Innovate and integrate
Embedding innovative practices

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Executive summary

This executive summary includes a background to the research, the key themes emerging from a comprehensive literature review, an introduction to an implementation model used in this research, the eight key findings, a summary of four resources developed by vocational education and training (VET) contributors and an overview of a proposed four-phase strategy for embedding innovative e-learning in VET.

Background

‘Embedding’ means to fix or set securely. It is equated to ‘institutionalisation’ or the sustained use of an innovation by a critical mass as a routine practice. It is the final stage of an innovation process that starts with an initial decision to engage (adoption), moves to spreading the word (diffusion) consolidates in utilisation (implementation) and culminates in embedding (integrate as core practice).

The aims of this applied research project on embedding innovative practice in e-learning were to:

- identify factors that have contributed to embedding innovative practices
- inform future decision makers in regard to the considerations and potential impacts of embedding innovative practices
- develop models for ongoing embedding of innovative practices to be utilised by future VET organisations.

This is Phase 2 of the research. Phase 1 focused primarily on New Practices in Flexible Learning1 projects and sought input from Project Managers about embedding the outcomes of their projects. This phase has integrated and built on these findings by broadening the scope to include other innovative e-learning practices supported by the Australian Flexible Learning Framework2 (Framework), as well as innovative practices initiated from other sources within the VET sector. It has also expanded the range of contributors to include practitioners, decision makers with responsibilities for professional and organisational development, and those with responsibilities for implementing e-learning innovations. Over 330 people contributed to this research.

Data was collected through various processes including a comprehensive survey of the VET community, interviews, case studies, site visits, feedback from conference and workshop presentations, contributions to the research wiki, innovation styles assessments, feedback from critical readers and a literature review.

Two international research advisors with extensive research and corporate experience in adoption and diffusion of innovations provided guidance, support and

1 The New Practices in Flexible Learning Project is one of 14 Framework projects. It funds and supports the development of innovative approaches to e-learning in workplaces, communities and training organisations across Australia. <http://www.flexiblelearning.net.au/newpractices>

2 The Framework is the national training system’s e-learning strategy which is collaboratively funded by the Australian Government and all states and territories. It provides the VET system with e-learning skills, professional development, resources and support networks to strengthen the skills base of Australia. <http://www.flexiblelearning.net.au>
substantial input into the research and offered their own models and frameworks for use and adaptation. The aim of working with the research advisors was to leverage their significant expertise to advance this research rather than to replicate what had already been done. It also provided insights and perspectives from outside a VET context.

**Literature review**

A comprehensive literature review investigated theories of adoption and diffusion of innovations in general and embedding innovative e-learning in particular. Sources included books, journals, weblogs, networks, websites and wikis. The literature review highlighted that education and training sectors all over the world are facing the common challenge of identifying how to transition ‘innovative practice’ to ‘everyday practice’.

A broad range of enablers, barriers, implementation models and frameworks are well documented in the literature. While there are different configurations for local contexts, a synthesis of the content highlighted a common and consistent message; namely the embedding process must be based on a clear vision for e-learning, be driven by champions, explored from multiple perspectives, involve a range of stakeholders over a period of time, have committed support and that there is no one way to do it. In other words, embedding innovative e-learning is about systemic change.

Three key components must be considered in implementation endeavours:

1. **The innovation** – the types, attributes, market need, benefits and pedagogical impact.
2. **The innovators and adopters** – the human factor including beliefs and attitudes, readiness, collaboration, personal impact and relationships.
3. **The organisation** – the culture and systems including technology infrastructure, leadership, commitment and provision of appropriate support.

These three components provided a useful structure to explore the literature in more detail.

**The innovation**

Phase 1 of the research identified four focus areas for new practice, which ranged from generic tools a teacher could use independently and which complemented existing practice, to educational models that required significant changes in teaching practice and demanded other systems to change. This diversity can be an implementation barrier in itself as there are no clear guidelines about what is required to implement these innovations. Some require incremental change and others require radical change, but this is not explicitly stated. This is a key consideration for embedding an innovative practice as recent research in VET (Robertson 2006), suggests that e-learning functionalities that are congruent with existing practices, have been available for some time, require moderate level of technical skill and remain within practitioner control, are more likely to be adopted. This is reinforced by Collis and Moonen (2001), who found that innovative practices that promote incremental change and add variety, choice and flexibility to existing practice are more likely to be adopted because dominant models are difficult to change without a concerted and sustained effort. This is confirmed by other researchers who found that Rogers’ innovation attributes of relative advantage (the degree to which an innovation is superior to what it supersedes) and compatibility (the degree to which the innovation is compatible with existing values and past experiences) are indicators
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of embedding success (Grunwald 2002; Tornatzky and Klein 1982; Adams, Tranfield and Denyer 2006).

This suggests that incremental innovations that complement existing practice are more likely to be adopted and embedded than more radical approaches that require significant change of practice.

Innovation classification tools are available which identify types of innovations and their attributes (Adams 2003; Rogers 1995). If embedding innovative e-learning investments is now a high priority in VET, such tools may guide and support decision makers to make more informed choices about the types of innovations to invest in to ensure they are ‘embeddable’ in the current VET climate.

The innovators and adopters

To embed an innovation requires uptake by a critical mass – mainstream adopters. Three ‘chasms’ were identified in the literature that were barriers to mainstream adoption of an e-learning innovation:

1. **A chasm between early and mainstream adopters.** Early and mainstream adopters have different reasons to adopt and have different expectations, so momentum can be lost if these differences are not addressed (Moore 1999).

2. **A support structure chasm.** Mainstream adopters need qualitatively different support than early adopters, yet support systems are set up for early adopters. Mainstream adopter support includes shared decision making, peer support, a focus on teaching and learning, and highly ‘adoptable’ use of technology. As mainstream adopters are not so enamoured with the technology and are looking for practical solutions to real problems, early adopters who tend to focus more on exploring the technology may not be good role models for mainstream adopters (Geoghegan 1995; Forsyth 2004; Lambe 2003; Nutley et al. 2002; White 2002). Yet early adopters are often targeted to take on this role.

3. **A technology-pedagogy chasm.** E-learning technologies are adopted at a faster rate and are more advanced than e-learning pedagogies. This highlights the need to have sound underpinning pedagogy as technology use tends to sustain rather than alter existing patterns of teaching practice. Technology will do nothing to improve ineffective teaching. E-learning innovation may be less about the ‘e’ and more about the ‘learning’. (Elgort 2005; Cuban et al. 2001; Geoghegan 1995). This has implications for modelling good practice, initial teacher training and ensuring that e-learning initiatives are based on sound pedagogical foundations.

The organisation

There is a growing interest in complexity science as a conceptual model for organisational development. From a complexity perspective, the best system to enable innovation to thrive is the complex system; which is adaptive, largely self-organised, networked and highly connected, where interactions are fluid and interdependent and there is flexibility to embrace both radical and incremental changes (Carlisle and McMillan 2006). If an organisation is too stable, there is resistance to change. If it is too unstable, disintegration is possible. Innovation requires both exploration and utilisation and these may require different roles, talents, ways of doing things and support system requirements. Organisations must be flexible enough to respond to what is required at any point in time as there will be iteration between the need to explore and the need to utilise and both are important for meeting current and future needs. Embedding an innovation is about consistent
utilisation in everyday practice and this infers stability – the need for robust systems and processes which identify what needs to be done, who is responsible and how the embedding process can best be supported.

‘RIPPLES’ implementation model

While several e-learning implementation models were identified in the literature review, this research used the RIPPLES model as the basis to collect and synthesis data from the VET community. RIPPLES is a generic macro model for implementing e-learning innovations. RIPPLES is the acronym for the seven components of the model: resources, infrastructure, people, policies, learning, evaluation and support. It was developed by Dr Daniel Surry, Associate Professor in Instructional Design and Development, University of South Alabama in the USA and David Ensminger, a Clinical Assistant Professor in the School Technology program at Loyola University, Chicago. Informed by the authors’ own research on implementation of technology innovations, their experience as change agents in higher education and extensive literature reviews on implementation of educational technology innovations, RIPPLES was well aligned with the intent of this research. It was developed to help senior decision makers in the implementation of web-based learning in the higher education sector. This research project provided an opportunity to test the model in a VET context and to leverage the significant foundation work on which the model is based. Dr Surry designed, administered and analysed the survey results.

The results of the survey indicated that RIPPLES is a viable and practical implementation model. It identified a focus on learning outcomes as the key enabler of innovative e-learning practice and technology infrastructure as the key barrier. Support was identified as a pressing need. All seven components of the model were considered important to an embedding process reinforcing a key theme emerging from the literature that several key components must be aligned for an innovation to move forward.

A significant contribution to this research was the use of the model to collate and synthesise a comprehensive set of enablers for embedding innovative e-learning which were submitted by the VET community. These enablers address each of the seven components of the model and provide a substantial ‘checks and balances’ planning tool (included in Appendix 2). This highlights the benefit of utilising existing models and working collaboratively with researchers from different contexts who are exploring similar issues.

Key findings

This research has produced eight key findings.

Key finding 1: Available time and competing priorities are limiting factors for engaging with e-learning innovations

Increasingly the VET work environment is becoming a crowded landscape and a significant barrier to engaging with an e-learning innovation is time. To introduce something new is a time based process and individuals make decisions about prioritising their time including whether or not e-learning is a worthwhile investment. For some it is, for others it is not and others need a tipping point to be convinced either way. The criteria for making such a decision includes several interrelated enablers: a work culture that embraces and supports innovation; a robust technology infrastructure; technology tools that are appropriate for teaching and learning purposes; a senior champion who drives the process; a willingness to consult and
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Key finding 2: There is a shift away from the ‘e’ and back to ‘learning’
To enable embedding of innovative e-learning practice requires a shift in emphasis from exploring technology tools to a need for better understanding of e-learning pedagogy, client perspectives and the demonstration of good examples of working models in local contexts. Considering whether the ‘e’ is still required or is becoming a distracter signals a change in thinking about the role and status of the ‘e’ in e-learning. Currently, e-learning innovations tend to complement existing teaching practices indicating embedding efforts to date have been incremental. Greater clarity about what we are aiming to embed is needed – new technologies (‘e’) or new pedagogies (‘learning’). They may not be one and the same.

Key finding 3: There is an organisational readiness chasm
Innovative practitioners are outpacing the readiness of organisational systems and services to provide the infrastructure required to support those practices. While individuals have benefited from professional development opportunities, what has fallen short and is now becoming evident is the lack of equal and parallel attention to stakeholders, like educational and information technology (IT) managers whose ‘buy in’ is required to support implementation. The results of this research indicate that embedding an innovative practice requires the right innovation, innovative practitioners, innovative managers, innovative business systems, innovative workplaces and a commitment to a common e-learning vision. It requires strategic alignment between all the seven components identified in the RIPPLES model. If one component is out of alignment it creates barriers to progress. Technology infrastructure was noted as a significant barrier to progressing an innovative practice, particularly the lack of access to Web 2.0 tools and limited consultation regarding technology-based decisions. The other key concern of practitioners was the lack of active management support. Consequently, the focus on embedding – the use of an innovation by the critical mass as a routine practice – may be ambitious and premature until the systems are more fully aligned with each other and with practitioner requirements.

Key finding 4: Purposeful use of technology is a core competency in a knowledge society
Productive functioning in the knowledge society requires a mix of individual and social competence and purposeful use of technology (Collis and Moonen 2005). Social software, rather than being adjunct ‘cool tools’, are instead ‘core tools’ that are integral for participating and contributing in a knowledge society to express, share, collaborate, communicate and co-construct. This provides another perspective as to why e-learning innovations, like social computing, are important to VET delivery. They support the new competencies required for living, learning and working in a knowledge society and need to be supported as legitimate and credible innovations.

Key finding 5: Targeted support is required to implement an innovative practice
The focus on e-learning has moved from ‘why’ to ‘how’ and this orientation requires relevant stakeholders to actively support implementation efforts. The need for better support was a dominant message from the field. The types of support included
training, technical support, pedagogical support and administrative leadership. Support enablers for training included time, mentoring, practical hands-on experience, access to networking opportunities, and support for training that was personalised, localised and just-in-time. Technical support enablers related to competent, service oriented IT staff, access to up-to-date hardware and software, and reliable robust systems. For pedagogy, personal qualities and attributes including motivation and willingness to engage and take responsibility was well represented. Other factors included modelling by peers and mentors, sharing and collaborating, and experimenting with different learning models that incorporated technology. Administrative leadership enablers included champions at senior level and actively supportive and enthusiastic line managers. These types of support enablers align well with Geoghegan’s (1995) early mainstream adopter needs. His observation was that early majority (mainstream) adopters are more concerned about teaching or learning solutions, demonstrated benefits and proven application of technology. They require shared decision making, peer support in a local context, a focus on teaching and learning, and on highly adoptable uses of technology. This has implications for the design of professional development and marketing programs to encourage and support potential early mainstream adopters to engage with e-learning innovations.

Key finding 6: Embedding innovative practice requires diverse strategies and styles

Diverse strategies are essential for a comprehensive approach to embedding an innovation. Miller (1999) proposes that all people have the capacity to be innovative, they just have different styles, approaches and strategies. These different strategies include: Exploring (discovering new perspectives, assumptions, and unchartered territory); Visioning (developing a clear sense of long-term purpose, with bold, ideal solutions to achieve it); Experimenting (combining and testing existing elements in novel combinations) and Modifying (building on and optimising past and present achievements). All four styles represent legitimate and valuable kinds of innovations and all are important to the creating, implementing and embedding process. In addition, these strategies point towards a critical issue that impacts on whether innovative e-learning products will be readily adopted by educators and their organisations: Does the degree of innovativeness of the product or service match the degree of innovativeness sought by the educators and their organisations? Catering for this diversity and matching innovation to need must be more explicit in planning and implementation processes.

Key finding 7: The skewed view of ‘innovators’ limits opportunities to embed innovative practice

Practitioners and managers nominated be their peers as ‘innovators’ tended to have one particular innovation style – Exploring. This focuses on only one of four legitimate approaches to innovation. If this group of practitioners is predominantly perceived to be innovative by their peers and their profile is Exploring, there are several issues to consider for supporting the embedding of an e-learning innovation:

- The perception that innovation is about exploring new territories can be seen as a limiting one.
- The Exploring profile may not be the most effective for embedding an innovation, yet those with this style are associated with being innovative.
• Raising the profile of other approaches to innovation will be important for embedding as a suite of approaches is important to move an innovation forward.

• Innovators with different approaches and strategies may not be recognised as innovators either by themselves or by their peers.

• There may be benefit in a greater emphasis on the diverse skill set required for successfully embedding an innovation.

