

New Practices in Flexible Learning

Connecting the Dots: breaking down the barriers to participation

Project overview

December 2005

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1 Summary

Although current e-learning methods provide substantial benefits to some learners, others face significant difficulties when attempting to access learning in this manner. For example:

- use of learning material that is primarily text-based can present problems for learners who experience literacy or language difficulties and/or who have a learning style that is more auditory and/or kinaesthetic
- use of material that includes visual-based content can pose problems for learners with sight impairments, and/or
- learners who have difficulty accessing the necessary technology utilised by current e-learning options (eg: due to physical disability, geographic isolation, or the constraints of other commitments).

In recognition of this issue, the *Connecting the Dots: breaking down the barriers to participation* project explored the potential of podcasting as an additional learning delivery tool for adult education practitioners to make the benefits of e-learning available to a wider proportion of learners.

1.1 **Project relevance: scope of interest and application**

The *Connecting the Dots: breaking down the barriers to participation* project will be of interest to:

- practitioners and trainers interested in exploring and/or adopting podcasting as an additional learning tool
- learner groups who wish to explore podcasting as an alternative learning tool. This may be particularly relevant for learners who experience barriers to learning under currently available learning or e-learning options due to:
 - English as a second language
 - disability
 - literacy needs
 - difficulty engaging with current learning options
- adult community education (ACE) organisations
- ACE agencies and vocational education and training (VET) providers interested in adopting and applying voice technologies
- professional development staff looking for examples of how this particular technology has been applied.

1.2 Concept background: what is podcasting?

As described by Wikipedia,

Podcasting is a term used to describe a collection of technologies for automatically distributing audio programs over the Internet using a publisher/subscriber model. It differs from earlier online delivery of audio or video because it automatically transfers the digital media files to the user's computer for later use... Podcasting's essence is about creating content (audio or video) for an audience that wants to listen when they want, where they want, and how they want.

Podcasting. Wikipedia, The Free Encyclopedia. Retrieved 23 December 2005 from <http://en.wikipedia.org/w/index.php?title=Podcasting&oldid=32434511>

It is this subscription and automatic transfer component that distinguishes podcasting from other forms of audio-based learning content (eg: audio files, voice-boards, audio blogging, CD-ROM). The most currently popular means by which subscription and transfer is made available is via Really Simple Syndication (RSS) feed.

With specific relevance to the domains of vocational education and training (VET) and adult education, podcasting represents an innovative e-learning option that has the following characteristics:

- Uses relatively low-cost devices and free (or low-cost) software.
- Enables a practitioner to create audio-based learning content that is uploaded to a server.
- Enables a learner to automatically subscribe to this learning content. Once the learner has configured their subscription software, the content is automatically sourced and downloaded by the learner's computer. This includes regularly and automatically checking for updated or new content that their teacher may have uploaded. In this way, a learner can ensure they have the most up-to-date learning content available to them.
- Provides a learner with increased portability and accessibility of their e-learning content. Because the audio-based learning content is typically in MP3 format, it can be transferred from a learner's computer to a mobile device such as an MP3 player or MP3-compatible mobile phone. In this way the learner can access the learning content anywhere, anytime.

1.3 What does podcasting have to offer the VET and adult education sectors?

Once set up, podcasting is a relatively cheap and easy to use technology that is readily accessible, portable and immediate. As such, it offers a range of potential benefits for the VET and adult education sectors. Listed below are some examples:

1. Podcasting allows for further diversification of the way that learners receive information, thus catering for a wider array learning styles and learning situations.

2. Podcasting allows for a diversification of options available to practitioners for design and development of learning content. Practitioners may source ready-made podcasts that cover or augment course/unit competencies or may develop their own podcasts.
3. In the case where a practitioner develops their own podcast to more optimally suit the needs of a particular learner, learner group or unit competency, this new material can then be released and syndicated so that others can benefit from its creation. The partnerships and synergies that this may lead to are only just beginning to be understood.
4. Because podcast content can be automatically distributed to the learner, the amount of time and effort involved in distributing learning content is reduced. Once the system is established, the ongoing production and /or distribution costs are typically less than are required for other options (eg: hard-copy production and distribution).
5. Because learning and assessment happen in a variety of circumstances, there is a need for optimal portability. Podcasts can be downloaded to portable digital players (such as MP3 players or MP3-capable mobile phones), learners can access this learning content anytime, anywhere.
6. Podcasting gives learners the option of creating and submitting their own podcast files for assessment purposes. This option holds particular potential for assessment conducted in the workplace, especially where such is within a rural or remote location. In this manner, a regular and ongoing exchange of optimally relevant learning material, assessment recording and feedback can be quickly, easily and effectively compiled and exchanged between the learner and the practitioner.
7. Podcasting can open up opportunities for voice-based learning that supports the learning of a second language or that offers literacy support.

Podcasting holds potential for increasing learner engagement through providing a more 'human encounter' in situations where face-to-face options are limited. Because a learner can hear their teacher's voice, they can pick up on intonation, emotion, and inflexions that are missing from text. The same applies when a learner creates and submits a podcast (eg, assessment recording) to their teacher. In this way, a greater level of personalisation and intimacy is possible when compared with alternative non-face-to-face options.

1.4 Project context: adult community education (ACE) sector

The *Connecting the Dots: breaking down the barriers to participation* project consisted of a series of podcasting trials conducted within two suburban and eight rural/regional Victorian adult community education (ACE) providers.

Suburban providers:

Morrison House, Mt Evelyn

Coonara House, Upper Ferntree Gully.

Rural/regional providers:

Beechworth Neighbourhood Centre

Corryong Education Centre

King Valley Learning Exchange

Mansfield Adult Continuing Education (MACE) Inc

The Centre, Benalla

Worktrainers, Shepparton

Yackandandah Community Education Network

Yea Community Services Centre.

The trials comprising this project involved provision of audio-based learning content either to individual learners or to small groups of learners. Many of the learners experienced physical and/or learning disabilities. As each conducted trial was specific to the particular needs and context of the learner/s involved, a range of course content areas were covered and a range of levels of assistance was provided by practitioners in order to enable the learner/s to access the learning content.

With regard to the practitioners who took part in this project, some had a moderate degree of information and communication technology (ICT) experience, while others had little or no such experience. None of the practitioners had used podcasting as an educational delivery tool prior to their involvement with this project.

1.5 Overview of project trials

Each of the practitioners involved in the *Connecting the Dots: breaking down the barriers to participation* project undertook initial training in the creation and uploading of podcasts. This was undertaken in conjunction with other projects and initiatives. Practitioners were then asked to identify and design a podcasting trial that would suit a specific learner need within the context of the practitioner's current course delivery. Each practitioner subsequently created their podcast and trialed it with their particular learner or learner group. Finally, feedback was collected from the learners and the practitioners who participated in the trial.

1.6 Project materials available

The *Connecting the Dots: breaking down the barriers to participation* project has produced a range of materials that are variously applicable to learners, practitioners and organisations interested in the possibilities that podcasting holds for learning delivery within the VET and adult education sectors. These materials consist of:

- **Project overview:** a snapshot of the project concept and findings.
- **Case studies:** a set of nine case studies written by practitioners who reflected upon the teaching and learning experiences of their particular podcasting trial.

- **Reflection report:** an external perspective on the impact of podcasting as experienced by the project.
- **A cheap and easy guide to podcasting for learners/practitioners/organisations:**
a set of podcasting starting points and considerations from three perspectives.
- **Frequently asked questions (FAQs)** – some answers to common questions that arose throughout the project.
- **Terminology list** – a summary list of the common technologies that were highlighted by the project.
- **Annotated reference list** – a list of relevant websites and useful references with comments about what the team considered useful from these sites.

