, volunteering and paid work purposes.

Concluding remarks

The study shows a VET system in transition towards meeting the knowledge and skills needs of workers throughout life. Mature aged workers over 45 years of age have become a VET target group only recently. The use of e-learning in innovative ways to meet the particular needs and preferences of older learners is occurring but needs to now be taken up more widely.

Overall, we concluded that the good practice we observed in the case studies and consultations holds insights and lessons that can be applied in other contexts. A critical aspect is developing the mature aged workers confidence and self esteem and a sense that the learning can succeed. Successful applications of e-learning develop the mature aged workers' motivation for further learning.

The standalone guidelines we developed on good practice use of e-learning for the mature aged recognise the wide support for blended learning strategies that we encountered in the consultations and case studies. The guidelines also recognise the diversity of life and work experience among mature age workers and the consequent benefits from approaches that draw on these experiences. The key requirement is to be innovative and adapt the nature of the blend to the various industry, educational and community contexts and the needs and preferences of the particular mature aged workers involved.

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Presenters

Kaye Bowman has managed a comprehensive national VET research and evaluation program for several years and has developed networks with the university research community whilst employed as General Manager at the National Centre for Vocational Education Research (NCVER) (2002-mid 2006). While at ANTA Kaye also oversaw work programs of three university research centres focused on *Education pedagogy* (UTS, Sydney), the *Economics of Education* (CEET, Melbourne) and *Regional development and Education* (CRLRA, University of Tasmania). Since July 2006 Kaye has been a consultant. She undertook the research to be presented into E-learning for the Mature Age Worker with colleague Peter Kearns.

Annie Fergusson is the Project Manager for the Research and Policy Advice Project of the Framework. This project undertakes research that is targeted to contribute to the achievement of the vision, goals and implementation of the Framework and the 2004 – 2010 national VET strategy *Shaping Our Future*. In particular, the research program aims to provide evidence to support consolidation and promotion of VET e-learning capabilities, including the uptake of e-learning in target areas and informing and implementing innovative processes.