• There may be different types of support required to meet the learning needs of these diverse approaches.

There may be great benefit in profiling the suite of different approaches required for creating, adopting, diffusing and embedding e-learning innovations.

**Key finding 8: A strength-based orientation fosters innovation and builds capability**

Recent research on capability development in VET promotes a strength-based orientation (Staron et al. 2006). This research shares many similarities with the findings from Staron’s research. While one focuses on embedding e-learning innovations and the other has a broader focus on capability development, there is a meeting point. Both emphasise that rich learning environments, organisational enablers, diverse approaches and interconnectedness between stakeholders are critical to the change process. Put simply, barriers are deficits, enablers are strengths and embedding anything is fostered by a strength-based orientation. The enablers identified for fostering innovative e-learning practice by VET contributors to this research (see Appendix 2) align with the organisational enablers identified in recent research on a strength-based orientation to developing capability for working and learning in the knowledge era. This suggests that embedding innovative e-learning practice is really about building individual and organisational capability.

**Resources from the research**

This project provided the opportunity to collect, collate and consolidate a wealth of VET knowledge and expertise about embedding innovative e-learning practice. Four resources informed the development of an embedding strategy which is a key deliverable for this project. These resources include feedback to the Framework from participants in current and previous Framework initiatives; three case studies that consider embedding factors from an organisational, an innovator and an innovation perspective; and a comprehensive set of enablers for embedding innovative e-learning framed within the seven key components of the RIPPLES model. These are substantial resources in their own right and provide practical tools and processes that could be adapted to different contexts.

**Feedback to the Framework**

Participants in current and previous Framework initiatives were invited to give feedback on what they believed different stakeholder groups could do in the future to effectively enable innovative practice in e-learning to be embedded. Stakeholders included the Framework funding body, the New Practices in Flexible Learning Project National Management Team, the organisations sponsoring a new practice, the New Practices in Flexible Learning Project teams, intermediaries who promoted or supported new practices and the adopters of new practices products and services. The resulting insights and suggestions are documented in Section 8, and highlight
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the value of considering increased multiple stakeholder involvement in planning and implementing new initiatives.

Case studies

Three case studies provided different perspectives of e-learning innovation diffusion within the VET sector. They included a focus on an organisation, an innovation and an innovator. The case studies informed the development of the embedding strategy.

An organisation perspective – getting down to business

This case study identifies the key organisational enablers that have progressed GippsTAFE’s (Central Gippsland Institute of TAFE) vision of becoming the best quality provider of flexible learning solutions in Australia. Key organisational enablers included flexible learning as the vision, a CEO who drives the vision, an e-learning innovation champion at a senior level, an experienced and talented innovation team dedicated to the task, a business approach to building capability and committed and supportive senior managers. Ten top tips for successful embedding provide practical advice for those with responsibilities for embedding e-learning practice. An independent analysis of the innovation styles of the Innovation and Organisational Development Team at Gipps TAFE identifies different innovation strategies and provides guidelines on how to work with team strengths to more effectively support embedding processes.

An innovator perspective – there’s something about Michael

This case study mapped Michael Coghlan’s journey as a pioneer of online voice tools in VET. It provides insight into the role and contribution of an innovator in VET and captures the essence of what is required to enable the unique talents of an innovator to be effectively utilised.

An innovation perspective – embedding digital storytelling

Digital storytelling is an e-learning innovation that is being successfully embedded across the VET sector. This case study maps the development of digital storytelling from the perspective of Carole McCulloch, a pioneer in digital storytelling in VET. This case study used Rogers’ (1995) five perceived attributes of an innovation as a framework to document the critical success factors that have contributed to embedding digital storytelling in VET. These attributes are: relative advantage; compatibility; trialability; observability and complexity. The aim was to provide a practical example of mapping an innovative practice against specific attributes to determine its embedding potential. It also provided an example of an implementation plan based on Rogers’ five stages in the adoption process: awareness; interest; evaluation; decision and adoption.

Enablers for embedding innovative e-learning

This resource is a synthesis of the enablers for fostering innovative e-learning identified by approximately 300 VET contributors to this project. It is an amalgam of open-ended questions from the RIPPLES survey, the input from case studies, feedback to the Framework, the collaborative work on the research wiki and input from interviews. The enablers are structured around the seven components of the RIPPLES implementation model and represent a VET perspective of the types of support required to embed innovative e-learning practice. It reinforces the need for a systemic approach.
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Part of the Australian Flexible Learning Framework

This resource was the result of an invitation to 17 practitioners and managers who were nominated as ‘VET innovators’ by their peers to identify enablers and barriers to innovators in an e-learning context. They were also asked to offer suggestions for maximising the talents of innovators for the benefit of both the innovator and the organisation. They worked collaboratively in the research wiki for approximately two weeks to produce this resource which provides insights into effective strategies for supporting innovators within a VET context.

The key findings and the resources emerging from this research have informed a four-phase strategy for embedding innovative practice in VET.

Four-phase strategy for embedding innovative practice

This strategy was developed in collaboration with William C Miller, an international consultant on the adoption and diffusion of innovation within corporate environments, who was a research advisor to this project. It incorporates some of his original work. The strategy is based on a cross-functional team philosophy.

Key features of the strategy

The strategy recommends that representatives from different stakeholder groups work together from the outset to develop and coordinate processes aimed to maximise the development, implementation and embedding of e-learning innovations. The following are key features of the strategy.

1. **It is a strategy not a model**
   - As a strategy it provides a general framework rather than a detailed prescription. This acknowledges that there is no one way or no one model to embed an e-learning innovation. Adapting the strategy to local needs is encouraged and expected as its purpose is to alert stakeholders to the range of issues that need to be considered if embedding is to be successful.

2. **It incorporates key research findings**
   - It addresses the readiness chasm by aligning what is being proposed with what the adopter groups require and are ready to adopt.
   - It recognises the interconnectedness between different stakeholder groups by including them in all phases of the strategy.
   - It recognises the key role of champions in driving an innovation forward.
   - It gives equal attention to the innovation, the adopters and the organisation.
   - Key questions are framed around issues emerging from the research.
   - It explicitly plans for different levels of readiness to adopt.
   - It can be customised to different contexts.
   - It utilises the four innovation styles to ensure different perspectives are considered.
   - It utilises the resources generated by VET contributors to this project.
   - It utilises useful tools identified in the research.
3. **There are four phases**
   - needs-assessment/selection/funding
   - development of the innovative practices
   - early adoption
   - mainstream adoption.

   Each phase focuses on current needs and prepares for the next phase of implementation. While phases 1–2 are well known and well documented processes, phases 3–4 which focus on early and mainstream adoption are not as formed and will require stakeholder groups to provide the details as adoption and embedding develop.

4. **There are three foundation questions**
   1. Is there a portfolio of both incremental and breakthrough innovations – for short-term and long-term needs?
   2. How well does this innovation match the short-term and/or long-term needs of the adopter groups?
   3. To what degree is the organisation ready to implement the innovation?

5. **The process is inclusive of all stakeholder groups**
   Five stakeholder groups have been identified: funders/project managers; developers; early adopter champions; mainstream adopters; and IT managers. IT managers have been targeted as a stakeholder group because of their explicit role in enabling implementation. These key stakeholder groups have significant impact on the outcome of an investment in an innovative practice. By considering different frames of reference and perspectives, all stakeholders have a voice from the outset and are alerted to the issues that must be considered and addressed if the challenge of embedding innovative e-learning is to be realised. Based on the concept of cross functional teams, this approach seeks to leverage diverse perspectives and expertise to achieve a common goal.

6. **It is managed horizontally**
   The project managers coordinate activities across the five stakeholder groups throughout the four phases.

7. **It is based on a portfolio approach**
   A portfolio approach ensures the best mix of incremental and radical innovations to meet present needs and to explore future possibilities. Short-term improvements build momentum for success and longer term investments lay the foundation for the future. A percentage of modifying, experimenting, visioning and exploring initiatives is required to ensure a diverse portfolio that meets a range of needs.

8. **It is time based**
   A three-year process is suggested based on corporate models and input from VET contributors.

9. **There are tasks and key questions for every phase**
   The key questions help focus on tasks and processes and ensure a balanced perspective.
10. **Four innovation strategies provide a structure**

   The innovation strategies are adapted from the work of William Miller and are used with permission.

11. **There are two generic analysis templates**

   Two analysis templates have been developed for use in all four phases. The templates are designed to capture developer and adopter perspectives on key issues to ensure the best possible outcomes and to ensure there is a good spread of innovative initiatives that meet both present needs and future possibilities. Protocols for teamwork are also considered.

**Concluding remarks**

The fundamental focus of this research project was on embedding innovative e-learning practice within a VET context. To embed means to ‘set in place’ and to become an integral part of something. Embedding also has a nested connotation – one component is embedded within another. This reinforces the key findings in this research that embedding innovation requires alignment between different components and stakeholders.

To successfully embed an innovative practice may not only require the identification of a set of good practices to model or the production of implementation models and checklists of enablers. It is clear from the research findings that the VET community understands and can articulate that it takes more than this.

It also requires a mindset change and an acknowledgement of the lived experience of learning and working in the crowded landscape that is VET. This research concludes that the real innovation may be to embed a way of thinking about innovation, learning and change that promotes a strength-based orientation. There is no doubt that embedding innovative e-learning is a challenge. It requires vision, will, determination and drive to jump the readiness chasm identified in this research to enable innovators, early adopters and ‘the other 85%’ to not only take on e-learning innovations – but also to see them through.

A strength-based orientation is a key enabler to this embedding process as such a leap takes planning, preparation, commitment and collaboration because:

> *You can't cross a chasm in two small jumps.*  
>  
> David Lloyd George
Section 1: Introduction

Methodology

This applied research project on embedding innovative practice in e-learning was jointly funded by the Framework’s New Practices in Flexible Learning and Research and Policy Advice Projects.

Research aims

The research aims for this project were to:

- identify factors that have contributed to embedding innovative practices
- inform future decision makers in regard to the considerations and potential impacts of embedding innovative practices
- develop models for ongoing embedding of innovative practices to be utilised by future VET organisations.

Phase 1 and Phase 2

This is Phase 2 of this research project. Phase 1 focused primarily on New Practices in Flexible Learning projects and sought input from the Project Managers about embedding the outcomes of their projects.

This phase has integrated and built on these findings by broadening the scope to include all innovative e-learning practices supported by the Framework. The source of this practice could be the New Practices in Flexible Learning Project, Flexible Learning Leaders (a previous Framework project 2000-2004), LearnScope, Flexible Learning Toolboxes (Toolboxes) and other Framework initiatives. As there is a rich interconnection between many of these initiatives, the source of something new is often blurred. However, the common thread is the intent to make a difference to teaching and learning through contemporary e-learning practice.

The range of contributors to this research was also expanded to include:

- New Practices in Flexible Learning team members, including developers, mentors and reviewers.
- Intermediaries including Framework Coordinators, state/territory LearnScope Managers, organisation and professional development managers and coordinators in institutes, institute campus and educational managers, team leaders and support services professionals.
- The VET community in general – including members of the Flexible Learning Leaders listserv, E-learning Networks, participants in conferences, showcases.

3 Flexible Learning Leaders <http://www.flexiblelearning.net.au/leaders>
4 LearnScope <http://www.flexiblelearning.net.au/learnscope>
5 Toolboxes <http://www.flexiblelearning.net.au/toolboxes>
6 Framework Coordinators <http://www.flexiblelearning.net.au/frameworkcoordinators>
7 E-learning Networks <http://www.flexiblelearning.net.au/networks>
and various activities. Views of different stakeholders were valued and noted. Anyone who showed an interest was invited to contribute.

- **VET innovators** – those identified in interviews as being ‘VET innovators’ were contacted and invited to collaboratively develop a response to some key questions in the research wiki.
- **Managers and/or advocates** whose innovations had diffused without New Practices in Flexible Learning funding.

While efforts were made to engage a broad range of VET stakeholders, the research findings are primarily a TAFE perspective.

**Data collection**

Data for this research was collected through various processes including:

- a survey instrument distributed through VET sector networks
- one-on-one and small group interviews lasting between one and three hours
- visits to case study sites
- **Skype™ interviews** – both text and voice
- telephone interviews
- email exchanges
- feedback from conference and forum presentations
- informal conversations at conferences, workshops and showcases
- contributions to the research wiki
- promotion at workshop and showcase events within the VET sector
- feedback from and conversations with critical readers
- Innovation styles assessment, analysis and reporting
- literature review.

**Research approach**

**Research advisors**

Two international research advisors provided advice, support and substantial input into this research.

**Dr Daniel Surry** is an Associate Professor of Instructional Design and Development at the University of South Alabama, USA. He is a past Chair of the American Educational Research Association’s Special Interest Group – Instructional Technology and served as moderator of the Instructional Technology Forum listserv for five years. He has recently edited a special issue of the *British Journal of Educational Technology* on the topic: Change and Learning Technologies.

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8 Skype is a peer-to-peer Internet telephony network providing facilities for Internet chat, voice and video conferencing.
Dr Surry’s research and consulting interests relate specifically to how organisations can facilitate the implementation of process and technology innovations. Dr Surry offered his RIPPLES (Resources, Infrastructure, People, Policies, Learning, Evaluation and Support) model for implementing e-learning innovation for use in this research and designed, administered and analysed the survey. This also provided an opportunity to test out the RIPPLES model in the Australian VET context. Daniel’s website is <http://dansurry.com/>

William C Miller is a researcher, author and facilitator specialising in adoption and diffusion of innovations within the corporate sector. Based in India, William has consulted in England, Netherlands, France, India, China, Singapore, Malaysia, Japan, Canada, and the USA. He is the founder of Global Creativity Corporation, creator of the Innovation Styles Profile and author of four books on creativity and innovation including *Flash of Brilliance* (1999) which was recognised as one of ‘Executive Book Summaries’ top 30 business books in the USA for 1999. In 2005 William was named as one of the top 30 leadership consultants worldwide by ‘Leadership Excellence’.

William has a particular interest in values-driven team innovation and significantly contributed to the development of the three year embedding strategy which is based on his own research and conceptual models. William’s website is: <http://www.globalcreativitycorp.com/>

The aim of working with the research advisors was to leverage their significant research expertise to advance this research rather than to replicate what had already been done. It also provided insights and perspectives from outside the VET context which added an extra depth to the research process.

**Literature review**

A comprehensive review of the literature provided insights on adoption and diffusion in general and the embedding of innovative e-learning practices in particular. Sources included books, journals, blogs, communities of practice, websites and wikis. Information was gathered to identify key enablers and barriers to the diffusion of e-learning innovations and to identify models, strategies and processes that facilitate the embedding process. The literature review search moved beyond an educational focus to explore conceptual frameworks including complexity theory and adoption and diffusion of innovations theory. It considered views from the corporate sector as well as a more specific focus on e-learning innovations within different educational and training sectors worldwide.