2 Acknowledgements

Name	Organisation	Role in project
Barbara Lorey	Morrison House	Tutor participant
Cheryl Bartlett	MACE Inc. – Mansfield	Instructional design team
Daryl Hunt	MACE Inc. – Mansfield	Instructional design team and Tutor participant
David Waring	King Valley Learning Exchange	Tutor participant
Deborah Whitehead	Coonara Community House	Tutor participant
Delia Bradshaw		Project mentor
Dot Gavin	Morrison House	Tutor participant
Fiona Mould	Beechworth Neighbourhood Centre	Tutor participant
Gail Harrison	Yackandandah Community Education Network	Tutor participant
Gaye Morton	Coonara Community House	Tutor participant
Glenn FitzGerald	Coonara Community House	Tutor participant
Jan Simmons	Morrison House	Project sponsor
Janet Hayes		Project coordinator
Jo Wagstaff	MACE Inc. – Mansfield	Instructional design team
Kerri Houldcraft	Worktrainers – Shepparton	Tutor participant
Kylie Welch-Burling	Welch-Burling and Associates	Evaluator
Lauren Fearne	Tallangatta Community Centre	Tutor participant
Leanne Fitzgerald	Coonara Community House	Project sponsor
Leanne Flasz	The Centre – Benalla	Tutor participant
Lynne Gibb	Coonara Community House	Tutor participant
Marg Brown	Corryong Education Centre	Tutor participant
Meagan Rogers	Yea Community Services Centre	Tutor participant

Nina Bekker	Morrison House	Tutor participant
Paul Sladdin	MACE Inc. – Mansfield	Project mentor and supporter
Paula Herlihy	Morrison House	Tutor participant
Pat Grosse	GOM ACFE Regional Council	Project sponsor
Rose Cole	MACE Inc. – Mansfield	Administration team
Sally Dusting-Laird	Coonara Community House	Tutor participant
Sandy Leatham	MACE Inc. – Mansfield	Administration team
Sarah Marrison	MACE Inc. – Mansfield	Instructional design team
Sarah McCleery	MACE Inc. – Mansfield	Instructional design team
Sharon Mullins	Morrison House	Tutor participant
Stephen Downes		Remote project mentor
Sue Dunn	Morrison House	Tutor participant
Wally Czochara	MACE Inc. – Mansfield	Instructional design team

3 Project coordinator's reflections

The following represents a summarised selection of the observations, comments and reflections by the project coordinator, Janet Hayes from working with the various project participants and trial groups.

3.1 Project outcomes

3.1.1 Learners

All learners who participated in the project were surveyed and/or interviewed at the conclusion of their involvement in a podcasting trial. Although not all the surveys had been completed by the time of writing this reflection, initial responses suggested that podcasting has the potential to beneficially augment the educational processes for some learners.

In response to the question 'What did you enjoy about podcasting?', learners provided the following comments:

Just love new technology and saw this as a convenient alternative to reading. I was able to do other things while I was learning.

(Learner, Coonara House)

I felt I was in charge of my learning - I could repeat it as often as I wanted. It was personal, yet I still had connection with my tutor.

(Learner, King Valley Learning Exchange)

I could associate with the talking and the computers combined together, and learn - on hands-on learning

(Learner, Yackandandah Community Education Network)

For the question 'How did the podcast help you to understand the topic?', learners gave these responses:

It let me go over the instructions a couple of times to make sure I had not missed anything. The tutor did talk a bit fast on the recording though.

(Learner, Coonara House)

Gave a concise explanation - voice was easy to listen to and I was interested in the subject.

(Learner, King Valley Learning Exchange)

Step- by- step procedures were an asset to me - can replay the lesson, no interference with background noise, which is an asset to me as a result of my stroke situation, enables me to concentrate.

(Learner, Yackandandah Community Education Network)

For further feedback and comments by learners, the reader is referred to the *Case studies* document that forms part of the *Connecting the Dots: breaking down the barriers to participation* project materials.

3.1.2 Practitioners

Practitioners involved in the project were also surveyed and 'interviewed' by way of two focus groups that were held in October during the closing stages of the project, one for the rural practitioners (held at Yackandandah) and one for the metropolitan practitioners (held at Upper Ferntree Gully). Responses were more varied than those of the learners. Responses ranged from those who said they were greatly enjoying podcasting to those who were relieved that the project was concluding and that they would not have to podcast again for a while. Practitioners who echoed the latter opinion generally considered that the time that podcasting takes did not seem to balance with the degree of improved educational potential that they were able to achieve. These practitioners also tended to consider that existing learning delivery options available to them were more suited to the teaching of their particular field.

For a more detailed presentation of the range of views and opinions expressed by practitioners during the two feedback focus groups, the reader is referred to the Sections 7.1: *Focus group: October 5, 2005* and 7.2: *Focus group: October 12, 2005* of this present document.

3.2 Project learnings

3.2.1 Podcasting ease of use

A diversity of views regarding how easy podcasting was to learn and use was represented by the practitioners involved in the project. Views on this ranged from "*anyone can do this*" to "*not recommended for novice computer users or novice tutors*".

The perspective a particular tutor held appeared to be related to their previous experience with technology and their general familiarity with the concepts related to audio and audio files. During one of the focus groups, one tutor noted that, "*when it is easy, you use it more*" - a response that received emphatic agreement.

The following matrix represents a guide as to factors that may influence the ease of use of podcasting for a practitioner (or a learner):

	Low technology skills	Intermediate technology skills	High technology skills
Low understanding of audio/audio files	Not for popular consumption		Technological skills enable me to work it out
Intermediate understanding of audio/audio files		Reasonably easy to execute podcasting	
High understanding of audio/audio files	Understanding of sound helped me with the software		Easy to implement and use

Figure 1: Matrix of developed opinions regarding perceived ease of use of podcasting

The practitioners who participated in the project were relatively evenly distributed across the range of alternatives represented in the above matrix.

3.2.2 Key supports required within the project for practitioners to uptake podcasting

Within the project, various support systems and methodologies were needed to help practitioners gain basic skills in the downloading and creation of podcasts. Four main support systems that were identified as key by project team members and practitioners who completed a post-project feedback survey were, in order of priority:

1. **Funding:** funds need to be allocated to support the change process. This includes funding to support professional development and to cover the costs associated with the production and/or utilisation of podcasts. The project team would like to emphasise the importance of provision for the amount of practitioner time involved in the uptake of e-learning options such as podcasting. Within the project, this cost was covered both by the project funding and the additional time and resources committed by the tutors themselves.
2. **Easy access to 'how to guides' and other similar resources:** for examples of such resources, the reader is referred to the following project materials:
 - *A cheap and easy guide to podcasting for learners/practitioners/organisations*
 - *Frequently asked questions (FAQs)*
 - *Annotated reference list.*
3. **Access to a mentor/coach:** practitioners suggested that a 'train the trainer' approach would be beneficial whereby a practitioner who is more experienced in podcasting mentors/coaches a less experienced practitioner.

4. **Access to an e-teaching or podcasting consultant:** similar positions to an e-teaching or podcasting consultant already exist within larger VET institutions for the purpose of assisting practitioners with the uptake of e-learning and e-teaching strategies. Whilst smaller-scale VET or adult education providers may not have the funding to employ an e-teaching or podcasting consultant, it is conceivable that regional provision of such could be shared amongst the providers within a region.

Via the post-project feedback survey, the majority of practitioners suggested that the above four items were important resources that practitioners would need to get started with podcasting and that organisations would need to cater in order to facilitate a successful adoption of podcasting as a viable e-learning tool.

3.3.3 Importance of adopting podcasting via teaching pedagogy

The project team considered it desirable to approach podcasting and other emerging technologies from particular pedagogical points of view. These included an emphasis on learner-centred learning (with the role of the practitioner being 'guide by the side') and a teaching philosophy driven by constructivism. Constructivism proposes that learners are pivotal in creating their own learning environment and therefore are as much creators of content as consumers of it.

The project team also consider that podcasting does not represent a replacement of other approaches to teaching and learning. Whilst podcasting may be a powerful tool for learners in certain situations, it is simply another tool for practitioners to use in their efforts to more effectively cater for the learning needs, styles and profiles of their learners. Often times, podcasting is best integrated with other modalities such as simulations, blogging or other interactive online strategies.

3.3.4 Practitioners' opinions on the amount of preparation time required to learn and implement podcasting

During the two focus groups, the facilitator challenged the practitioners who had participated in the project to share their opinions regarding the amount of time that they had spent learning and implementing podcasting. The responses were interesting and included the following.