**RIPPLES survey**

RIPPLES is one of several models developed specifically to advise decision makers on the requirements for implementation of technology innovations within an education context.

RIPPLES was chosen as the preferred model for this research for the following reasons:

- The researcher has known Dr Surry since 1998 when she visited University of South Alabama as part of a learning fellowship, so has a detailed understanding of his work on implementation of e-learning innovations.
• Dr Surry was an early ‘expert in virtual residence’ in the Australian Flexible Learning Framework’s Virtual Learning Community (VLC)\(^9\) so he has an awareness of the Australian VET e-learning context and has engaged with VET e-learning practitioners.

• The model is designed to inform and guide senior decision makers who are the primary targets of this research.

• It provided an opportunity to test out the RIPPLES model in another country and in another education sector.

• It provided an opportunity to leverage off the substantial body of research underpinning RIPPLES and in doing so, advance this project.

• It provided an independent perspective as the researcher is a VET practitioner with a long history of involvement in Framework initiatives and innovative e-learning.

• It provided an opportunity to work collaboratively with another researcher with extensive experience in the same field. The survey for this research was developed by Dr Surry and the results were also analysed by him.

• To model ‘working and learning in the knowledge era’, by sharing expertise and collaborating to advance knowledge in a common field of interest for mutual benefit.

• While the elements of the RIPPLES model are adequately grounded in theory and practical experience, the overall model had not been applied extensively. It provided an opportunity to test the transferability of the model and to refine it.

Case studies
Three case studies provided different perspectives of e-learning innovation diffusion within the VET sector. They included a focus on an organisation, an innovation and an innovator. The case studies informed the development of the embedding strategy. Extensive interviews with case study participants were recorded, transcribed, sent back for modification and sign-off and formed a substantial foundation for the case studies.

An organisation – getting down to business
GippsTAFE (Central Gippsland Institute of TAFE) has participated in two New Practices in Flexible Learning projects and has developed a business approach to embedding innovative practice. Data collection for this case study includes interviews with three campus managers, the manager and members of the Innovation and Organisational Development Team, New Practices in Flexible Learning Project Team members and first adopters of the *Virtual Worlds – Real Learning* New Practices in Flexible Learning project. It also provides an Innovations Styles Profile of the Innovation and Organisational Development Team.

An innovator – there’s something about Michael
This case study mapped Michael Coghlan’s journey as a pioneer of online voice tools in VET. The aim was to provide insight into the role and contribution of an innovator in VET and to capture the essence of what is required to utilise their unique talents. Seventeen peer-nominated VET innovators also collaborated to document enablers

and barriers to their innovative practice in the research wiki. Fifteen innovators also completed an Innovation Styles Profile and the group profile provides some key insights into the perceived role of an innovator.

**An innovation – embedding digital storytelling**

Digital storytelling is an e-learning innovation that is being successfully embedded across the VET sector. This case study maps the development of digital storytelling from the perspective of Carole McCulloch, a pioneer in digital storytelling in VET and facilitator of the Digital Storytelling Network. This case study used Rogers’ (1995) five perceived attributes of an innovation as a framework to document the critical success factors that have contributed to embedding digital storytelling in VET. These attributes are: relative advantage; compatibility; trialability; observability and complexity. The aim was to provide a practical example of mapping an innovative practice against specific attributes to determine its embedding potential. It also provided an implementation plan based on Rogers’ five stages in the adoption process: awareness; interest; evaluation; decision and adoption.

**Research wiki**

A research wiki was set up early in the project to provide a collaborative working space for this project. It provided open access to the VET community to publish models, strategies, ideas and resources related to embedding innovative e-learning practice. The wiki was used throughout the project to collect data, disseminate information and provide a repository for resources, references and models. This dynamic resource has potential to be developed beyond the life of the project.

**Critical readers**

Seven critical readers provided comprehensive feedback on drafts at key stages in the research development. Critical readers represented the target group for this research and included senior managers with direct responsibilities for embedding e-learning innovation, project managers of significant e-learning initiatives, and managers and coordinators of professional development, innovation and organisational development units.

**An iterative process**

The research findings and subsequent models emerged through an iterative process involving cycles of dialogue and feedback loops with the New Practices in Flexible Learning National Management Team and project teams, early adopting practitioners, critical readers, case study participants, research advisors, conference and workshop participants, research wiki contributors and reference group members. Findings from the survey provided a substantial source of data which was analysed, discussed with research advisors checked against the literature and similarities and differences noted. Emerging themes and key findings were continually shaped and refined in response to feedback and then used to inform the development of models and tools. As the case studies were developed over a period of time and involved extensive interviews with decision makers who represented the key target group for this research, they also provided an opportunity to seek feedback on emerging themes which informed and refined thinking. Progress reports were continually fed to...

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11 Research wiki [http://designplanet.wikispaces.com](http://designplanet.wikispaces.com)
the research advisors and regular conversations provided fresh perspectives and new ways to move forward. Ethical research guidelines were adhered to when working with individuals and the privacy of individuals was respected.

**Definition of terms**

The following definitions help clarify the terminology used in this project.

**E-learning:** E-learning uses electronic media to deliver flexible VET. It includes access to, downloading and use of web, CD-ROM or computer-based learning resources in the classroom, workplace or home. It also includes online access to and participation in course activities (eg online simulations, online group discussions), directed use of the internet, mobile and voice technologies for learning and research purposes; structured learning-based email communication; and online assessment activities. E-learning does not include email dissemination of course information, email communication between a teacher/trainer and learner on a single learning issue, or online administration of learning activities.

**New practice:** In this context, new practice is a synonym for innovative practice in e-learning. While there is a focus on the New Practices in Flexible Learning project, it also refers to new practices initiated from other sources like LearnScope, Flexible Learning Leaders, Toolboxes and other Framework initiatives. There is often a blurred boundary as many of these initiatives are interconnected. The common focus is on the models, processes, strategies and people that enable these new practices to thrive beyond the initial project funding.

**Innovation:** Innovation is about ideas and the transformation of those ideas into value creating outcomes – into products, processes and services. Innovations include breakthrough ideas that lead to new products or services, and incremental ideas which improve the way processes are undertaken, or products are manufactured. Innovation is about the creation of new knowledge and the use of that knowledge (National Innovation Website 2006)\(^\text{12}\).

**Innovativeness:** Being open to changes and willing to adopt innovative tools and practices.

**Adoption:** User attraction to the new practice and a decision to engage, dismiss or continue full use of an innovation. The focus is on what factors influence an individual to engage with a new practice.

**Diffusion:** The social process by which a new practice spreads its influence.

**Diffusion process:** How a new practice spreads from its source to its ultimate user or adopter.

**Adaptation:** Shaping, altering, or modifying a new practice so it suits a particular context.

**Implementation:** Enabling the new practice to be utilised within an education and training context. Implementation identifies what needs to be in place to ensure ‘workplace readiness’ to embrace and support the new practice to move beyond the ‘new’ and to be embedded as everyday practice that becomes established and enhances delivery.

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Innovate and integrate: Embedding innovative practices

Institutionalisation: The sustained use of a new practice by a critical mass so it is no longer badged as ‘new’ but rather becomes a routine part of a practitioner’s toolbox of strategies.

Embed: To fix or set securely. This is the outcome a new practices investment is striving for. Embedding is to witness the utilisation and impact of new practices as an integral part of everyday VET delivery. There are two levels of embedding:

- for local impact – how a new practice has made a difference in a local context
- for broader impact – how a new practice has made a difference beyond its point of origin. Embedding is closely associated with institutionalisation.

RIPPLES: This is the acronym for the seven components of a technology innovations implementation model designed for decision makers and developed by Surry and Ensminger (2005). The components are: Resources; Infrastructure; People; Policies; Learning; Evaluation and Support. RIPPLES was used as the framework to design and implement a survey for this research.

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Section 2: Theories, enablers, barriers and models

*General theories and models of innovation diffusion*

The work of Nutley et al. (2002) from the Research Unit for Research Utilisation, University of St Andrews in the UK, provides a comprehensive conceptual synthesis of the key ideas, models and implementation implications drawn from the adoption and diffusion of innovations literature. The paper provides a thorough overview of major theorists and provides an analytical review of innovation research contained within a four-part framework:

1. types of knowledge
2. types of utilisation
3. models of process
4. ways of seeing.

It also summarises the factors drawn from the literature review which affect the likelihood that a particular innovation will be adopted. These factors are innovation attributes, adopter characteristics, environmental/context characteristics, the characteristics of those promoting the innovation and communication channels.

It is a recommended background paper for understanding the general theories of diffusion of innovations and research interests in this field. Figure 1 is a mind map that captures the key components of the diffusion literature reflected in Nutley's paper.
Rogers in a nutshell

Diffusion of Innovations, the seminal work of Everett Rogers first published in 1960 and now in its 5th edition, is consistently referred to in the literature on the diffusion of e-learning innovations as a key model for understanding and planning for innovation diffusion and implementation (Grunwald 2002; Seufert and Euler 2003; Mahoney and Wozniak 2005; Elgort 2005; Jasinski 2003; Robertson 2006).

While details of this model are widely available, its essence is outlined below:

The model has four key components

1. **Innovations decision process.** An individual’s process of adopting an innovation progresses over time through five stages – knowledge, persuasion, decision, implementation and confirmation.
2. **Individual innovativeness.** This refers to the sequential uptake of innovation over time by different adopter categories – innovators, early adopters, early majority, late majority and laggards.

3. **Rate of adoption.** Initially, the innovation goes through a slow, gradual growth period, followed by dramatic and rapid growth, and then a gradual stabilisation and finally a decline as a saturation point is reached.

4. **Perceived attributes of an innovation.** An innovation is a cluster of attributes with the following five attributes having the most impact on an individual’s decision to adopt an innovation – compatibility, trialability, complexity, relative advantage and observability.

5. **Stages in the adoption process.** These include awareness, interest, evaluation, decision and adoption.

The general adoption and diffusion research, especially the work of Rogers, has informed educational technology diffusion research in many different countries and across different educational sectors. This generic model is widely transferable to different discipline settings including diffusion of e-learning innovations.

Rogers’ innovation attributes are still the most commonly used metric for examining factors that affect innovation diffusion and adoption. Furthermore, the majority of the literature that examines factors affecting the adoption of instructional technology in higher education identified Rogers’ innovation attributes. Of these attributes the literature suggests that relative advantage and compatibility may be the most important factors affecting faculty adoption of instructional technology (Grunwald 2002, p. 36).

An Australian example of using Roger’s model as an ‘explicit theoretical framework’ to examine e-learning implementation is a case study on diffusion of innovation and professional development at the University of Sydney (Mahony and Wozniak, 2005). The authors conclude that:

“Rogers theory of the diffusion of innovation provides a useful framework for examining the introduction of e-learning strategies to university populations.” (p. 7).

Closer to home, Jasinski (2004) used Rogers perceived attributes as the framework for evaluating the New Practices in Flexible Learning - Interactive Ochre project and found it to be a practical and useful tool.

Rogers diffusion of innovations model assumes a pro-innovation bias, or the assumption that adopting the innovation will be of benefit to potential adopters (Grunwald 2002). It also assumes a linear progression from one stage to the next.

While Rogers is a high profile model of diffusion of innovations, it is not the only one. There has been significant research from a range of countries and sectors specifically focusing on diffusion of innovative educational technology that makes a useful contribution to informing this research. This is the focus of the next section.

**Barriers and enablers to e-learning sustainability**

Grunwald (2002) noted there has been a shift in the literature from a focus on the benefits of e-learning to issues of sustained use as ‘it is assumed that faculty adoption and sustained use of instructional technology is the desired outcome for colleges and universities’ (p. 3).
“The immediate challenge for higher education institutions is to understand the factors that influence faculty adoption and sustained use of instructional technology. This understanding will better equip institutions to establish support structure enabling faculty to adopt and use technology.” (p. 3)

Grunwald analysed the findings of 26 studies which identified variables that affect adoption of instructional technology. These variables were synthesised into six categories:

1. **Potential adopter traits** – risk aversion, gender, potential adopter usage style, personal conviction, motivation, experience, self-efficacy, academic discipline and age.

2. **Potential adopters’ beliefs and attitudes** – perceived goals, positive attitudes towards technology, perceived usefulness and perceived ease of use.

3. **Innovation characteristics** – relative advantage over traditional teaching, compatibility with teaching materials, perceived value, ease of use, time needed to learn, innovation amenability and adaptability, trialability and visibility.

4. **Organisational and cultural context** – faculty support, resources, equipment, availability, staff development opportunities, prompt technical support, incentives, instructional design support, strong culture which provides leadership and support for the new technology and encourages risk taking, mission statements, supportive institutional culture, cultural context.

5. **Performance impact of instructional technology** – improved student learning, result demonstrability.

6. **Communication with other adopters** – this category overlays all other categories.

Grunwald also cited a meta-analysis of over 75 studies by Tornatzky and Klein (1982) which revealed that ‘compatibility and relative advantage were the two most positively related factors to adoption. Furthermore, they found that complexity had a consistently significant negative affect on adoption’ (p. 65). Compatibility, relative advantage and complexity are three attributes identified by Rogers as influencing the decision by an individual to adoption an innovation.

Apart from these attributes, Grunwald also identified the following enablers and barriers to the adoption of instructional technology:

**Enablers**

- Staff development opportunities, time, prompt technical support, incentives and positive attitudes towards technology, incentives/rewards to use it, encouraging risk taking, proof of improved student learning, advantage over traditional teaching, equipment availability, ease of use, time needed to learn, training, administrative support, personal comfort and colleague use, perceived value, resources and communication with other adopters, mission statements and institutional culture, faculty development programs, personal conviction, motivation, and experience, academic discipline and age, gender and potential adopter traits.

**Barriers**

- Barriers to adoption of instructional technology identified in the literature included: lack of time, inability to receive credit towards tenure and promotion, insufficient or obsolete hardware and software, inadequate facilities and support services, lack of information about good practice, underestimation of the difficulties, inadequate training
In 2003 the British Educational Communications and Technology Agency (BECTA), commissioned two literature reviews to identify factors 'which hinder or promote the effective use of ICT by teachers.'

**Barriers**
- Major factors – confidence, time and access to quality resources.
- Recurring technical faults, and the expectation of faults occurring during teaching sessions, are likely to reduce teacher confidence and cause teachers to avoid using the technology in future lessons.
- Resistance to change, especially from teachers who do not realise the advantages of using technology in their teaching.
- There are relationships between many of the identified barriers and any one factor is likely to have an influence on the other.