- All learning and preparation takes time - this is just another instance of preparing for a class, but with a different modality.
- 'Podcasting is much more fun than [Microsoft®] PowerPoint®', which brought nods of agreement. Because podcasting is voice-based, rather than text-based, practitioners who, like learners, have a preference for this modality appear to enjoy the lesson preparation process more. In addition, voice recordings can be made without needing to be in front of computer.
- Creating podcasts is more time efficient than video production. The literature supports this view, noting that podcasting is a bridge between writing and video production. Levine (2005) notes that launching immediately into video-based digital story telling is somewhat complex. In contrast, many practitioners/learners have undertaken at least some degree of sound recording in the past, making the step into digitising sound a smaller one.

- Some practitioners found their thoughts flowed more easily when making a sound recording as compared to typing lesson content (eg, learner handouts) that was accompanied by the ever-present awareness of possible 'typos'. The ability to edit out unwanted audio content (eg: 'ums', 'ahs' etc) produced an additional confidence with the technology.

3.3.5 Practitioners' perception of podcasting benefits for learners

Throughout the lifespan of the project, the following array of benefits that podcasting, as a learning delivery tool, potentially offers to learners were suggested.

- Delivery of learning through a technology that is 'fashionable' (eg: MP3 player or MP3-capable mobile phone) and, as such, already embedded within the social context of many young learners.
- Due to the portability of the audio-files, access to the learning content anywhere at any time. This also enables learners to review material as often, when and where they individually need. This is particularly useful for learning involving complex concepts or frequent repetition. Listening to podcasts while undertaking daily activities (eg: travelling, domestic duties, exercising, waiting for appointments etc) was popular amongst learners who participated in this project.
- Provides an alternative learning delivery option for learners who experience problems with text-based material. Podcasting caters particularly to the needs of auditory and kinaesthetic learners, or learners who experience disabilities that are not well catered for by other learning options.
- Provides reinforcement of details that are easily forgotten (eg, computer tutors within the project found this feature especially helpful) as well as presentation and practice of mnemonics as a memory aid.
- A means of helping learners to keep up if away, if unable to attend a class due to other commitments or if ill.
- Enables incorporation of supplementary material from subject-matter experts that learners may not otherwise have access to. For example, with the content of conferences increasingly being made available as podcasts, practitioners can locate speeches, lectures, forums or other types of content by experts pre-eminent in their domain of skill and knowledge and from across the world. The RSS feeds associated with the selected content could then be subscribed to by the learners, enabling them to access material that represents the very latest ideas and developments within a particular field.
- As an enriched means of explaining or coaching assessment tasks or for practicing and reinforcing new skills beyond the classroom.
- Enables establishment of a study companion whereby learners can work together despite being remote from each other. This involves learners recording podcasts for each other to access.

- Enables learners to undertake voice-based assessment recording and, because of the ease with which audio recording can be undertaken 'in the field', learners can undertake the recording at the optimal point of relevance.
- Provides learners with the opportunity to acquire a new skill set that is of 'up-to-the-minute' relevance.

Learners who do have their own access to computer are still able to access the benefits of podcasting. Given the nature of the major operating systems currently in use, it is possible for a registered training organisation (RTO), library or other public institution with computer facilities to set up usernames and passwords for learners. Once the learner logs into the system with their unique identifier, the software manages the rest of the process.

Practitioners involved in the project were mindful that not every learner was able to use the portable digital devices (ie, MP3 players). In some cases, the smallness and sensitivity of buttons/switches made managing the device quite difficult, even for some of the more nimble-fingered learners. Consequently, practitioners identified that there needs to be an assessment of physical capability of a learner and the requirements of the particular digital device. They also noted that there are ways of overcoming these physical difficulties, with digital devices being only one of several methods of accessing a podcast. An alternate approach that was used within the project was burning the podcast to a CD-ROM that a learner could play on their home audio equipment, in their car or in a portable CD-ROM player.

3.4 Why would a practitioner adopt podcasting?

Learners within the VET and adult education sectors represent a broad diversity of learning needs, styles and profiles. The general understanding of practitioners within these sectors is that, in order to more fully cater for all learners, a multiplicity of modalities and environments are essential. With this in mind, any new option that appears on the horizon represents an opportunity to better accommodate learners.

At the same time, it is also necessary to critically evaluate new options that emerge. Consequently, a key question that practitioners attending the two feedback focus groups considered was how they would answer a colleague's inquiry, 'Why would you do it, why would you podcast?' The answers that practitioners provided were considered and complex with the general tenet being that first, there are substantial pedagogical and andragogical reasons for including podcasting and second, that not all learning situations are suited to adoption of podcasting at this relatively early stage.

Within this general tenet, further specific considerations fell into one of the four following categories.

3.4.1 Support for learners and practitioners

Given that the main focus of this project was learners who face barriers to accessing learning via e-learning options involving reliance upon text-based or visual-based materials, it came as no surprise that practitioners identified providing help for learners who experience disabilities and/or issues associated with accessing current learning options amongst the reasons they would encourage their colleagues to try podcasting. This factor has been similarly supported by the findings of surveys completed by learners

who participated in the project where several cited disability as a reason they found study difficult and affirmed that the podcasts that they had listened to catered for them in a way that other modalities had not.

Practitioners also suggested that podcasts may free up teacher to teach, rather than having to spend time providing physical assistance to learners experiencing disabilities in the form of, for example, page turning, reading excerpts or assisting with the manipulation of writing implements, be these pens or keyboards.

Practitioners also thought that podcasting allowed for group access. Consequently, although a podcast may be developed for an individual learner, it may also help other learners within the group – as was experienced within some of the project trials. In making podcasts available to the group, there is less of a sense of singling out any individual and more of a sense of offering additional support to everyone.

Another form of support that podcasting offers learners is that of creating a transition, from not writing at all to producing formal materials for assessment purposes. Formal written text can be difficult and daunting for some learners who find speaking into a recording device somewhat easier. If using this medium as a transition tool to the production of a written assessment, the learner could then (with relevant assistance as/where necessary) transcribe and edit their spoken recording and submit it as a written presentation.

Likewise, where a learner with reading difficulty is required to read, the experience may be quite difficult and, as a result, create a block to understanding the content. Through use of podcasting, such learners can access learning content via the auditory modality and in so doing, focus instead upon assimilating, understanding and evaluating the content. The ability of the podcast to be stopped and started by the learner to match their concentration and comprehension levels further enhances this process. Similarly, the ability of kinaesthetic learners to be engaged in active tasks whilst listening to a podcast on their portable digital device can further support their particular learning style in a way that cannot necessarily be accommodated in a classroom setting, or that does not distract other learners.

3.4.2 Technology

Tutors identified a variety of technological reasons for adopting podcasting. Amongst them was the 'cool factor' that practitioners reported helped to increase the acceptance of the new learning tool.

It is envisioned that, as practitioners become more confident with utilising pre-built learning objects, they become more able to cater for individual differences. At the same time, the onus for content creation moves from the individual practitioner to become a more collective and even a potentially worldwide action. This freeing up of time allows practitioners to concentrate more on the individual differences of their learners and on finding materials/strategies that better cater to these.

3.4.3 Learning

In recommending podcasting to colleagues, the practitioners were enthusiastic about the possibilities and opportunities that podcasting potentially provides for learning, although

they were quick to emphasize that podcasting represents an additional tool to aid learning rather than a replacement of learning modalities currently in use.

Over the life of the project, many of the practitioners worked with learners who had a disability of one type or another. With this in mind, they were happy to recommend podcasting as an option worth considering when aiming to cater for a wider array of learners who experience disabilities.

While some practitioners working with learners who had literacy impairment found that podcasting was of benefit, this view was not universal. At least one practitioner reporting that their learners were not quite sure what the point of podcasting was. Although not yet fully realised, the practitioners involved in the two focus groups suggested that podcasting holds potential as another bridge that is available to assist learners transition from low-level literacy skills to greater levels of literacy comfort. In suggesting that podcasting could assist learners with literacy impairments, the practitioners stressed the need for careful assessment of where podcasting can be valuable and where reading and writing is required.

Practitioners also made mention of the potential that podcasting offers for learners to submit verbal-based assessment reporting, where learners provide an audio file addressing the relevant competency criteria. Within VET and adult education, there are many circumstances where learning occurs 'on the go'. Capturing the learning as it occurs is an excellent way to assess and to give learners a chance to reflect on the learning process as it happens. As Levine (2005) notes,

...if you stop and reflect on it orally or teach it to someone else, you process the information differently, you are more likely to remember it, more likely to understand it...