**Enablers**
- leadership and planning
- sharing of resources
- reliable technical support
- schools working with each other and with the local community
- differentiated training and continuous professional development for teachers
- participation in national ICT initiatives and projects.

Surry and Ensminger (2005) highlight several barriers identified from a range of sources to the implementation of web-based learning (WBL) to a university context in the USA including:
- the amount of time it takes to develop WBL
- no perceived, personal or career benefit from participating in WBL
- administrator’s commitment to WBL
- intellectual property
- academic freedom
- job security
- the changing nature of tenure
- the existing infrastructure of the university.

These barriers were reduced into three factors: 'personal variables,' 'attitudinal barriers,' and 'organisational barriers.' While Surry and Ensminger acknowledge that 'developing an implementation plan that accounts for the many barriers to WBL seems like an extremely difficult task', they were informed and guided by 'the literature, both outside of our field and within, which provides a number of useful theories and strategies related to the change process.' (p. 2)

Turning to a VET context, Phase 1 of the research project captured the views of New Practices in Flexible Learning project managers, who identified a number of factors that made it more likely that outcomes would be embedded. These included:
Innovate and integrate: Embedding innovative practices

- the innovation responds to the market and to proven unmet need
- the innovation had clear, demonstrable benefits
- the innovation fits with organisational priorities and has management support
- the innovation has a leader or champion
- the potential users are engaged in the development of the process as a means of fostering greater eventual uptake of innovative practices
- the innovator has strong professional networks.

Barriers included:
- personnel or organisational changes
- lack of time and opportunities for dissemination
- lack of support for practitioners in adopting innovations
- clashes with organisational cultures and systems
- practitioners attitudes
- short time frames
- the process of embedding innovation.

These lists of enablers and barriers provide a comprehensive overview of the types of issues to be considered in an embedding endeavour. They can be consolidated into three key themes:

1. **The innovation**: types, attributes and pedagogical impact.
2. **The innovators and adopters**: the human factors including beliefs, attitudes, readiness and personal impact.
3. **The organisation**: the culture and systems including vision, leadership, infrastructure, commitment and provision of support.

These themes appear in different configurations and degrees of emphasis in a range of models that have been developed to inform and guide decision makers in how to best support the longer term utilisation of innovative e-learning initiatives.

**From adoption to implementation – conditions, dimensions and models**

Recently there has been a shift in focus away from **adoption** and towards **implementation** (Surry and Ely 2001).

Implementation is the process of fostering the use of an innovation within an organisation after the initial adoption decision. (p. 184).

Implementing moves beyond the decision to adopt (take it on) to focus on active and sustained utilisation of the innovative practice (see it through). A significant amount of research has been undertaken to identify conditions, characteristics, enablers, barriers and models that influence the implementation of e-learning innovations. A snapshot of this research reveals a variety of approaches from higher education and schools and vocational and education training sectors around the world.
Ely’s eight conditions for implementation

A well known researcher on conditions that facilitate the implementation of educational technology innovations is Donald P Ely. Ely (1999) identifies eight conditions that facilitate the implementation of an innovation within an organisation (see Table 1). In theory, an organisation can foster the efficient implementation of an innovation by accounting for each of Ely’s eight conditions in ways that are meaningful and relevant to their unique implementation situation.

Table 1: Ely’s (1999) eight conditions to facilitate implementation of educational technology

<table>
<thead>
<tr>
<th>Condition</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status Quo</td>
<td>Dissatisfaction with the current technology or state of affairs within the organisation</td>
</tr>
<tr>
<td>Resources</td>
<td>Availability of materials and supplies needed to fully utilise an innovation</td>
</tr>
<tr>
<td>Skills and Knowledge</td>
<td>People within the organisation know how to use the innovation properly</td>
</tr>
<tr>
<td>Time</td>
<td>Workers have adequate time on the job to become familiar with the innovation</td>
</tr>
<tr>
<td>Rewards and Incentives</td>
<td>Workers who use the innovation receive some sort of tangible or intangible benefit</td>
</tr>
<tr>
<td>Participation</td>
<td>Everyone who will be affected by the innovation has input into the change process</td>
</tr>
<tr>
<td>Commitment</td>
<td>Upper management within the organisation demonstrates strong support of the innovation</td>
</tr>
<tr>
<td>Leadership</td>
<td>Middle and lower management provide active support of the innovation on a day to day basis</td>
</tr>
</tbody>
</table>

Seufert and Euler’s five dimensions

Seufert and Euler (2003) from the Swiss Centre for Innovations in Learning, University of St.Gallen, articulated why there was a growing research interest in e-learning sustainability.

The exaggerated expectations attributed to e-learning in the recent past have subsided somewhat and capital providers, mainly state sponsors returned to reality and withdrew their support successively – analogous to the dot.com crises and the developments in the e-business field. This disillusion and consolidation phase provides the opportunity to continue the development of e-learning on a high quality level and to evaluate what survives sustainability. (p. 3).

They conducted expert interviews with a range of stakeholders responsible for the ‘sustainability of e-learning’ once ‘financing subsides.’

Hence sustainability becomes a fundamental issue; how do e-learning projects manage the transition into a capable, self-financed and expanded model? (p. 3)

How does e-learning move beyond the innovative and motivated early adopters and be …integrated into central processes of an educational institution so that ordinary teaching staff will use it on a regular basis?’ (p. 4). Seufert and Euler equate e-learning to a foreign body.

Either it adapts and not be regarded as alien or it will continuously be identified as a foreign body and be eventually rejected from the system. (p. 4).
The word ‘sustainability’ itself can be problematic as ‘everyone has different ideas of what the term means’. Seufert and Euler relate sustainability to the concepts of ‘stability’ or ‘permanence’.

Transferring these terms to e-learning means developing stable structures, which are integrated institutionally and result in fundamental changes in teaching. (p. 5).

They concluded that sustainable implementation of e-learning innovations requires a systemic and ‘interdisciplinary approach’ and identified five dimensions that promote sustainability:

Table 2: Dimensions that promote e-learning sustainability (Seufert and Euler 2003)

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Main principle/objective</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Pedagogic</td>
<td>Sustainable learning success which is both general and discipline specific.</td>
</tr>
<tr>
<td>3. Organisational/</td>
<td>Flexibility, adaptiveness and efficiency of structures and processes, including mechanisms for anchoring the innovation to the institution, efficient project management, evaluation and searching out the perspectives of teachers, learners and employers, knowledge transfer and experience exchange, securing the necessary infrastructure and a proactive communication policy.</td>
</tr>
<tr>
<td>administrative</td>
<td></td>
</tr>
<tr>
<td>4. Technical</td>
<td>Functionality and stability of a suitable technical infrastructure which should be customised to users.</td>
</tr>
<tr>
<td>5. Socio-cultural</td>
<td>The socio-cultural changes which may emanate from e-learning. The main principle in this perspective is promotion of the innovation, a willingness to innovate and self-organise.</td>
</tr>
</tbody>
</table>

They emphasise the inter-relatedness of these dimensions ‘which derive from different disciplines and stand in mutual stressful interaction’ (p. 6), and caution against over-emphasis of one over the other. The dimensions are relevant to different stakeholder groups – key decision makers, e-learning coordinators and project teams.

Seufert and Euler’s research also identified three significant principles that are crucial for the sustainable implementation of e-learning innovations:

1. **Taking a long-term perspective** – it takes time to fix something permanently in human minds and implies a rethinking from short-term project orientation to long-lasting implementation.

2. **Applying a systemic approach** – sustainability needs to be achieved at an institutional as well as a project level and both need to be evaluated in respect to their efficiency and sustainability. However, the former is more important for sustainability.

3. **A multidimensional vision** – all five dimensions have to be evaluated in respect to their efficiency and have to be considered in the right balance (p. 10).
Collis and Moonen’s ‘18 lessons’

Collis and Moonen (2001) from the University of Twente in the Netherlands, distilled over 20 years experience with ICT and learning in higher education into ‘18 lessons’, which in essence, is a systemic model for embedding e-learning. Lessons include having clear goals, accepting e-learning as an integral component of a teaching repertoire, acknowledging change is iterative and unpredictable, recognising that environmental context and personal engagement are important, key people are critical, focusing on just-in-time support, keeping implementation a central focus of all development work, complementing core technologies, offering something for everyone, changing progressively and starting where people are at, involving learners actively, being cautious about old measures, understanding it’s not about saving money and simplifying return on investment criteria.

Of particular interest is ‘Lesson 5: Watch for the 4-Es’. The ‘4-Es’ predicts an individual’s likelihood of voluntarily using a technology tool or resource for supporting learning. They are:

1. Environment – the context in which an individual is a part
2. Educational effectiveness – perceived or expected benefit to a user’s own problem
3. Ease of use – the easier the better
4. Engagement with technology – a personal response to technology and to change.

Collis and Moonen believe the environmental context and the level of personal engagement are most important. They offer a conceptual model for technology integration called ‘The Learning Workbench’:

For us, technology is not for ‘delivering’ learning or for taking the humans out of learning, but is rather a set of tools, a locally tailorable workbench, which offers affordances to empower people to share, build, support, and manage their learning together, in their common context. (p. 6).

Three important elements must be considered together in setting up The Learning Workbench:

- **Context** – learning takes place within a complicated mix of personal social, organisational and cultural factors and there are no simple answers.
- **Processes** – that put the user in control and contributing so there is optimal fit of learning to the personal context.
- **Technology as a tool** – rather than a solution, technology is a workbench which supplies users with tools to address their own problems and interests.

Most of this research has occurred in the higher education sector. In the schools sector, models frequently cited include the Concerns-Based Adoption Model (Hall and Hord 1987) and the Integrated Model (Sherry and Gibson 2002). Both focus on supporting practitioners.

**Concerns-Based Adoption Model (CBAM)**

Hall and Hord’s (1987) Concerns-Based Adoption Model (CBAM) approaches the adoption of an innovation through the point of view of the individual teacher. The two key focus areas are ‘stages of concern’ and ‘levels of use’. Teachers will have different concerns about a technology depending on the stage they are in, and go
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through eight levels of use ranging from ‘non-use’ to ‘renewal’. It is the most commonly cited diffusion model in education (Grunwald 2002). The model has been used extensively to inform research and program development in adoption of innovations in school education.

**Sherry and Gibson’s integrated model**


Sherry and Gibson (2002) recommend that any model:

"...must deal with the complex interrelationships among the many key actors and parts of the system. It must provide a framework and language for describing many simultaneous interactions. It must represent the flow of resources in a system over time. And finally, the model must make visible both the patterns and the extent of involvement of the various players and parts of the system" (p. 2).

They developed an integrated model of professional growth where teachers progress through five distinct evolutionary stages as they develop expertise in using educational technology. These stages are:

- **Teacher as learner** – information gathering and learning new skills and knowledge for utilising the technology.
- **Teacher as adopter** – experimenting, trying out and sharing experiences with peers.
- **Teacher as co-learner/co-explorer** – developing a relationship between the technology and the curriculum rather than technology tasks.
- **Teacher as decision maker** – reaffirming/rejecting the technology as they develop a greater awareness of outcomes and begin to assess the impact of the innovation of student learning and performance.
- **Teacher as leader** – expand their role to become active researchers who share experiences and suggest improvements. Their skills become portable.

They caution that the portability of skills of a ‘teacher-as-leader’ could become a destabilising factor. Sherry and Gibson refer to the work of Miles (1983) whose studies of institutionalisation of educational practices highlighted a potential conflict between the need for the teacher-leaders to continue to take on new challenges, and the need to institutionalise the innovation at the local site. This required clear communication and cooperation and support between teacher-leaders and managers so that “…the pressure and stresses of incorporating something new could be managed together.” (Miles, p. 19, in Sherry and Gibson, 2000). If these teacher-leaders were supported they were able to grow in their role. If they weren’t supported the portability of their skills often meant they moved on resulting in the decomposition of the institutionalising effort. Support included administrative support, incentives, peer coaching, outside consulting, structured time for sharing new ideas and promising practices with colleagues, and support from enthusiastic students.

Gibson (2000) identified three critical processes that must be in place for systemic change to occur:
1. **Convergence of resources** which provides a starting point for change. The premise is that the influence of a practice stays at the level at which it is supported, i.e., individual, peer, work group, program, organization. If resources are not concentrated enough to spark something, there will only be a mild impact.

2. **Mutual benefit** to those who are affected by the change taking place. Every circle of influence has a boundary, so there must be benefit for people on both sides of a boundary.

3. **Extensive free flow of resources and expertise** throughout the system to fuel its sustainability. For any transformation, the innovation must spread beyond the localised setting. Otherwise there could be local sustainability, but no systemic impact.

If these three factors are in place, the momentum for systemic sustainability is created. That is, for a majority of teachers educational technology is ‘seamlessly integrated’ with other methodologies as a core component of everyday teaching practice.

**Summary**

The common and consistent message these theories, barriers, enablers and models present is that an embedding process must be based on a clear vision, driven by champions, explored from multiple perspectives, with a range of stakeholders over a period of time, and there is no one way to do it. Three key components must be considered in an implementation endeavours:

1. **The innovation** – the types, attributes, market need, benefits and pedagogical impact.

2. **The innovators and adopters** – the human factor including beliefs and attitudes, readiness, collaboration, personal impact and relationships.

3. **The organisation** – the culture and systems including infrastructure, leadership, commitment and provision of professional development.

As these three components are essential factors to consider in an implementation strategy for e-learning innovations they will structure the next three sections of this literature review.
Section 3: The innovation

Some ideas require the focused energy of the bulk of an organisation for their emergence and success. Other ideas can emerge in local situations and remain local or propagate across the organisation in a more organic fashion. Many ideas lie in between and require the focus of the organisation at times or rely upon a distributed system of support at other times (Coffman 2006, p. 5).

There is huge variation in the nature of innovative practices in e-learning. This was identified in Phase 1 of the project when the range of the New Practices in Flexible Learning projects was analysed. These projects tended to have one of four focuses:

1. developing a product or technology
2. using existing products or technology to improve teaching, learning or assessment
3. dealing with issues around a new technology itself
4. developing a new approach to teaching, not necessarily based around technology.

Within these focus areas, the scope and complexity of individual projects varied considerably. Examples of each of these New Practices in Flexible Learning are listed in Table 3.