There was considerable discussion regarding the way that podcasting may assist in stimulating creativity and imagination. The consensus appeared to be that regularly watching images (such as those presented via television and cinema) might be associated with a diminished imagination. Practitioners suggested that reading and listening allows a person to conjure up their own images and ideas and that this leads to a more fertile imagination and helps to foster development of visualisation skills.

3.4.4 Disaffected learners

The practitioners involved in this project also suggested that podcasting may offer a further option to re-engage aural/kinaesthetic learners, creative learners and those who may have become disengaged through its potential to specifically cater to their particular learning styles, profiles and needs.

3.5 *Why might a practitioner not adopt podcasting?*

Podcasting, like any other learning delivery tool, has its risks and limitations. It cannot be all things to all learners, situations and practitioners. The risks and limitations encountered within this project fell into the following categories.

3.5.1 Accessibility and equity

- **The digital divide:** there remains a proportion of learners who do not have computer access at home. Although the project team envisaged that learners would have an individual login at the learning centre they attended and that using this login they would be able to access their podcasts, none of the centres had provision for this. Additionally, not all centres had a facility that learners could use outside of class times. Where learners cannot readily access the Internet, the ability to subscribe and automatically download podcast files is irrelevant. In such situations, it may be more relevant to provide audio-files to learners via another format (eg, CD-ROM).
- **The risk of further isolating the already isolated:** the adult education sector practitioners involved in this project were mindful that without careful thought, the incorporation of podcasting may serve to further isolate and alienate certain learners. Consequently, these practitioners were keen to stress the importance of making this activity, like any other, inclusive and of doing so with sensitivity.
- **Digital device difficulties:** many project participants experienced difficulty with small size of the digital audio players in terms of the ability to physically operate the player and to read the function icons on the buttons/switches. However, not all project trial locations had the same brand or model of devices. Players that had the most simply arrayed controls (eg, with only one dial to control and virtually no embossed writing) could be operated by learners who experience visual and mobility impairments.

3.5.2 Pedagogy

- **Lack of immediacy:** one of the limitations of almost all e-learning is the lack of immediacy. With the exception of synchronous (ie, occurring in real-time) meetings, all other e-learning, including podcasting, is asynchronous.
- **Not suited to all subject material:** the team agreed that not all subject material could be taught exclusively with podcasts. There are some units/courses, or aspects of units/courses that are better suited to face-to-face interaction.
- **Podcast indexes and abstracts:** unfortunately, it is common for podcast producers not to include an abstract with their podcast. This means that an entire podcast must be downloaded in order to determine its quality and suitability. Where download speed is slow, spending time only to discover that a podcast is not what was anticipated can be frustrating and a time waster.

3.5.3 ICT competency, confidence and interest

Practitioners and learners alike who have limited ICT skills and who lack confidence and/or interest in further developing these skills may find podcasting a more daunting option compared to other alternatives (eg, audio files on a CD-ROM).

3.5.4 Technology

- **Slow downloads:** More than any other limitation, slow download time caused the most frustration.

- **File size and storage:** Podcast hosting companies charge according to the amount of space used on their servers, plus the amount of data downloaded from these servers. Where insufficient local server space is available, the cost of hosting podcasts with external service providers can be a prohibitive factor in the uptake of podcasting.
- **Software:** With regard to fetching podcasts, online podcasting repositories that include subscription and download functions are often confusing and difficult to follow. With regard to creating podcasts, while open source software is free, it can be difficult and/or time-consuming to learn and use. And often there is no single software program that will cover all necessary aspects. On the other hand, the cost of commercial software can be a prohibitive factor for smaller sized training providers or in situations where podcasting is conducted on a small scale.
- **Choice of digital audio players:** While the less expensive players may be an attractive option in situations where budget constraints are key, these products frequently have limited functions and in some cases are more difficult to use. It would appear that the industrial design expertise that goes into the more expensive players is missing from those at the less expensive end of the market. The concern is that learners or practitioners may be put off using this option because they are either difficult to use, are of poor quality or have limited functionality.
- **Quality of the podcast:** The quality and design of the podcast - the actual recording process – can have a huge impact on the end user's capacity to gain full benefit from it. Too many experiences with poor quality podcasts may well put learners off from using this learning delivery tool.

3.5.5 Organisational factors

A range of organisational factors are likely to be of key importance to whether or not podcasting is uptaken and/or sustained as a learning delivery tool. These include availability of adequate levels of funding and/or support for hardware and software needs; appropriate Internet service provision and related services (eg, podcast hosting and storage); access protocols for practitioners and learners; and professional development for practitioners.

3.5.6 Legal issues

The inclusion of relevant music clips and/or sound effects make podcasts more interesting, help with transitions from one segment to the next and provide audio cues that assist learning. However, many sound effects and most music is copyright protected and consequently has restrictions on when, where and how much can be used. In some situations, the ability to effectively source relevant sound effects that comply with copyright conditions can be an important factor in whether or not an educationally effective podcast can be created.

3.6 *Technological difficulties encountered during the project*

A range of technological difficulties related to training in the use of podcasting and the eventual uptake of podcasting arose within the project. These can be broadly classified into the following categories.

3.6.1 Insufficient bandwidth

Lack of sufficient bandwidth to enable multiple simultaneous downloading or uploading of podcasts emerged as an important issue early within the project and one that negatively impacted practitioners' initial experiences with podcasting. These initial difficulties were partially overcome by structuring sessions so that, when multiple practitioners needed to be involved in downloading podcasts, the download would be set 'in train' whilst another activity was undertaken. Unfortunately this did limit spontaneity to some degree and, as often happened, when a practitioner had selected something to listen to, waited for it to load and then found that it to be unsuitable, there was another long wait before their next preference was available. The general consensus amongst practitioners was that too much valuable time was wasted waiting for podcasts to either upload or download.

3.6.2 Insufficient web server storage space

Another difficulty encountered was insufficient web server space. The project experimented with several online storage solutions including free web space, commercial web space and the learning centre's own web space provision. Free web space tended to put strict limitations on file sizes, restricting what could be uploaded. Commercial web space presented security problems, with it being impracticable to give all participants the required username and password. Using the learning centre's own web space, proved most successful, in terms of having plenty of available space, but unfortunately required practitioners to also master FTP software on top of coming to terms with podcasting! By this point, many practitioners were beginning to feel somewhat overwhelmed by the amount of new material and concepts they had to learn.

3.6.3 Hardware limitations

The particular hardware barriers that were encountered included:

- Inadequate and inconsistent sound quality due to only having integrated (ie, motherboard-based) sound 'card' capability. Specifically, the project found that integrated sound did not have as much volume, had lower sound quality and had a more limited range of sounds that were capable of being recorded.
- Sometimes difficult to use digital audio players due to the small size of switches and buttons on some of the MP3 players used within the trial. Several new players also had to be returned due to being faulty.
- Lack of sufficient storage capacity for podcast files. In settings where computers are used by perhaps dozens of people over the course of the week, it is normal for there to be limits on the amount of data that can be stored. Allocated storage sizes need to be sufficient to accommodate storage of an adequate number of podcasts that have been downloaded before being transferred to, for example, a portable digital device.
- Lack of caching facilities. Caching is the process of holding files that are commonly downloaded on a local server. Because the file does not have to be fetched from a remote server, but is instead delivered from the local server, browser response time (and therefore download speed) is significantly increased. Unfortunately, the educational centres utilised in this trial did not have caching facilities available.

3.6.4 Software limitations

Because the purchase of software was outside of project funding parameters and may be an ongoing consideration for future implementers of podcasting, the project chose to test available open source software. Although free, this software rarely comes with comprehensive user guides and frequently the help files are scant. Several practitioners experienced frustration at the amount of time it took to determine how to use the software and ended up purchasing commercial software that had more comprehensive instructions.

3.6.5 Lack of sufficient technical support staff availability

It is not uncommon for smaller training organisations to only have technical support staff available for just a few hours a week or on call with 24 or 48 hours notice. This can further impact the frustration levels of users attempting to come to terms with a new technology.