Table 3: Range and examples of New Practice in Flexible Learning projects

<table>
<thead>
<tr>
<th>Project range</th>
<th>Examples of New Practices in Flexible Learning projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developing innovative products or technology</td>
<td>ARED – applications for rapid e-learning development. This project produced ready-made, re-usable interactions that can be used by developers to generate high quality, cost effective e-learning resources. Interactive Ochre. This project developed a product that transferred cultural awareness information into music, stories and song to create new blended and digitised technologies.</td>
</tr>
<tr>
<td>Using existing products or technology to improve teaching, learning or assessment</td>
<td>Beyond text – using your voice online. This project developed a model to address pedagogical barriers preventing teaching staff adopting online voice tools as part of their core teaching methodology. Building communities – managing community content. This project developed e-learning resources for use in training people responsible for managing, resourcing and moderating virtual or online communities.</td>
</tr>
<tr>
<td>Dealing with issues around the technology itself</td>
<td>Framework for rights enabled learning object exchange trial. This project developed a framework and descriptions for Digital Rights Management of learning objects. It developed license templates to meet business objectives of training institutions.</td>
</tr>
<tr>
<td>Developing an innovative approach to teaching, not necessarily based around technology</td>
<td>Port – Ability: This project developed a teaching model for using the ‘business incubator’ concept. Avec esprit: A curriculum model for developing personal and workplace skills, including awareness, visualisation, emotion management and creativity.</td>
</tr>
</tbody>
</table>

This small sample illustrates the broad range of new practice possibilities. For example, the ARED suite of rapid content development tools are designed for
generic use. A practitioner can come to grips with the basics after a three-hour workshop\textsuperscript{13} and very little demand is placed on other services. In other words, the new practice is self-contained at a practitioner level. Interactive Ochre (now a Toolbox\textsuperscript{14}) on the other hand, is specifically related to Indigenous cultural awareness training and requires a delivery plan for the resource to be used effectively. The Port-Ability small business incubation model involves placing students in community based small business incubators to run a simulated business with mentoring from incubator managers. This requires a significant change in teaching practice and demands commitment and perseverance from a range of champions and stakeholders to enable such a change to take place.

This diversity of new practices can in itself be a barrier, as it is difficult to determine what is required for implementation. Some guiding framework for potential adopters to make informed decisions about implementation viability would be of value.

From a complexity science perspective, an innovation is a fluctuation that disturbs the system to some degree. If the innovation is dampened, the system remains stable, if the innovation is amplified, it can help transform the system. Fluctuation is essential to the evolution of a complex system as any fluctuation is capable of initiating change. However, when the stability of a system is tested by an innovation, the system can either dissipate the force of the innovation and potential changes fail, or the innovation can take hold, the system adapts and new configurations emerge (Varga and Allen 2006). The challenge is have a disturbance that an organisation can adapt to rather than dissipate. The impact however, is unpredictable.

What type of technology innovations create fluctuations that are taken advantage of rather than dampened? What technologies are being adopted and embedded into the fabric of teaching practice and organisational life within vocational and technical education? The work of Robertson (2006) provides some signposts.

Robertson surveyed the use of 21 e-learning functionalities by Networks of the Australian Flexible Learning Community members. The eight most frequently used functionalities were individual email between teachers and learners (69%), distributing files via the internet (61.2%), internet searches to access information (52.9%), distribution of web-based learning resources (45.6%), group email between teacher and learners (42.8%), distribution of text-based assessments (36.7%), distribution of multimedia resources (36.4%) and electronic submission of assessment (33.3%). The least used were videoconferencing (0%), e-portfolios (7.9%), audio conferencing (8.9%) and e-journals (12.9%). In respect to these eight functionalities, Robertson identified four criteria that influenced use:

- **Newness** – all eight technologies have been in use for some time and could not be considered new.
- **Complexity** – all were likely to be used by teachers with a moderate level of technical skill and without assistance of intermediaries.
- **Compatibility** – all were likely to be congruent with existing practices, (namely the face-to-face teaching) of a typical TAFE teacher and therefore do not require significant changes in practice.
- **Locus of control** – the teacher could make their own decisions and retain control without reliance on another party.

\textsuperscript{13} Interview with ARED workshop facilitator
\textsuperscript{14} http://toolboxes.flexiblelearning.net.au/series9/907.htm
These findings align with ‘Lesson 9: after the core, choose more’ from Collis and Moonen (2001). The essentials of this lesson are that technology selection involves both core and complementary technologies. The core technology is the dominant model with a long standing history and is difficult to change without concerted and sustained effort. Complementary technologies add choice, variety and flexibility to the dominant core model, but may not change it, at least not in the short-term.

This suggests that incremental change is an important consideration in successfully embedding e-learning by practitioners who make decisions based on criteria like independence, do-it-yourself, ease of use, familiarity, availability and confidence to integrate technology into their teaching contexts.

**Innovation types and attributes**

The decision to adopt some innovations however, may not be an individual’s decision and requires more stakeholder involvement and participation. What would enable these potential adopters to make informed decisions about investing in a innovation? This section focuses on models that identify innovation types and innovation attributes and how these can be mapped to support the process of diffusion and implementation.

More than ever, there is a rich offering of different types of innovative e-learning. Innovation type has an impact on adoption and diffusion decisions and the most well known and utilised model in the education sector is Rogers’ five factors (Grunwald 2002). Compatibility, observability, relative advantage and trialability have been positively associated with a decision to adopt, whereas complexity has a negative relationship.

Adams (2003) and Adams, Tranfield and Denyer (2006) however, suggest that a gap exists in Rogers’ work because Rogers only focused on one class of innovation – ‘readily-adopted’ innovation. As a result of their extensive research on innovation in the UK National Health system, they suggest there are in fact three categories of innovation: readily adopted innovation, challenging innovation and under cover innovation. Each has different cluster characteristics that distinguish them from each other.

- **Readily adopted** innovations align well with Rogers’ model. These innovations have high ratings for adaptability, observability and actual operation and low ratings for disruption and risk. While they also had a high ratings for departure (extent of change from existing routines) this was not perceived as problematic because of the adaptability factor.

- **Challenging** innovations are characterised by high ratings for risk, disruption, scope and complexity. These innovations require change and accommodations to be made outside the adopting group, were complex and disruptive, and consequently, not readily adopted.

- **Undercover** innovations are notable for an absence of management commitment outside the innovating group and had low ratings for profile, scope, actual operation, observability, relative advantage. While understood within the innovating group, they had little profile beyond that group or institution. There was also some indication that the activity occurred in isolation and had little management support or endorsement – consequently the name.(Adams, Tranfield and Denyer 2006, pp 27–28).

While this three type classification is still ‘tentative’ and in early stages of research, nevertheless ‘two-thirds of the innovations investigated in this study were not “readily adopted”, implying that barriers exist that impede the process of change’ (p. 31). This has implications for policy makers and managers promoting and facilitating change.
Adams (2003) proposed a comprehensive and holistic framework for innovation classification which ‘acts as a powerful integrating device’ (Varga and Allen 2006, p. 49), and offers a ‘heuristic’ to better understand the nature of innovations within an organisation.

Table 4: Innovations attributes (Adams 2003 as cited in Varga and Allen, 2006, p. 50)

<table>
<thead>
<tr>
<th>First-order category</th>
<th>Sub-category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newness</td>
<td>Novelty</td>
<td>The extent of change represented by the innovation compared to what preceded it</td>
</tr>
<tr>
<td></td>
<td>Departure</td>
<td>The extent of change to existing practices, routines, behaviour</td>
</tr>
<tr>
<td></td>
<td>Disruption</td>
<td>The extent to which the departure from prevailing practice occurred in a disruptive manner</td>
</tr>
<tr>
<td></td>
<td>Risk</td>
<td>The extent to which the innovation is inherently risky or threatens individuals, the institution or user base</td>
</tr>
<tr>
<td>Ideation</td>
<td>Ideation</td>
<td>Innovation is the consequence of combinations of existing and new knowledge. Three levels of ideation: ‘originated’ (wholly original); ‘borrowed’ (copied, with no modification); ‘adapted’ (modified to fit the local context)</td>
</tr>
<tr>
<td>Application</td>
<td>Uncertainty</td>
<td>Knowledge concerning the link between innovation inputs, processes and outcomes</td>
</tr>
<tr>
<td></td>
<td>Scope</td>
<td>The extent to which the innovation stands alone (within the context of its application), or requires changes elsewhere (outside the group)</td>
</tr>
<tr>
<td></td>
<td>Complexity</td>
<td>The extent to which the innovation, regardless of scope, by dint of its connections (inherent on in terms of other social units) to other parts, renders it difficult to understand and use</td>
</tr>
<tr>
<td></td>
<td>Adaptability</td>
<td>The extent to which the innovation can be refined, elaborated and modified according to the needs and objectives of the group</td>
</tr>
<tr>
<td>Benefit</td>
<td>Relative advantage</td>
<td>The extent to which the innovation is perceived as being better than the condition it supersedes</td>
</tr>
<tr>
<td></td>
<td>Actual operation</td>
<td>The extent to which the innovation is perceived to have satisfied original objectives set for it</td>
</tr>
<tr>
<td></td>
<td>Observability</td>
<td>The extent to which the innovation is observable by others</td>
</tr>
<tr>
<td></td>
<td>Profile</td>
<td>The extent to which the innovation raises personal, group or institutional profiles</td>
</tr>
</tbody>
</table>

This framework has promise as a useful decision-making tool for assisting decision makers to examine the profile of an e-learning innovation. It provides criteria for making an assessment of an innovation’s attributes. This in turn may help to ascertain the viability of an innovation’s ‘embed-ability’ into a team or organisational context.
Case Study 3: An innovation – embedding digital storytelling

An e-learning innovation that has been ‘readily adopted’ across many different contexts within the VET sector is digital storytelling. This case study maps the development of digital storytelling and highlights the factors that have contributed to this growth. A central focus of this case study is a conversation with Carole McCulloch, the facilitator of the Digital Storytelling Network15 and an early pioneer of digital storytelling. Her story highlights the complex range of factors that have been catalysts and enablers of digital storytelling. This case study also demonstrates how Rogers’ five innovation attributes can be used as a framework to identify the key factors that have contributed to the continued growth of digital storytelling methodology. It also demonstrates how Rogers’ five stages in the adoption process can be used as a template for developing an implementation plan to market and support digital storytelling as part of a longer term embedding strategy. Refer to page 170 for Case Study 3.

Summary

The type and attributes of an innovative e-learning practice can vary considerably and can have different implementation demands. This variation can be a barrier to implementation if there are no clear guidelines to enable potential adopters to make informed decisions about implementation viability. The nature of an innovation is an important consideration as there is evidence that ‘readily adopted’ innovations that require incremental changes and complement existing practices are more likely to be adopted. Tools that help to classify and profile an innovation can assist decision makers to make informed decisions about the viability of adopting an innovative practice and therefore increase the chances of its ‘embed-ability’. The innovators and adopters are critical in this process and they will be the focus of the next section.

Section 4: The innovators and adopters

Most of us who work in organisations are well versed in our jobs – what we do every day. We’re less comfortable with the process of convincing others to adopt what we have been doing. Some feel that it’s intrusive or pushy. Some don’t like the idea of selling. The rest of us simply have never had the opportunity to hone the skills. … it’s important to teach people to share and to promote their own ideas. After all, the long term health of the organisation depends on good ideas finding broader acceptance (Coffman 2006, p. 13).

There are natural social speeds for adopting an innovation. Rogers (1995), is well known for his work on adopter characteristics and the different rate of uptake of an innovation over time by innovators, early adopters, early majority, late majority and laggards. According to Rogers innovators and early adopters make up only a small proportion of any population – 2.5% are innovators and early adopters about 13%. There are just not enough of them to have an impact at the coalface.

The mainstream adopters (early and late majority) who make up the bulk of any population are the ones who can make the difference to whether an innovative practice is utilised. However, mainstream adopters have different motives for making a decision to adopt than their first wave colleagues.

The early majority are more practical: they do think through the pros and cons of a new idea before they adopt, so they help to make it more tangible and acceptable. But if the support systems and infrastructure aren’t there, they’ll hold back on a commitment. The late majority, on the other hand, are creatures of habit and predictability. They want to know the rules, they love systems. The beautiful thing about the late majority is that when they don’t find rules or systems, they’ll start figuring them out (Lambe 2003, p. 2).

While the obvious targets for diffusing innovation are the innovators and early adopters, they may not be the best choice. In fact, they may be detrimental to the diffusion and embedding process. Lambe (2003) highlights why:

Early adopters like to play. They like to try out new things. And they like to get people excited. But they are not good at building systems, and they get bored by thinking through complex infrastructures (p. 2).

This is reinforced by Nutley et al. (2002) who observed that innovators:

… are usually dissimilar to the broad mass of potential adopters and therefore have communication and credibility problems (p. 11).

The work of Moore (1999) a marketer of high technology products, reinforces the insight that different adopter groups adopt for different reasons and have different expectations. While innovators want radical shifts, are risk takers and more willing to experiment, mainstream adopters want productivity improvement. From each perspective, both are good reasons to make a decision to adopt an innovative practice, but the basis on which that decision is made is different. As a result, a chasm exists between the enthusiastic and visionary innovators and early adopters, and the more pragmatic later adopters. The result is that the innovation can have a long period of stagnation and the momentum can be lost or fail completely if an infrastructure to jump the chasm is not developed (Forsyth 2004).
Focusing back on an educational context, the concept of a dividing chasm is supported by the work of Geoghegan (1995). While risk-taking early adopters are more willing to experiment, generally self-sufficient, and interested in the technology itself, the early majority educators are more concerned about the teaching or learning problem being addressed than the technology used to address it. Ease of use is critical to them as well as proven applications with low risk of failure. While Geoghegan recognises the chasm between early and mainstream adopters, he also believes there is a second chasm that needs to be recognised, namely that the support structures favour early adopters. The underpinning assumption is that all adopters require the same kind of support structures, but this is not the case. In other words, mainstream adopters need something qualitatively different from early adopters in terms of support. He also supported the notion raised by Nutley (2002) and Lambe (2003) that because of this chasm, early adopters can be poor role models for mainstream adopters.

The result is that early adopters can reach a saturation point, while the mainstream adopters rarely adopt and if they do, it is not sustained because they have the wrong support structures and the wrong role models based on wrong assumptions about their needs – even though these assumptions may be well intentioned (Grunwald, 2002).

White (2006) translated Geoghegan’s ideas for catering for different adopter groups to a university setting in the UK. The focus was embedding e-learning initiatives after initial external funding had ceased. She found the following issues:

- **Radical/gradual change**: Seeded projects tended to reinforce horizontal change, but vertical change is required if an innovative practice is to be adopted. She also made the point that the nature of project funding in academia was necessarily visionary (kudos seeking) so will encompass activities that attract early adopters.