3.6.6 The digital divide

Unfortunately, many learners who form the basic catchment group for the ACE sector still experience limitations to access of their own computer, the Internet or a portable digital device that would be suitable for listening to podcasts. The issue of limited Internet access is particularly problematic for people who reside in rural and remote areas where there is a very limited selection of Internet providers available. This means there is less access to both low-cost and sufficient bandwidth (eg, broadband) Internet plans. These issues are in addition to those related to the lack of sufficient ICT skills by learners who have, for one reason or another, had limited opportunity to develop ICT literacy/competency.

Listed below are some suggestions that practitioners can adopt to assist learners to negotiate some of these challenges presented by the digital divide:

- Provide a separate orientation for learners with low ICT literacy/competency to more gradually ease them into the concept of podcasting. This could be part of an 'open day' or a separate event in its own right.
- Integrate learning about podcasting with general use of the Internet to normalise it as much as possible. In addition, link activities to the learner's personal experience, so that these are both relevant and authentic. For more specific suggestions regarding the actual implementation of the principles behind this recommendation, the reader is referred to Section 2.8: *Introducing podcasting to learners* in the *Case studies* document that forms part of the project materials.
- Use 'scaffolding' approaches with students that both break the overall concept/task down into smaller and more manageable steps and bridge from where the learner is at, gradually easing them into the full-blown podcasting system.
- Give participants a digital audio player ready loaded with podcasts, to simplify their first exposure to podcasting. The reader is referred to the *Case studies* document that forms part of the project materials for examples of project trials that adopted this strategy.
- Be conscious of avoiding unexplained jargon.

3.7 A final word

In reflecting upon the qualities of practitioners who are more likely to uptake innovative e-learning initiatives such as podcasting, three core attributes stand out: passion, patience and persistence.

Passion, born of a belief in the educational possibilities and potentialities of the innovation, provides the motivation to continue to seek solutions to the almost inevitable maze of challenges associated with the uptake of an innovation. It is the energy to make the journey.

Patience enables the practitioner to accept outcomes that do not initially go as expected. With this acceptance comes the ability to then step back and reflect upon the unexpected in order to find a path that, although perhaps different, moves closer towards the goal. It is the understanding that the path to the goal is rarely, if ever, a straight path.

Persistence provides the ability to 'keep on keeping on' in fulfilment of the goal – the successful adoption of the innovation. It is the embracing of the reality that not only is the path to the goal rarely straight, the travelling of that path is frequently a 'one step forward, two steps back (or sideways)' process.

These three attributes, in conjunction with all other forms of support mentioned within these reflections, are what is required to see podcasting realise its potential as an educational delivery tool to further break down the barriers to learning participation for an ever widening array of learners.

4 Project coordinator's recommendations

The extent to which practitioners, learners, administrators and other members of the VET and adult education community adopt a particular e-learning innovation will be determined by many factors. Key among these factors are those that pertain to an organisation's culture and environment. Aspects relevant to the successful and sustainable uptake of podcasting as an educational delivery tool are outlined as follows:

1. **An organisational culture that genuinely values and supports the uptake of innovative e-learning options commits to and provides for the necessary funding and support required.**

At an organisational level, podcasting requires support and funding for the people involved in the undertaking as well as for the necessary hardware and software. The provision of support and funding acts a catalyst: it provides the impetus to embark on the innovation process and it demonstrates that an organisation takes educational innovation seriously.

The introduction of any new practice also requires time for learning, experimenting, implementing, reflecting and exchanging learnings with colleagues. Sometimes practitioners need to undertake a few 'dry runs', working through a process several times before they are able to sufficiently 'come to terms' with how to use and implement an innovation. It is unreasonable for practitioners to carry the cost of this time entirely themselves. Consequently, organisations who wish to support a responsible and sustainable uptake of innovation may need to provide the resources for this time as, for example, payment, time in lieu or release-time. Where practitioners are casual or sessional, this is particularly important as it is not uncommon for this type of practitioner to be working across multiple sites and, as a result, have even less time to experiment and learn.

Closely related to the above factor is an understanding of the reality that some practitioners need sufficient time to also become comfortable working in what may well be a significantly new and different way. For example, some practitioners within this project had difficulty comprehending the educational validity of podcasting. These practitioners had no previous experience with e-learning or e-teaching and therefore found it difficult to integrate this concept within the teaching paradigm that they were familiar with. Expecting these practitioners to undertake a significant paradigm transformation within the timeframe of the project would have been unrealistic.

The organisation would also need a tolerance for what may be perceived as 'failures' or setbacks and would need to instead regard these as a necessary part of experimenting with emerging technologies. Within organisational cultures where perceived 'failures' or setbacks are unwelcome, be this at an explicit or implicit level, risk-taking becomes inhibited and innovation withers.

2. **An organisational culture that genuinely values and supports the uptake of innovative e-learning options understands the importance of catering for the particular learning styles of its practitioners.**

When introducing podcasting to practitioners who are unfamiliar with this technology in particular, or ICT more generally, it is important that practitioners be supplied with

sufficient professional development to achieve adequate competency in the technology in question and that such is undertaken at a pace that minimises the risk that a practitioner becomes overwhelmed. Practitioner's learning styles and profiles mirror those of the learner population - some will need minute details, whilst others can run with a broad overview, being happy to fill in the spaces themselves. Therefore, organisations would need to ensure that all learning styles are catered for in the provision of professional development materials and learning opportunities that relate to the innovation. These styles would include visual, textual and aural, with provision for both lateral and linear thinkers.

As a way of better catering for this professional development need, the adoption of a 'train the trainer' approach may be considered (as was referred to in Section 3.2.2: *Key supports required within the project for practitioners to uptake podcasting*).

3. An organisational culture that genuinely values and supports the uptake of innovative e-learning options understands the importance of educating stakeholders in order to foster their support.

There appears to still be a sense amongst some educational stakeholders (including learners) that e-learning is a somewhat 'second-best' option to face-to-face learning. Where this is the case, organisations may need to assist stakeholders to see e-learning innovations (such as podcasting) within the framework of the entire learning experience.

Where this is the case, there is need for provision of resources to educate stakeholders in relation to the e-learning innovation (eg, podcasting) being undertaken. These resources may variously consist of, for example, press releases, community meetings, campus tours and 'meet the innovators' type undertakings. Regardless of form, consideration will need to be given to how the information is presented in order to ensure accommodation of stakeholder communication styles and capacities to comprehend the innovation.

4. An organisational culture that genuinely values and supports the uptake of innovative e-learning options demonstrates a sustained commitment to inclusion of an increasingly wider spectrum of learner styles, profiles and needs.

When viewed within the framework of the entire learning experience, both e-learning and face-to-face learning become part of the entire educational equation rather than either/or options. While each modality has its strengths and limitations, the appropriate blending of these modalities results in learners benefiting from a breadth of methodologies and options that serve to make educational opportunities available to an increasingly wider spectrum of learner styles, profiles and needs.

5. An organisational culture that genuinely values and supports the uptake of innovative e-learning options understands the importance of providing ongoing support for stakeholders beyond the initial uptake phases.

Although the present project has not been funded beyond the initial phases, the following recommendations are made based upon the project team's experience to date with podcasting.

- Less intensive professional development support is required at a level that fosters the ongoing maintenance and extension of the skills and knowledge that have been initially developed.
- Ongoing encouragement of staff to continue their reflections and sharing of experiences, particularly the successes that inspire them, needs to be undertaken.
- Continued support with keeping hardware and software adequately up-to-date is required in an acknowledgement that these will continue to evolve.
- A widening of liaison with other community organisations, the broader community and associated stakeholder groups that also have significant contact with learners in order to foster a wider dissemination of awareness of the innovation that has been adopted and the way that it is being implemented.
- In-house evaluative procedures that assist the entire organisation to reflect on current practice and promote new practice where appropriate and a fostering of broader educational peer networks that allow for wider reflection and evaluation processes and outcomes to be shared.

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Adobe®	Dodoupload
Apple®	Doppler
Apple® Automator®	ePodcast Producer
Apple® iTunes®	FeedBurner™
Apple® iPod®	FeedForAll
Apple® Mac® OS®	FreeX
Audacity	Fresh Download
Blogger™	IBM®

iPodder

Intel®

Ipswitch WS_FTP

LAME

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Microsoft® Excel®

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Netscape Navigator®

Pegasus Mail®

Pentium™

Podcast Maker

PodProducer

Propaganda™

RSS DreamFeeder

Vienna 2.0

WinZip®

WolframTone™

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7 Appendix

7.1 Focus group: October 5, 2005

The following is a summary of the questions and findings of the focus group conducted October 5, 2005 at Yackandandah with the team members of the *Connecting the Dots: breaking down the barriers to participation* project.

7.1.1 What does podcasting mean to you?

Key words: connecting, reaching new people, extending boundaries, bringing people together, new options, support for disabilities, accessibility, interactive, flexible, fashionable.

Key concepts:

Awareness

- Of the possibilities the technology provides for new ways of being able to reach isolated (re: literacy, geographically) people.
- Learning about the possibilities and plans for passing on knowledge to other tutors who have responsibilities for delivery to those with disabilities.
- Good way of introducing people to a new technology, providing an option to 'have a go', ask learners to think of ways that they would want to use it.
- A positive move for addressing literacy options.
- Could provide an entry door into education for reluctant learners through enticing them to 'touch' technology. Benefits that could then carry over into other areas of learning with technology.
- iPod® a cultural statement – is fashionable and acceptable and can be used for education at the same time.
- Opportunity to share the concept when interacting with others who don't know about podcasting. Seeing the interest and potential application to business environment. (Eg: teach people to be able to put up a share trading item to the web).
- Knowledge of how current the outputs can be. Able to create something and have it 'out there' instantly. The editing capability it provides.
- Exciting options; instantaneous release.
- Noted the frustrations that come with slow connections and how bandwidth can limit availability and accessibility.

Learning

- Being able to listen instead of purely a visual option for learning.
- Enables people to focus on the listening, without distractions.
- Provides the options of being able to listen in your own time.
- Far more interactive than some other learning options.
- Opening up a new form of learning. New way of thinking about learning. Not just a new tool but a new way of learning.
- Ability of the tutor to 'replicate themselves'. Awareness of how and why this could be applied for areas where there are limited staff and isolated learners.
- Liberates people by providing another option where print may have disenfranchised people or traditional education may not suit them.

Accessibility

- Valuable potential for use and application for those with disabilities (eg: vision impairment, stroke, may 'open up a new world' for some people).
- Opens up the issue of accessibility. Potential there for those who are isolated (noted that isolated need not be geographic) to extend their communication options.

7.1.2 In your experience, what does podcasting provide that you can't get anywhere else?

Key words: Instant, unique, sense of being personalised, tone of voice, someone is talking to you, intimate, not automated, passion, inspirational, access, immediate.

Key concepts:

Anywhere anytime

- Portable – take it with you anywhere/anytime.
- Something you can do while you are doing something else or choose to only listen.

Connection

- Anonymous - nobody knows what you are listening to. For some people they may be able to listen to things others may ridicule them about.
- Attraction element, fashionable – 'cool' etc.
- For those who have felt marginalised. May positively influence self-esteem by being able to use the latest technology.

- Not automated – personal, can impart passion, inspire by the use of voice.

Learning

- All the beauties and qualities of voice are available in the learning environment such as the qualities of 'radio' that are valued.
- Bringing voice 'back into its own'. Making learning more like it 'used to be' by having voice available in online learning.
- Opportunity to hear presentations from key people and experts around the world. Improved access for remote people who would not normally be able to travel or extending the options of access to material from around the world.
- Bedtime listening - concept like bedtime reading. Uses the fruitful periods of the day to help absorb when in relaxed state good for learning.
- A method for the tutor to report personally on the work learners are doing and provide tips not able to be provided as efficiently/effectively through a text medium.
- Decreases 'daunting' feeling re course material/learning especially for learners with difficult accessing meaning from print alone.
- Gives a personal connection between people on a regular basis. Within education can help address learning in a far more personal way.
- Enables reflection on learner work – giving feedback. Could become a regular part of the training process. Subscription could be factored into the training schedule.
- Provides an option to assist learners who learn from different methods.
- Material can be replayed/reviewed when needed or most relevant to learner.
- Extension options can be provided.
- Making a podcast is more fun than typing reams of notes and more time efficient for the tutor, therefore more sustainable.

Accessibility

- Time saving – options for subscription to automatically upload most useful materials on a regular basis.
- Learners who are away (eg: sick) can catch up or keep up with work.
- A way of supporting learners rather than travelling distances and having to be there where cost prohibitive.
- Could make podcasts for the group to follow eg: feedback for the group to consider.
- Build rapport and capacity; provide encouragement, progress reports, explanations, and tips on new materials.

- Sustainability – consideration on how to do things quicker, how to contribute on a regular basis.
- In an educational setting, factor podcasts into program for specific purposes.
- Not an either or option, but an additional option, extending the possibilities.

7.1.3 How would you answer a colleague's inquiry: *Why would you do it, why would you podcast?*

Key words: support, options, interest, access, and commitment.

Quotes:

'When it is easy, you use it more'.

'Much more fun than [Microsoft®] PowerPoint®'.

'A book is often better than a movie'.

Key concepts:

Support

- Help for learners with disabilities and various issues.
- Frees up teacher to teach rather than having to spend time providing physical assistance to learners with disabilities re page turning, etc.
- Aimed at individual but there for the group to access. Not singling out one individual.
- Another learning tool option.
- Formal written text can be intimidating. Voice may be less threatening and more assuring.

Technology

- Knowing how to address physical difficulties: ie, if unable to use an MP3 player, provide on CD-ROM.
- Important what type of machine is used – provide different options for different learners.

Preparation

- Time commitment – all learning preparation takes time. Moe time efficient than video production.
- 'Much more fun than [Microsoft®] PowerPoint®' because it is voice based rather than text based.

- No typos – learners not so inhibited in expressing themselves. Inhibition re writing maybe reduced.

Learning

- An aide to learning – not a replacement.
- Tutor interest – how learning styles of the tutor affects the methods of delivery chosen.
- Useful for stimulating imagination.
- Listening may help create a more fertile inner imagination. Podcasting can help foster visualisation skills. Creative learners more at risk of leaving education system that doesn't cater for creativity.
- Imagery (video) may put people into a box – by using oral descriptions learners can create their own 'box'.
- Could be an educational activity and have an infinite number of ways of applying the concept.
- May have a longer-term effect on the education options – creation of skills in imagery (counter concerns of what is being lost by over supply of TV).
- Disengaged learners may be alternatively engaged in other means, oral options may assist in re-engaging learners.
- Oral assessments – another way of sending in your work for assessment. Questioned raised re 'How does this translate to work situations where literacy and numeracy is an issue?' Response: Be clear about the different purposes, where podcasting can be valuable, where reading and writing is required. Not an 'either or' approach, but another bridge from illiteracy to literacy.

7.1.4 What, in your experience, are the limits of podcasting?

Key words: access, knowledge, resources, policies and procedures, awareness, interest.

Key concepts:

Accessibility

- Download time, limited Internet access time.
- Concerns for those with disabilities: Do they have equipment at home? Can they afford equipment (computer, player, software, access)?
- Those with limited access who have to come to community provider loose the benefits of any-where any time.
- Danger of isolating the isolated – need to be a consideration in applying this to the learning environment.

- Cost of current commercial software. Open source fragmented (not a single package and difficult to find).

Learning

- Has the possibility of two-way communication but not in real time. Stimulus – response time delay.
- Need immediacy to respond to learner's demand.
- Lack of immediacy – in a classroom the response is straight away. How does that translate to a podcast? Response is delayed and this is a one-way communication.
- Subject material limits. What curriculum is suitable? What would be good? Suitable for foreign language, English language, part of an online course. Not suitable perhaps for first aid though can assist but not a complete option.
- For those who need repetitive resources but cannot be assessment for hands on type training.
- Useful for repetitive reinforcement, extension, instructions/procedures, rarely exclusively just a podcast but a blended learning approach.
- Not good for assessment where a visual component is needed but could be used to prepare and guide someone through an assessment procedure.
- Audio preference or audio resistance - relating to learning styles and interest in audio from the learner.
- Is this a novelty that will take us down a dead end? No, an educational option in our set of tools. Not the 'be all and end all'.
- Not just a passing fad because it 'fills the gaps'.