- **Visionary/pragmatic**: If innovative projects are part of an academic career and an individual opportunity, they can reinforce horizontal diffusion as they are mostly presented at conferences and through publications. The primary interest therefore is not institutional progress and change, even though this might be the intent of the original funding.

- **Project/ process**: While ‘projects’ are a device to make change happen, projects are often separate from everyday business and could have little impact if they did not have internal sponsors.

- **Risk taker/risk averse**: Investing time in technology for teaching was considered a risky personal decision when the benefits were unclear – especially for an individual’s career.

- **Experimenters/want proven use**: Dissemination of proven use was not effective if there was no perceived application and benefit in a local context.

- **Self sufficient/need support**: A number of support factors were identified including training, technical support, information/knowledge, time, resources, colleague support, encouragement/rewards and funds.

- **Relate horizontal/vertical**: External funding tended to build horizontal rather than vertical allegiances, whereas what is needed for embedding, is vertical integration.

White concluded that a number of local factors can undermine progress beyond a project. Short-term financial autonomy may result in ‘pockets of excellence rather than broad advances’ (p. 14). She suggests small but systemic advances in
structure, policies, procedures and tactics targeted to meet the needs of the early majority.

A compounding argument is put forward by Elgort (2005) who challenges us to think about a third chasm – the chasm between innovative technology and innovative teaching practice. As part of her Flexible Learning Leaders in New Zealand research, Elgort proposes an ‘e-learning paradox’ in relation to practitioners’ decisions to implement e-learning. She suggests approaching e-learning innovation as a multidimensional process that is located on two planes: the plane of technology and the plane of pedagogy. She suggests the real chasm is not between early and mainstream adopters, but rather between ‘the two interrelated but distinct components of e-learning: adoption of the e-learning technology innovation and adoption of the e-learning pedagogy innovation’ (p. 184). Her observation is that in an adoption cycle, e-learning technologies are adopted at a faster rate and are more advanced than e-learning pedagogies. The approach to teaching in whatever context is influenced by the way teachers are taught.

“Thus if a lecturer believes in the information transmission approach, this lecturer will use e-learning to facilitate this mode of learning, and any tools that do not align with this approach will be either ignored or ‘misused’. (p. 184).

This highlights the importance of initial teacher training, the exposure to e-learning pedagogies, and the importance of modelling good practice in a teacher training context.

Elgort suggests that e-learning is not about technology innovation, but rather educational innovation that ‘requires reconceptualisation of traditional teaching and learning paradigms, especially in relation to the roles of teacher and learner’ (p. 184). She proposes that professional development is a key to transforming beliefs about teaching practice.

This raises the issue of what ‘new practice’ we are aiming to embed – new technologies, new learning environments or new pedagogies. This is an issue worthy of discussion as they may not be one and the same. Cuban et al. (2001) in reference to a study of adoption of educational technology in California’s Silicon Valley stated that:

“We found that access to equipment and software seldom led to widespread teacher and student use. Most teachers were occasional or nonusers. When they used computers for classroom work, more often than not their use sustained rather than altered existing patterns of teaching practice”. (p. 813).

In other words, the ‘e’ may be distracting attention from the ‘learning’. Geoghegan (1994) believes this is the heart of the matter.

Technology in the service of ineffective teaching will do nothing to improve the quality of instruction; it will simply perpetuate and even amplify poor teaching. Likewise, good teaching can often be enhanced by even simple technology, wisely and sensitively applied. In either event, the process begins with teaching; technology comes second (p. 15).

This technology/learning issue is emerging in the conversations within the broader Framework community as the following anecdote from the field illustrates.

We really shouldn’t be focusing on the technologies! We should be focusing on the learning and the learning/teaching issues that we are facing and then looking at what might be out there that could help. Part of the solution may be technologies – and in some cases these will be new technologies, mobile technologies, and in some
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E-learning manager

Anecdote from the field
Posting on the LearnScope NSW blog in response to Elgort’s concept of chasm: (31/10/06).
I’m interested in the notion of chasms but I think there’s a 3rd and many would have heard me mention it…It’s a chasm between taking on board new technology, concepts, strategies at a personal level… and actually moving to a point, a space, a confidence perhaps, where you can actually integrate it into your teaching practice. In part it’s the move from technology to pedagogy, but I think it’s more than that. It’s about having to expose your gaps in knowledge, to teach it/with it instead of having the space to trial and make mistakes. The chasm is jumped when teachers have a passion for the new tool/strategy, when it’s easy to master, easy to see immediate uses for, easy to support uptake of as well as when there are immediate pedagogical uses/benefits.

An adopting teacher’s response:
I appreciate your recognition of teachers who take leaps before they are ready – whether ‘forced’ through self-expectations or real or perceived expectations by others. I had no appreciation of the depth of the e-learning ocean into which I was diving head first. But gees I’m glad I did. Importantly, I feel I’m jumping the chasms you talk of WITH my students … I’m OK with acknowledging with them and TO them, that I am also learning. This has been the most exciting part of incorporating e-learning tools into my classroom delivery. There is a refreshing equality and congeniality, especially within my younger classes, that is often lacking in traditional educational environments.

It may be timely and strategic to re-introduce more rigorous attention on the benefits of both ‘e’ and ‘learning’ to the core business of the VET industry – teaching and learning.

Summary
The details may vary and the models may be configured differently, but the overarching message from the literature is consistent. Embedding e-learning innovation is a personal, social, pedagogical, technological and organisational process involving a commitment to sustainable practice, and systemic but not necessarily systematic change. Embedding requires acceptance by a critical mass, it happens over time, with other people, in different ways, for different reasons, at a different pace and with different approaches.

What sort of organisation enables this complex process of embedding new practices to be realised? This is the focus of the next section.
Section 5: The organisation

Most of an organisation's energy is spent on maintaining itself and replacing lost capabilities. Any remaining energy should be devoted to innovation in both grass roots and top down approaches. If operations consume all of an organisations' energy, it stops growing. When it stops growing it becomes less resilient and begins to atrophy (Coffman 2006, p. 11).

With the rapid growth of Web 2.0 and the era of social software, the e-learning world is characterised by abundance and variety. There is almost too much choice. Woodhill (2006) from Brandon Hall Research for example, recently released a comprehensive guide to 52 of 'the latest and upcoming technologies used in e-learning’ including mashups, mobile devices and multi-channel learning. A rich offering of blogs, wikis, e-portfolios, digital stories, voice tools, games, mobile devices and virtual worlds have changed the e-learning landscape and are now available to VET practitioners. They complement or provide alternatives to the more established tools and processes like structured content, self-paced learning and learning management systems.

Technology tools are becoming cheaper, more freely available and easier to use and empower teachers and their learners to ‘do their own thing’ to meet the needs of their local context. Networks for peer collaboration and sharing and personal learning environments are enabling innovations in e-learning to keep moving forward and to meet learning needs. It’s an exciting time for innovators and early adopters. The challenge however, is to capitalise on the achievements of these pioneers and to influence the second wave of VET practitioners who will need more convincing and support to engage with these technologies and to utilise them effectively as part of their teaching and learning repertoire.

What kind of working environment will enable this innovative potential to be harnessed, diffused into the mainstream and accepted by the critical mass as everyday practice? The answer is probably complex!

Complexity science provides a fresh perspective on organisations and organisational activities. Carlisle and McMillan (2006) explored innovation in organisations from a complexity perspective, posit that 'we can place organisations along a spectrum ranging from random, unorganised and highly chaotic to highly ordered and mechanistic’ (p. 4). Table 5 shows this relationship between different types of organisational systems and their properties, and where they are positioned on the spectrum.

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Table 5: Types of systems and degrees of order and stability (Carlisle and McMillan 2006, p. 4, reprinted by permission of ISCE Publishing Copyright © Carlisle and McMillan 2006.)

<table>
<thead>
<tr>
<th>Type of System Properties</th>
<th>Totally random and without pattern</th>
<th>Chaotic</th>
<th>Complex (Zone of emergent complexity)</th>
<th>Hierarchical</th>
<th>Mechanical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Controlling mechanism</td>
<td>None</td>
<td>Strange attractors</td>
<td>Largely self-organised</td>
<td>Command and control</td>
<td>Tight rigid control</td>
</tr>
<tr>
<td>Nature of relationships between agents</td>
<td>Independent agents no detectable relationships</td>
<td>Random</td>
<td>Networked and highly connected</td>
<td>Formally dictated by top down directives</td>
<td>Fixed and prescribed</td>
</tr>
<tr>
<td>Nature of interactions</td>
<td>Random and totally irregular</td>
<td>Some detectable regularities and patterning</td>
<td>Fluid and interdependent</td>
<td>Mostly dependent</td>
<td>Fully dependent</td>
</tr>
</tbody>
</table>

Carlisle and McMillan (2006, p.4) describe the table thus:

At one end of the spectrum, random and chaotic systems are highly unstable. At the other mechanistic and hierarchical systems are highly stable and ordered. In the middle lies the complex adaptive systems behaviour (p. 4).

From a complexity perspective, the best system to enable innovation to thrive is the complex system, which is adaptive, largely self-organised, networked and highly connected, where interactions are fluid and interdependent, and there is flexibility to embrace both radical and incremental changes.

Organisations as complex adaptive systems are comprised of agents (people) who experiment, explore, self-organise, learn and adapt to changes in their environment.

People as individual complex adaptive systems are adept at self-organising; at manipulating their environments; at turning things to their own advantage; but most of all at learning and adaptation. Their ability to learn and adapt is underpinned by key self-organising behaviours including exploration and experimentation (Carlisle and McMillan 2006, p. 4).
Rogers et al. (2005) explored the relationship between his adoption and diffusion model and complex adaptive systems and found they were complementary. Complex systems are about ‘relationship among members of a system’ and diffusion spreads through social systems. They also share the same endpoint of adaptation and adoption:

The endpoint for complex adaptive systems is emergence out of a disorganisation into a more ordered system, with more adaptable patterning and better fit. The usual aim for a managed diffusion-of-innovations program is to effect a faster rate of adoption of a new idea or practice, resulting – it is hoped – in a higher-order fitter system (p. 4, excerpts reprinted by permission of The Innovation Journal: The Public Sector Innovation Journal, Copyright © The Innovation Journal)

Complex adaptive systems constantly seek to adapt to environmental conditions in which they find themselves. To do this, they use an appropriate combination of exploration and utilisation. Exploration involves seeking new knowledge, environments and building new capabilities for longer term survival. For current performance and to sustain competitive advantage, existing knowledge and capabilities are utilised to make incremental improvements. Both are needed to avoid falling into the ‘competence trap’ in which ‘existing competences become obsolescent before new ones have been developed’ (p. 3).

The message here for organisations is not to take too rigid a stance in approaches to innovation, but to respond flexibly as internal and external environments demand (p. 4).

To achieve this, organisations who fall in the complex zone ride between the ‘edge of chaos’ and ‘edge of stability’, but allow neither to dominate. This enables the right conditions for innovation to thrive.

Moving too far towards stability restricts creativity and open communication, but too much instability can cause disintegration. Without judgement, both can be barriers to innovation so ‘management processes and cultures are needed to enable organisations to stay within the emergent complexity zone’ (Carlisle and McMillan 2006, p. 5). This requires continuous learning, constant adaptation and flexible and responsive frameworks.

The edge an organisation favours at any time is influenced by its intent – to explore or utilise innovative practice. Exploring new practices may require operating more towards the edge of chaos and avoiding forces that pull towards stability, and implementing may require the reverse.

Too many traditional, slow moving and unresponsive departments or units engaging in only single loop learning or testing, may drag the whole enterprise into the stability zone. …. too many areas experimenting frantically and creating huge waves of novelty can overstretched the organisation and draw it into instability (p. 5).

To do both may require an organisation to dynamically ‘dance’ between the edge of chaos and the edge of stability. This suggests how to utilise different talents and roles within organisations to collaboratively and collectively embed innovation and to give those roles legitimacy. Innovators and early adopters may be best utilised in exploring new horizons for long term survival, and mainstream adopters in implementing those new discoveries so they become established practices.

This stance is reinforced by Forman (2001) who suggests an organisation must tend to both established and innovative practices as they are equally important for both current and future viability. However, the processes for innovative practice and established practice are different and often require different knowledge and skill sets.
Different parts of an organisation and different groups of people are responsible for the two processes, so it makes sense to manage them with a slightly different emphasis. In other words, innovators may require looser and less tightly controlled conditions, while mainstream adopters may require more stability and support. Such recognition may address the chasms to embedding innovative e-learning identified by Moore, Geoghegan, Elgort and Grunwald highlighted in Section 4. It legitimises and reinforces the need for different roles, different support structures and different emphasis on technology and teaching practice.

It also highlights that fostering conditions that simultaneously explore and utilise innovative practices is not about extremes or balance, but riding the right edge. While different stakeholders have equally important but different roles, different ways of doing things and different support requirements, all need ‘strong frameworks to guide their organisational practices and ensure robust processes for accountability, responsibility and decision making’ (Carlisle and McMillan 2006, p. 5–6).

If implementation and embedding is about utilisation – taking advantage of and fully embracing presented opportunities – this infers erring to the side of stability and a rationale for providing a robust framework which identifies what needs to be done, who is responsible and how it can best be supported.

This research offers the RIPPLES model as one such implementation framework. It provides a gauge to ‘innovation readiness’ and helps to identify and guide what needs to be in place to utilise new practices, so they can become stable, established and thus embedded.

This is the focus of the next section.
Section 6: RIPPLES – a model for implementing innovative practice in e-learning

This section is co-authored with Dr Daniel Surry whose generosity, sensitivity and insight is acknowledged.

RIPPLES is a generic macro model for implementing e-learning innovations. It was developed by Dr Daniel Surry, Associate Professor in Instructional Design and Development at the University of South Alabama and David C Ensminger, a Clinical Assistant Professor in the School Technology program at Loyola University, Chicago. Informed by the authors' own research on implementation of technology innovations, their experience as e-learning change agents within university settings, and extensive literature reviews on the adoption and implementation of educational technology innovations, RIPPLES is well aligned with the intent of this research. It was developed to help guide senior decision makers in the implementation of web-based learning in higher education.

RIPPLES is the acronym for the seven components of the model: resources, infrastructure, people, policies, learning, evaluation, and support. It was specifically developed to assist universities implement innovative e-learning practices.

Implementation is the process of fostering the use of an innovation within an organisation after the initial adoption decision (Surry and Ensminger 2005, p. 5).