Skills

- People's technology knowledge – lack of skills of how to use technology or lack of desire to gain knowledge. A certain level required. Not instant access.
- Assumption that learners will automatically know how to use this. Option to send a CD-ROM to bridge the gap.
- Lack of knowledge of technology or lack of desire. Who would this suit? Can this be translated to it in general but is this specific to podcasting?
- Still entering the public imagination – how is that different to having a tape or CD-ROM. Syndication is the difference.
- Technology – new and evolving, often open source with no support but has issues to solve and think about how the solutions can actually work. Having to track down open source support in a low funded environment eg ACE.

Funding

- ACE sector – funding, storage of podcasts and the bandwidth to download from website. Who pays for the access to download the more popular files – can become more costly for providers to continue to host podcasts. Who chooses which ones are available and sets the priorities?
- Downloading - cost of policing issues.
- For many learners Internet access is remote and through satellite provision – income may limit access and ongoing maintenance of requirements.
- Tutor cost (especially sessional): access to ADSL, technology, players, and computer options. How much is it costing tutors to stay abreast with technology to keep up with requirements and time? Acknowledgement of professional development role and limitations. Not everyone will want to or be able to self fund their own PD – learners and tutors.
- Costs shifted to learner – printing documents etc. What does that mean re the technology etc for the future directions in this area?

Policy

- Organisational issues – decisions and policies around the adoption of podcasting
- PD more time consuming than it used to be. Out-of-work self-funded PD. To stay employed and to be doing the right thing by our learners. Responsibility has shifted to the participants, as have the costs accordingly.

7.1.5 Was a shift in thinking (in you, learners or your organisation) required to implement this podcasting project? If so, in what way?

Key words: overcoming resistance, moving forward, identification of barriers, policy.

Key concepts:

General

- Having to take on a new technology and be prepared for demand. Being current, staying abreast of new developments, to respond to community needs.
- Exposure – new awareness of evolving technologies.

Resistances

- What changes would learners or organisations need to make? – thinking of the things that can be done.
- ‘What is in it for us – what do we get out of it?’ – stakeholders needing to know.
- Bottom line – the dollar – providing services for clients.

- Convincing support staff to allow software – lack of knowledge and willingness to give control of requirements to staff.
- Security – IT policies.
- Management permission to have these things on computer (software, devices).
- ‘Don’t spend any money’.

Shifts

- Burden of pioneers to educate others about the benefits.
- Related to other training issues ie: require paradigm shifting from classroom group based to individual off-site learning.
- Management need to see the value – financial, client increase etc. Need to get management onside for successful implementation. Management need and the desire for training methodology to be up-to-date.
- Reduces workloads.
- Online not second best to face-to-face– rethinking paradigm of learning.
- Where people sit within the learning paradigm affects response to podcasting.

7.1.6 At this point in the project, what has been the most important lesson for you? What would you do differently next time?

Identification of FAQ question topics

- Glossary of terms – explanation of terms.
- What computer literacy standard do you need to be at before you start podcasting? Technical expertise required?
- How much time do I need to allocate – initially, ongoing basis?
- How much will this cost – financial cost to organisation, practitioner, learners, any others?
- What is in it for me (learner, practitioner, organisation)?
- What are the hardware and connectivity requirements suitable for podcasting? (Ideal and minimum)?
- What infrastructure would be suitable?
- What cost-effective solutions re software are available (especially open source)?
- How can an organisation prepare for adopting new technology (podcasting)?

- What is it?
- Where do I start (making or fetching)?
- Why should ACE be involved in podcasting?
- What is it about podcasting that attracts people to become advocates?
- What would a solo practitioner need to know to get started?
- What pre knowledge do I need to get going – any prerequisites or assumptions?
- Worldview – practices, what are we committed to – paradigm shift needed?
- What educational vision does this support?

7.2 Focus group: October 12, 2005

The following is a summary of the questions and findings of the focus group conducted 12 October 2005 at Upper Ferntree Gully with the team members of the *Connecting the Dots: breaking down the barriers to participation* project.

7.2.1 What does podcasting mean to you?

Key words: portable, valuable, customisable, choices, informing, immediate, educational value, accessible.

Key concepts:

Awareness

- Can be a method of distribution for valuable material. Would require an assessment of what is 'valuable' rather than just personal information not suitable for the public domain.
- Provides audio with all its virtues – portable and not time restricted. Could make the topic more interesting as you can listen rather than read.
- Customisable – to one person or a group of people – Podcasts could be developed focussing on a specific need for a learner.
- The amount of time required and possibility that the requirements of podcasting to take over other responsibilities – possibility the same issue for addressing requirements for learners who do not have regular access to a computer or the Internet.
- Considering the implication if equipment not available and where the only access is through a public place.
- Considered the uses and applications – practitioner to fetch appropriate podcasts and burn to CD-ROM for use in class to avoid valuable lesson time spent in helping learners who have disabilities do their own fetching.

- Current limitations of the practice.
- Amount of own time required to become proficient, level of commitment and self funded requirements.
- Use for individual learners, assessments, walk through an activity.
- Understanding that podcasting is not simply a sound file.
- Uploadable – focussed on the production of podcasts, downloadable – focussed on the listening to created podcasts.
- Fetching and production – the different roles of each aspect.

Features

- Like radio with more choices – when, what and where.
- Provides regularity like radio.
- Delivered by the Internet so learner can download onto computers using RSS feeds.
- Delivery straight into the ear by earplugs could minimise distractions and help learners tune into the program.

Learning

- About informing – can be educational, informational while also entertaining.
- Immediate and topic specific.
- Can provide an audio version of the main points of the class.

Accessibility

- Doesn't require a physical presence to download by subscribing. Requires software to do the downloading - set *iPodder* to download on a regular basis.
- Helps encourage learners to be more independent.

7.2.2 In your experience, what does podcasting provide that you can't get anywhere else?

Key words: freedom, portable, cheap, on demand, tailored, easier to manipulated, easier to decipher, listening option, literacy support, ready-made podcasts.

Key concepts:

Features

- Take it with you out of the classroom – portable equipment.

- Unique.
- Freedom of the light weight device.
- Cheap once you have everything in place - CD-ROMs or tapes cost more than an MP3 file.
- Cheap to produce – could be out of date in a week but can be easily replaced.
- Can be manipulated – quicker to find relevant sections using digital technology.

Learning

- Ability to be on demand – practitioner doesn't have to be there all the time, learner can download without having to be in the classroom – more instant outside of the classroom.
- Can have different sets of instructions for groups of learners – integrated into other activities.
- Don't need high levels of literacy to be able to decipher the content.
- Suitable for learners with dyslexia or low literacy.
- Teacher being able to record what is necessary and customise the content for the learner and the class.
- Choice of ready-made resources.
- May suit kinaesthetic learners.
- Useful for language teaching.

Connection/access

- A portable communication with no direct contact with the podcast author but rather transfer files across distance.
- Cheap to fetch podcasts once infrastructure is there - need broadband.
- Podcasts can be sourced from public Internet locations.
- File creation options – manipulative software to create podcasts to a higher standard than traditional audiotapes – eg, *Audacity*.
- Promotes learner independence.
- Potential for use of the podcasts in the learning or workplace environment.
- Doesn't cost a lot to make a specific file for a learner – tailored without too much cost.
- Another form of information – in the future will become more familiar.
- Learners may only need an MP3 player to participate.

7.2.3 How would you answer a colleague's inquiry: *Why would you do it, why would you podcast?*

Quotes:

'What you need is a podmaster' (like webmaster)?