An overview of the RIPPLES implementation model

The RIPPLES model was developed to address the needs of the university sector in the USA. This research project was an opportunity to test the model in an Australian VET context and to leverage the significant foundation work on which the model is based. The RIPPLES model is informed by adoption, diffusion and implementation models including the work of Everett Rogers (1995). Also, work specifically related to the education and training sector including Hall and Hord's (1987) Concerns-Based Adoption Model; the work of Michael Fullan (2001), especially his underlying foci on
the development of shared vision and capacity building for change; Ely’s (1999) eight conditions that facilitate implementation; The Critical Factors in Adoption Checklist developed by Stockdill and Morehouse (1992); Burkman’s (1987) User Oriented Instructional Development model; and the concept of adoption analysis developed by Farquhar and Surry (1994). Other authors whose work is relevant to this area include Havelock and Zlotolow (1995) and Reigeluth and Garfinkle (1994).

An implementation model for decision makers

In order to successfully implement any innovation, change agents must address both the human needs and organisational issues that affect implementation. RIPPLES integrates the two and addresses wider issues such as infrastructure, resources, technical support and provides a model to guide the development of an e-learning implementation plan.

The model has also been used to study the adoption of technology in academic and public libraries (Murray and Moen, 2003). While not the original intent of the model, it is possible to apply the macro level framework to the narrower task of facilitating the use of e-learning by other stakeholder groups.

RIPPLES – the seven components in more detail

In this section, each of the seven components of the RIPPLES model is described in more detail. A range of variables within individual contexts will influence the weightings of each of the components.

Resources

The financial resources needed to develop and use innovative practices in e-learning.

Resources refer to the monetary resources required to progress an innovative practice to implementation and embedded use. Resources include the source of funding and the costs associated with implementing a new practice.

Source of funding

Soft money – the temporary resources accessed from external sources.

Hard money – recurrent resources committed by the organisation to sustaining an innovative practice in its journey from innovation to a routine practice that is embedded as a core business offering.

Costs

A number of costs are associated with any innovation. These costs can be categorised as direct and indirect costs and initial and continuing costs.

Direct costs – These include:
- hardware and software purchases
- license fees, server space
- teacher and support services salaries.

Indirect costs – These can be surprises and are quite substantial.
- upgrading of computers
- increased demand for support services
Innovate and integrate: Embedding innovative practices

- updated and expanded use of wireless networks
- the purchase of specialised software and peripherals
- salaries for teaching overload
- advertising and marketing costs.

**Initial costs** – are those one-time costs that occur when an innovation is first adopted.
- hardware and software needed to develop and deliver courses
- facilities.

**On-going costs** – are those costs that need to be accounted for in each budget cycle throughout the life of the innovation.
- annual fees for commercial management and delivery systems
- internet service providers
- training, and periodic equipment
- software upgrades.

When developing an implementation plan to embed an innovation, all four costs may need to be accounted for. Surry suggests that:

> Perhaps the most important things an organisation can do to facilitate the implementation of an innovative practice is to ‘have a realistic understanding of all the costs involved and to develop a detailed, practical plan for addressing those costs.

**Infrastructure**

The technological capabilities of an organisation. This includes communication systems, networks, hardware, software, and administrative facilities.

Infrastructure refers to all of the technologies associated with an innovation. No innovation exists in a vacuum. Every innovation is dependant upon a variety of associated technologies for its success. In order to successfully facilitate the use of an innovative practice, an organisation’s technology infrastructure should include five components:

- **Teaching resources** – the technology required to deliver the new practice. This could include campus-based or remote servers, server software, specialised hardware and software.
- **Production resources** – the hardware and software needed to develop the audio, video, and other resources that will be used in the new practice.
- **Communication resources** – the tools needed for teachers and students to interact in an online environment.
- **Student resources** – the technology used by students to access and participate in a new practice.
- **Administrative resources** – the technology needed to manage traditional educational functions such as registration, textbook orders and grading in an online environment.
People
The social and human elements of an organisation. This includes the goals, skills, talents, backgrounds, beliefs, opinions and feelings of the people who make up an organisation as well as those of customers and clients.

The people within an organisation play an essential role in the change process. Any organisational change, including embedding innovative e-learning practice, is an inherently human process. Everyone within an organisation has an important role to play in the successful implementation of an innovation. The two essential considerations are shared decision-making and communication between all stakeholders (Ely 1999).

- **Shared decision-making** – seeking input from stakeholders who are directly or indirectly responsible for making decisions that influence the implementation of the new practice. These include managers, corporate and support staff, teachers, learners and where appropriate, their sponsors.

- **Communication** – involving all stakeholders throughout the innovation process so potential barriers can be addressed as the innovation moves more fully towards implementation.

Policies
By this, we mean the written and unwritten rules, practices, traditions, and regulations that govern your organisation’s day-to-day operations.

Every organisation that adopts an innovation is forced to make changes to the way it does business. The introduction of even the smallest new technology forces at least subtle changes to the normal routine. The size and scope of a new practice will influence the degree of change required for successful implementation. Some change will be small and local, others will significantly impact on established processes.

These could include policies on:

- e-learning
- intellectual property
- flexible work practices
- award and incentive schemes
- innovation
- evaluation
- assessment
- talent management.

Organisations may also have to adapt existing policies related to student fees, prerequisite courses, performance management and assessment.

Learning
The instructional outcomes of a training or educational program. This also refers to a focus on the learner's overall experience within a training or educational program.
When implementing a new practice, consideration needs to be given to the learning outcomes as much as technological or financial outcomes. In general, there are two ways that any technology can enhance the learning outcomes of an organisation.

- **Pedagogical benefits.** A new practice can allow teachers and students to learn and interact in dynamic new ways, resulting in increased cognitive or motivational outcomes.

- **Access benefits.** A new practice can allow an organisation to reach new learner populations or to serve current learners in new ways.

The challenge is to define the pedagogical and access benefits to be achieved through the new practice, and to communicate those goals to relevant stakeholder groups.

**Evaluation**

An assessment of learner goals, technology, technology plans, innovative practices, and the costs and benefits associated with a new practice.

Evaluation should be a major component of any implementation plan. There are four areas of evaluation to consider.

- **Evaluation of technology in relation to learning goals.** The main evaluation question would be ‘Is this new practice allowing teachers to do a better job teaching their students or to reach new populations?’

- **Evaluation of the new practice itself.** This evaluation would include an ongoing assessment of management and delivery alternatives. The goal of this evaluation is to improve the learning experience for both teachers and students.

- **Evaluation of the effectiveness in working with staff both individually and collectively.** Surry suggests that Ely’s eight conditions provide the foundation for formulating these evaluation questions. This evaluation would determine the factors that have either enabled or created barriers to the embedding of the new practice at various points throughout the process. It is especially important to evaluate the effectiveness of each strategy for various sub-groups, (eg staff in different departments) and adopter categories, (eg innovators, laggards).

- **A benefit/cost evaluation should be used to determine the return on investment for the new practice.** The cost/benefit evaluation should be on a unit-by-unit and organisation-wide basis.

**Support**

The technical, training, pedagogical and administrative support for teachers, learners and those supporting the process.

Support has four components:

- **Training** – all the formal and informal instruction required to implement an innovative e-learning practice.

- **Technical support** – the ongoing support teachers (and learners) have when hardware, software, or network problems arise.

- **Pedagogical support** – the assistance teachers receive related to applying innovative teaching approaches to an online environment.

- **Administrative leadership** – the commitment of managers/supervisors have to helping practitioners do an effective job.
**Summary**

RIPPLES is a comprehensive and well researched model specifically designed to assist decision makers implement innovative e-learning practices in a higher education setting. RIPPLES is the acronym for the seven components of the model: **resources, infrastructure, people, policies, learning, evaluation,** and **support**.

As it is well aligned with the intent of this research project, it was used as the framework for surveying the VET sector to identify barriers, enablers and other factors that impacted in the embedding of innovative practice in e-learning in a VET context. Details of the survey design, dissemination, results and discussion are documented in the next session.
Section 7: The RIPPLES survey results and discussion

Survey design

The survey was designed and administered by Dr Daniel Surry, University of South Alabama. He was particularly interested in testing out the usefulness of the RIPPLES model in the Australian VET context. There were 46 questions. Twenty-nine questions addressed each of the seven components of the RIPPLES model, eight questions collected demographic data, and four questions addressed perceptions of personal and organisational innovativeness. Four open ended questions invited respondents to identify the two biggest enablers and barriers to using innovative e-learning and suggestions for fostering the use of innovative practices in e-learning. Respondents also were invited to leave their email addresses if they were happy to answer follow-up questions. The survey questions are included in Appendix 1.

Survey distribution and response profile

The RIPPLES survey was distributed through VET networks including the Flexible Learning Leaders listserv, state and territory LearnScope managers, state and territory Framework Coordinators, state and territory Australian Council of Private Education and Training (ACPET) contacts and state and territory Toolbox Champions. The survey was also distributed to project managers of previous and current New Practices in Flexible Learning projects, the State and Territory Framework Coordinator, through individual contacts in institutes and to those who had expressed an interest in the project including those who had registered on the research wiki. Many recipients forwarded the survey to their own networks.

The survey was conducted between 15 October and 1 November 2006, with a total of 321 respondents. From that, there were approximately 260 usable surveys.

Survey results

Descriptive statistics

The following is a summary of the demographic profile of the sample population including provider type, primary role, gender, age, state/territory and primary work location. The number of responses to the open-ended questions is also listed.

Respondents by provider type

<table>
<thead>
<tr>
<th>Provider</th>
<th>Total</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAFE</td>
<td>220</td>
<td>83.0</td>
</tr>
<tr>
<td>Private registered training organisation (RTO)</td>
<td>14</td>
<td>5.1</td>
</tr>
<tr>
<td>ACE</td>
<td>4</td>
<td>1.4</td>
</tr>
<tr>
<td>Schools</td>
<td>3</td>
<td>1.1</td>
</tr>
<tr>
<td>Other</td>
<td>26</td>
<td>9.4</td>
</tr>
</tbody>
</table>
## Respondents by primary role

<table>
<thead>
<tr>
<th>Role</th>
<th>Total</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive Manager</td>
<td>19</td>
<td>6.9</td>
</tr>
<tr>
<td>Manager</td>
<td>46</td>
<td>16.6</td>
</tr>
<tr>
<td>Practitioner</td>
<td>124</td>
<td>44.8</td>
</tr>
<tr>
<td>Support</td>
<td>35</td>
<td>12.6</td>
</tr>
<tr>
<td>Developer</td>
<td>18</td>
<td>6.5</td>
</tr>
<tr>
<td>Other</td>
<td>35</td>
<td>12.6</td>
</tr>
</tbody>
</table>

## Respondents by gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Total</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>174</td>
<td>63</td>
</tr>
<tr>
<td>Male</td>
<td>102</td>
<td>37</td>
</tr>
</tbody>
</table>

## Respondents by age

<table>
<thead>
<tr>
<th>Age</th>
<th>Total</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 25</td>
<td>10</td>
<td>3.7</td>
</tr>
<tr>
<td>25–34</td>
<td>25</td>
<td>9.3</td>
</tr>
<tr>
<td>35–44</td>
<td>61</td>
<td>22.7</td>
</tr>
<tr>
<td>45–54</td>
<td>113</td>
<td>42.0</td>
</tr>
<tr>
<td>55–64</td>
<td>55</td>
<td>20.4</td>
</tr>
<tr>
<td>65 or more</td>
<td>5</td>
<td>1.9</td>
</tr>
</tbody>
</table>

## Respondents by State/Territory

<table>
<thead>
<tr>
<th>Provider</th>
<th>Total</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACT</td>
<td>7</td>
<td>2.6</td>
</tr>
<tr>
<td>NSW</td>
<td>71</td>
<td>26.2</td>
</tr>
<tr>
<td>NT</td>
<td>9</td>
<td>3.3</td>
</tr>
<tr>
<td>QLD</td>
<td>31</td>
<td>11.4</td>
</tr>
<tr>
<td>SA</td>
<td>30</td>
<td>11.1</td>
</tr>
<tr>
<td>TAS</td>
<td>13</td>
<td>4.8</td>
</tr>
<tr>
<td>VIC</td>
<td>84</td>
<td>31.0</td>
</tr>
<tr>
<td>WA</td>
<td>26</td>
<td>9.6</td>
</tr>
</tbody>
</table>
### Respondents by primary work location

<table>
<thead>
<tr>
<th>Location</th>
<th>Total</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metropolitan</td>
<td>177</td>
<td>64.8</td>
</tr>
<tr>
<td>Rural / Regional</td>
<td>96</td>
<td>35.2</td>
</tr>
</tbody>
</table>

### Respondents by Aboriginal and/or Torres Strait Islander origin

<table>
<thead>
<tr>
<th>Origin</th>
<th>Total</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neither Aboriginal nor Torres Strait Islander</td>
<td>272</td>
<td>98.9</td>
</tr>
<tr>
<td>Aboriginal</td>
<td>3</td>
<td>1.1</td>
</tr>
<tr>
<td>Torres Strait Islander</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Both Aboriginal and Torres Strait Islander</td>
<td>0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

### Respondents by field of VET teaching

<table>
<thead>
<tr>
<th>Field</th>
<th>Total</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Support role – e-learning facilitator, developer, coordinator</td>
<td>50</td>
<td>19.2</td>
</tr>
<tr>
<td>Agriculture, animal and primary industries</td>
<td>5</td>
<td>1.9</td>
</tr>
<tr>
<td>Architecture, building and planning</td>
<td>2</td>
<td>0.8</td>
</tr>
<tr>
<td>Art, design, music and entertainment</td>
<td>16</td>
<td>6.2</td>
</tr>
<tr>
<td>Business, administration and sales</td>
<td>40</td>
<td>15.4</td>
</tr>
<tr>
<td>Chemicals, plastics, rubber, etc.</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Computing and information services</td>
<td>18</td>
<td>6.9</td>
</tr>
<tr>
<td>Education</td>
<td>57</td>
<td>21.9</td>
</tr>
<tr>
<td>Engineering and technical</td>
<td>11</td>
<td>4.2</td>
</tr>
<tr>
<td>Food processing</td>
<td>2</td>
<td>0.8</td>
</tr>
<tr>
<td>Furniture and wood products</td>
<td>4</td>
<td>1.5</td>
</tr>
<tr>
<td>Health and community services</td>
<td>26</td>
<td>10.0</td>
</tr>
<tr>
<td>Hospitality and tourism</td>
<td>10</td>
<td>3.8</td>
</tr>
<tr>
<td>Law, security, and defence</td>
<td>5</td>
<td>1.9</td>
</tr>
<tr>
<td>Literature and social sciences</td>
<td>4</td>
<td>1.5</td>
</tr>
<tr>
<td>Metal, electrical and automotive</td>
<td>6</td>
<td>2.3</td>
</tr>
<tr>
<td>Natural sciences and mathematics</td>
<td>1</td>
<td>0.4</td>
</tr>
<tr>
<td>Printing and paper</td>
<td>1</td>
<td>0.4</td>
</tr>
<tr>
<td>Textiles, clothing and footwear</td>
<td>1</td>
<td>0.4</td>
</tr>
<tr>
<td>Transport and storage</td>
<td>1</td>
<td>0.4</td>
</tr>
</tbody>
</table>
Qualitative data
Respondents were also asked four open-ended questions:
1. In your opinion, what are the two biggest enablers that make it easier for people to use innovative practices in e-learning? (225 responses)
2. In your opinion, what were the two biggest barriers that prevent people from using innovative practices in e-learning? (229 responses)
3. If you were in charge of fostering the use of innovative practices in e-learning and you had unlimited resources, how would you do it? (211 responses)
4. Is there anything else you would like to tell us? (110 responses)

The responses to these open-ended questions were analysed using the RIPPLES framework. Themes were identified and synthesised and transferred into the appropriate components of the model. Responses that did not fit within the RIPPLES model were analysed and reported separately.