Key concepts:

Characteristics of practitioners who would podcast	Characteristics of practitioners who may not podcast
<ul style="list-style-type: none"> • Like computers and technology. • Like to learn new things, cutting edge • Looking for something to offer or disseminate, seeks unique resources • Convinced of the merits of how the technology can be used to reach a learner that may not have been reached in the past. • Motivated to learn how to podcast. • Looks at niche markets. • Have experienced success or good outcomes of using podcasting eg: class reaction positive, learners who are excited by it. • Have support – organisational (money, PD, time, flexibility for timetables to allow PD, enthusiastic about concept). • Have someone else make the podcasts for practitioners to use. (Maybe a luxury). • Rearranging schedules to include the concept in the organisational focus. • Can find relevant materials, found good methods of finding podcasts. • Can find what they are looking for, as they don't want to create materials themselves. • May have experimented with audio first 	<ul style="list-style-type: none"> • Learners not interested or negative. • Those who do a cost benefit analysis and decide that outcomes can be achieved another way that takes less time. • Time effectiveness – 'chicken and egg' concept - how much effort to put into that initial learning phase. • Practitioners who have limited access to technical requirements – broadband, equipment or knowledge. • Technical level expertise – may be a steep learning curve. • Time consuming. • Can see that things can be done in other ways and don't see the benefits. • Personal choice. • Can't find suitable podcasts – frustrating and time consuming after considerable effort. • Don't have the knowledge or the desire. • Don't listen to music regularly – not audio type people or inclined to use alternative delivery methods. • Like quietness – don't want any more stimulation.

<p>then investigate the option for broadcasting.</p> <ul style="list-style-type: none"> • Meet the needs of learners who need something else physical while they are learning. • Looking for blended learning options. 	
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7.2.4 What, in your experience, are the limits of podcasting?

Key words: download times, technical barriers, lack of available quality materials, file size, time heavy, navigation for disabled, relevance, copyright.

Key concepts:

Technology

- Some MP3 players too difficult for some learners – buttons too difficult, features frustrating due to manual dexterity issues, reading the small font, may depend on the individual and the type of player. iPod® is easier than cheaper players.
- Can be frustrating for a new learner how to get around the MP3 player – how easy is it to manipulate? Learners who can't control a mouse could not control the player. Cheaper the players are the harder they are to use.
- Learners and practitioners may choose to start with cheaper player to test the podcasting concept but limited functions of the cheaper player could be negative for users therefore they may not necessarily move up to better products and improved functions.
- Download times – speed reduced with poor bandwidth.
- Size of files – limited budgets and downloads and storage.
- Costs related to the host concerning the number of times the podcast is downloaded, how long it is kept?
- Technical barriers: Learners have to be computer literate, could be time consuming.
- Podcasts must be well made – currently some are really bad, quality of the voice makes it a chore to listen to. Music makes files interesting but file sizes too large.
- Same limits when you have re choosing a video – still have to watch and preview before using in an educational setting, needs the virtues of a book. Difficult to get a feel for the value of the podcast, time-consuming to preview and download. Podcasts need to have a journalistic style – have valuable and well produced.
- Time of having to listen to large sections of content then for the practitioner to edit and provide the learner with only the most important points – however customisable factor can be a feature.

- 'Time heavy'.
- 'Technically heavy' and possibly exclusive – sounds delightful but how realistic is doing this?
- Podcasting has some of the negatives of the Internet access so it isn't really relevant to many people in the rural community. Without broadband there is limited access to all the available features.
- Issues found re configuring and subscribing using Apple® iPod® – 'time heavy' to get configuration right – what is the value of the learning, time and importance?

Experience

- All participants need to be trained to various levels, be familiar with technology, confident with podcasting, and practice means speed improves over time.

Accessibility

- Eye sight – font on devices too small to see – hard to navigate.
- Indexing issues at present – no abstracts available.
- Access issues for groups with disabilities.

Learning

- Topic specific – has to be short and sharp – may not be what everyone wants – would be time consuming for the practitioner to create a lot of podcasts that are suitable for each learner.
- Cannot be listened to indefinitely.
- Whilst podcasting is an emerging trend it is hard to find good podcasts that are beyond novelty value - minimum suitable resources available at present. For example, authentic voices – practitioners seeking information on topics of importance.
- Searching for a way to use podcasting – how to find a good application within the learning environment rather than artificial examples. Are we are trying to find a purpose for podcasting rather than matching the right technology to the learners?
- Some subject matters not relevant to podcasting.
- A valid educational purpose is not always obvious.
- Journey of how this technology could be applied very new. Experience so far has found more uses for audio, which raises the question why you would upload it? May become more useable as time goes by re the applicability and appropriate uses.

Copyright

- Music – concerned about copyright and the implications for broadcasting, users must be aware of issues when publishing on the web. Must research and find appropriate resources that are copyright free.
- Non-broadcasting may help address some copyright issues but then it is not podcasting.

7.2.5 Was a shift in thinking (in you, learners or your organisation) required to implement this podcasting project? If so, in what way?

Key words: appropriateness, educational context, and adoption by learners, incorporation into strategic plan, commitment, resources.

Key concepts:

Awareness

- If there is some awareness of the concepts before commencing and the organisation already looking at the area of flexible delivery then shift is not so grate but rather an awareness of the future application.

Learning

- Learners a paradigm shift – had not considered anything like that before and not independent learners. Podcasting was not considered an option to extent learning outside the classroom and that it could be pleasurable. Learner response was positive even though they may not like class or topic presented.
- Shift away from dependence to independence – move into lifelong learning.
- Looking at the learning styles and incorporating into every day use. Having learners know the way they learn.
- Having podcasting incorporated into learners practices if it matches their preferred style and having it readily available.

Adoption

- Valuing learners and this mode – willing to provide resources to support this option.
- Lifelong learning – can be applied to other areas.
- Organisations – must be looking for new innovative ways of doing things. Would it work if under pressure to do this? Need ownership of the concept, pilot concepts.
- Embedding strategy could consist of organisational support for professional development – train one staff member to discover new practices with a view to sharing with others.
- Requires people be open to change and innovation.

- Ethos requires a willingness to shift.
- Help facilitate a changing thinking by showing practitioners that they can become proficient - 'I can actually do this'.
- Could be a different scenario if the concept is not part of the overall strategic direction to change the way of doing things.

Professional development

- Would be part of the overall plan of professional development within the organisation – without professional development would not be exposed to the concept.
- PD to be encouraged and paid for to extend and support staff.
- Recognise that practitioners are also learners and no different to anyone else – need time.
- Practitioners need to see how to teach with the podcasting tool – limitation can be too much time mastering one particular tool and not focussing on all the options available. 'Too many tools, I still need to learn the trade'. If it takes too long it may not be seen as worthwhile.
- Can be counterproductive if it takes too long – can cause hostility.
- Break the PD down into steps: build confidence first, break concepts down into smaller steps, start on audio first, then master the fetching, then uploading.
- Could start with looking at the educational value then where appropriate look at the creation side later.
- Being left behind can be a factor for people not adopting if it is not achievable – put into place processes to help keep up with others who are in the process of change.
- Avoid too much jargon - can cause frustration and be alienating.

Costs

- Funding is an important catalyst to begin and embark on the process. Without funding adoption would be much slower and would rely on personal time to be committed from practitioners.
- Takes a personal commitment to improvement by practitioners and learners.
- Is there another way of doing the project – how can we utilise the project more profitably – train one person per organisation to continue to dissemination? Second layer that could translate into more managing bite size pieces – embedding – one person be trained then they come back and disseminate and facilitate adoption.
- Organisations in the future could look at a different model of becoming aware of the material.

- Without trial funding – would wait to see someone else doing it first. Dissemination and embedding would be slower. Wait for more readily available resources and practices – ‘osmosis effect’.

Technology

- Software raises difficulties – can move people away from adopting the concept.
- Need to be walked through the idea/technology several times before the ‘penny drops’.

7.2.6 At this point in the project, what has been the most important lesson for you? What would you do differently next time?

Identification of FAQ question topics

- What level of technical expertise is needed to begin the project?
- How much time will I need to put aside? How much time does each component take?
- What equipment must I have (ie, what are the absolute hardware and software necessities)?
- How many steps are needed to create a podcast and get it online? Eg, four steps, provide a big picture type map:
 1. Create file
 2. RSS file
 3. Upload
 4. Subscribe.
- What is the ideal length of a podcast – ideal times per type of podcast? Is this related to the length of music people are used to listening to (eg, around three mins)?
- What are the characteristics of a good podcast and in what circumstances (provide a matrix)?
- What can you use podcasts for within education - future situations and examples?
- What will this cost – learner, practitioner, organisation?
- Is there a central place if I need support – where do I go if I get stuck (preferably a person)?
- Where can I find good podcasts suitable for VET learning (current searches too broad)? Are directories available? (Provide a list with annotation and examples of good sites).
- How can podcasting be embedded as part of blended learning? How does it lead as well as follow on from other things?

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