Inferential statistics
Analysis of variance was conducted on the following:
1. The extent to which individual courses employ innovative practices.
2. Provider type.
3. Role types.
4. Perceived level of personal innovativeness.
5. Perceived level of organisational innovativeness.
6. The seven components of the Ripples model.

The results of each analysis are listed below.

1. The extent to which individual courses employ innovative practices

   Question 39. Thinking specifically about the e-learning courses you are responsible for, to what extent do you think those courses use innovative practices and techniques?

   An analysis of variance was conducted to determine if there were differences between respondents who felt their e-learning courses used innovative practices and respondents who felt their e-learning courses did not use innovative practices. The results showed that there were significant differences based on the seven components of the RIPPLES model, perceptions of personal innovativeness and perceptions of organisational innovativeness.

   More specifically, respondents were more likely to report they used innovative practices in their e-learning courses if their organisations:
   - had a strong infrastructure for e-learning
   - took into account peoples’ ideas, beliefs and experiences when making decisions
   - engaged in shared decision making
   - had appropriate e-learning policies
   - had strong evaluation programs
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- had strong support systems
- had strong pedagogical support.

In addition:
- The more innovative a respondent reported themselves as being, the more likely they reported use of innovative practices in their e-learning.
- The more innovative a respondent reported their organisation as being, the more likely they reported uses of innovative practices in their e-learning.
- The more their organisation used innovative practices and techniques in e-learning, the more likely they reported uses of innovative practices in their e-learning.

**Note:** state or territory, location (metro/rural), provider type, gender, and ethnicity were also found to be statistically significant variables but subsequent analysis determined that those factors were either not practically significant or were the result of statistical anomalies. As a result, they are excluded from the discussion. Additional research is needed to determine the effect of these variables on the use of innovative practices in e-learning.

**Summary:** The results indicate that the extent to which e-learning courses use innovative practices is the result of a number of interrelated factors including the technology infrastructure, communication, shared decision making, policies, evaluation, organisational and personal support and perceived personal and organisational innovativeness. There were three significant differences related to the RIPPLES components of People and Support and one each to Policy, Infrastructure and Evaluation. The RIPPLES components of Learning and Resources were not significant factors in this analysis.

2. **Provider type**

There were a number of statistically significant differences found between respondents based on their provider type (ie, TAFE, ACE). It should be noted, however, that the large majority of respondents to the survey (83%) were affiliated with TAFE. Therefore, it was determined that comparisons between provider types would not be valid. Further research comparing different provider types is recommended.

3. **Role types**

An analysis of variance was conducted to determine if there were differences between groups. The results showed that there were statistically significant differences between executive managers (6.9% of respondents) and other respondents in 10 key areas.

Compared to other respondents, executive managers:
- felt resources were allocated less appropriately in their organisation
- felt opinions, ideas, beliefs and experiences were considered to a greater extent
- rated the amount of shared decision making in their organisation higher
- felt the culture of their organisation acted more as an enabler
- felt the policies of their organisation acted more as an enabler
• rated the commitment of their organisation to provide high quality e-learning experiences higher
• felt the commitment to learning outcomes of their organisation acted more as an enabler
• rated the quality and quantity of evaluations related to e-learning in their organisation higher
• felt the quality and quantity of evaluations in their organisation acted more as an enabler
• rated the quality of pedagogical support in their organisation higher.

Summary: Executive managers felt that communication, shared decision making, culture, commitment of their organisation to high quality e-learning experiences, evaluations and pedagogical support were more enabling than respondents with other roles. Conversely, executive managers believed financial resources were less appropriately allocated than other respondent types.

4. Perceived level of personal innovativeness

Personal innovativeness related to Question 38. Innovativeness is defined as being open to change and willing to adopt innovative tools and practices. In general, would you say you are more innovative or less innovative than the average person?

There were significant differences between respondents who viewed themselves as more or less innovative based on:
• the level to which they believed the RIPPLES components: People, Policies, Learning, Evaluation and Support were important
• their organisation’s infrastructure for e-learning
• the level of shared decision making in their organisation
• the degree to which they believed their organisation’s policies were rigid and difficult to change
• the appropriateness of their organisation’s policies related to e-learning
• the degree to which their organisation emphasised learning outcomes in e-learning courses
• the degree to which their organisation was committed to providing a quality e-learning experience
• the quality and quantity of evaluations in their organisation
• the quality and quantity of evaluations in their organisation related to e-learning
• the support system of their organisation
• the quality of training in their organisation
• the quality of technical support in their organisation
• the quality of pedagogical support in their organisation
• the extent to which they used innovative practices and techniques in their own e-learning courses
• the degree to which they felt their organisation was innovative.

**Note:** The majority of respondents to this survey identified themselves as either much more innovative (38.3%) or somewhat more innovative (47.7%) than the average person. This question calls for a self-reported level of innovativeness and, therefore, represents a person’s perception of their own innovativeness, not an independent measure of innovativeness. While additional research could be conducted to include an independent measure of innovativeness, the discussion for this research has focused on types of ‘innovativeness’.

**Summary:** Perceptions of personal innovativeness are significantly related to the extent respondents believed the RIPPLES components: **People, Policies, Learning, Evaluation** and **Support** were important. Other significant factors include the infrastructure for e-learning, shared decision making, policies related to e-learning, commitment to quality e-learning provision, the quantity of evaluations related to e-learning and in general, the quality of pedagogical and technical training, the use of innovative practices in their own e-learning delivery and the degree they thought their organisation was innovative. Eighty-six percent of respondents rated themselves as being much more or somewhat more innovative than the average person.

5. **Perceived level of organisational innovativeness**

A comparison of respondents based on the extent to which they felt their organisation as a whole uses innovative practices in e-learning, and the extent to which they believed each of the RIPPLES components serves as a barrier or an enabler showed significant differences on all seven components.

From a practical standpoint, this means that respondents who felt their organisation used innovative practices in e-learning tended to view each of the RIPPLES components as an enabler rather than a barrier in their organisation. Conversely, it means that respondents who felt their organisation did not use innovative practices in e-learning viewed each of the RIPPLES components as a barrier rather than an enabler in their organisation. This finding suggests that the RIPPLES components are a valid framework for determining barriers or enablers to the use of innovative practices in e-learning.

Of the 53.1% of respondents to this survey, 10.1% identified their organisation as being extremely innovative and 43% as somewhat innovative.

**Summary:** Organisational innovativeness was significantly related to the seven components of the RIPPLES model and so are considered enablers of innovative e-learning practices; 53.1% of respondents believed their organisations in general were extremely or somewhat innovative.

**Summary of perceived personal and organisational innovativeness**

Perceptions of personal innovativeness are significantly related to the extent respondents believed the RIPPLES components: **People, Policies, Learning, Evaluation** and **Support** were important. Other significant factors include the infrastructure for e-learning, shared decision making, policies related to e-learning, commitment to quality e-learning provision, the quantity of evaluations related to e-learning and in general, the quality of pedagogical and technical training, the use of innovative practices in their own e-learning delivery and the degree they thought their organisation was innovative. Organisational innovativeness was significantly related to the seven components of the RIPPLES model so they are considered enablers of innovative e-learning practices.
While 86% of respondents rated themselves as being much more or somewhat more innovative than the average person, 44.7% indicated they were using innovative e-learning practices and techniques to a very high or high extent in their delivery. Of the 53.1% who believed their organisation in general was extremely or somewhat innovative, only 25.7% believed their organisation was using innovative practices to a very high or high extent. Individual respondents perceived themselves to be more innovative than the organisation they worked in and using more innovative practices than their organisation as a whole.

6. The seven components of the RIPPLES model

Table 6 shows the mean for each RIPPLES component on a seven point scale with ‘1’ being a major barrier and ‘7’ being a major enabler. The component Infrastructure showed the lowest mean score (3.42). This suggests that the technological infrastructure of the organisation was viewed as the biggest barrier to the use of innovative teaching practices in e-learning by respondents in this sample. The component Learning showed the highest mean score. This suggests that an emphasis on learning outcomes by the organisation was viewed as the biggest enabler to the use of innovative teaching practices in e-learning by respondents in this sample.

It should also be noted that Learning was the only RIPPLES component to score above a ‘4’ – the mean point on the ‘7’ point scale. This suggests that Learning was the only net enabler for this sample while the other six components were all net barriers – although all six appear to be relatively weak net barriers.

Table 6: Barrier or enabler – mean for each RIPPLES component

<table>
<thead>
<tr>
<th>Component</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resources</td>
<td>255</td>
<td>1</td>
<td>7</td>
<td>3.59</td>
<td>1.660</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>273</td>
<td>1</td>
<td>7</td>
<td>3.42</td>
<td>1.616</td>
</tr>
<tr>
<td>People</td>
<td>271</td>
<td>1</td>
<td>7</td>
<td>3.63</td>
<td>1.706</td>
</tr>
<tr>
<td>Policies</td>
<td>259</td>
<td>1</td>
<td>7</td>
<td>3.66</td>
<td>1.491</td>
</tr>
<tr>
<td>Learning</td>
<td>274</td>
<td>1</td>
<td>7</td>
<td>4.14</td>
<td>1.615</td>
</tr>
<tr>
<td>Evaluation</td>
<td>257</td>
<td>1</td>
<td>7</td>
<td>3.62</td>
<td>1.384</td>
</tr>
<tr>
<td>Support</td>
<td>272</td>
<td>1</td>
<td>7</td>
<td>3.64</td>
<td>1.730</td>
</tr>
</tbody>
</table>

** 1 = major barrier, 7 = major enabler

Barriers and enablers for each component of the RIPPLES model

This section is a collation of survey responses related to the barriers and enablers specifically aligned to the seven components of the RIPPLES model. This includes survey questions specifically addressing enablers and barriers, and the importance of each component for successful use of an e-learning innovation. A synthesis of the responses to the two open-ended questions specifically related to enablers and barriers have been aligned to the appropriate component.
Innovate and integrate: Embedding innovative practices

Resources

Question 3. Do you think the financial resources of your organisation and the way those resources are allocated act as a barrier or an enabler to the use of innovative practices in e-learning? (A barrier makes innovative practices in e-learning harder, an enabler makes innovative practices in e-learning easier) 1 = Major Barrier, 7 = Major Enabler

![Bar chart showing the percentage of responses related to Question 3](chart.png)

**Figure: 5 Percentage of responses related to Question 3**

**Importance of financial resources (money) for the successful use of an innovation**

<table>
<thead>
<tr>
<th>Important</th>
<th>6</th>
<th>5</th>
<th>Moderately important</th>
<th>3</th>
<th>2</th>
<th>Not important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extremely</td>
<td>36.9</td>
<td>23.4</td>
<td>18.9</td>
<td>17</td>
<td>3.2</td>
<td>0</td>
</tr>
</tbody>
</table>

**Summary of responses related to Resources**

Responses related to Resources tended to be short like ‘no funds’ or ‘no money’. Key words like ‘funding’, ‘money’, ‘funds’, ‘finances’ ‘dollars’, ‘financial’ and ‘cost’ appeared 16 times in the responses. The word ‘resources’ also referred to learning resources, so ‘financial resources’ were differentiated. Responses that included a reference to funding tended to come as a bundle of factors, most commonly; time, money, infrastructure, management decisions about resource allocation and management support.

**Sample quotes**

Management due to financial restriction are not able to invest in the development of innovative delivery.

Although technical support is excellent, the lack of resources is extremely short sighted! The organisation needs ‘to put its money where its mouth is’ so to speak.

Supportive management that encourages innovations and have the resources to fund it.
It is always sufficient $$$’s as this provides – when managed effectively and in an encouraging environment – the opportunity to develop staff, learning materials and logistical processes that will capitalise on an invigorated staff eager and able to relate to ‘industry education and training’ needs and deliver.

Private RTOs (registered training organisations) have no funding to do this and the infrastructure is very expensive.

Too many casual staff do not have the technology skills.

<table>
<thead>
<tr>
<th>Enablers</th>
<th>Barriers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SOURCES OF FUNDING</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Hard money</strong></td>
<td></td>
</tr>
<tr>
<td>• Organisation commitment to resource e-learning innovations, resources and encourages risk-taking</td>
<td>• Insufficient resource allocation&lt;br&gt;• Petitioning for funds</td>
</tr>
<tr>
<td><strong>Soft money</strong></td>
<td></td>
</tr>
<tr>
<td>• LearnScope – to motivate, learn, meet, explore, practice&lt;br&gt;• Reframing the Future</td>
<td>• Heavy reliance on Framework funding with no sustainability plan beyond the ‘project’</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Enablers</th>
<th>Barriers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SOURCES OF FUNDING</strong></td>
<td></td>
</tr>
<tr>
<td><strong>COSTS</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Initial costs</strong></td>
<td></td>
</tr>
<tr>
<td>• Funding to establish and maintain support units</td>
<td>• Private RTOs have no funding for expensive infrastructure&lt;br&gt;• Costs to small RTOs (particularly for small owner/operator RTOs) who often lack sufficient funds for the necessary ICT requirements&lt;br&gt;• No funds for purchase of equipment, hardware and software&lt;br&gt;• Inability to finance appropriate resources&lt;br&gt;• Casual staff are not resourced beyond teaching time</td>
</tr>
<tr>
<td><strong>Ongoing costs</strong></td>
<td></td>
</tr>
<tr>
<td>• Upgrades of hardware and software&lt;br&gt;• Expecting that a percentage of funding agreements are targeted for innovations</td>
<td>• Lack of funding to backfill teachers from their regular duties to explore innovations&lt;br&gt;• Resources allocated to other priorities&lt;br&gt;• No money for upgrades&lt;br&gt;• Competing priorities due to financial restrictions&lt;br&gt;• Short-term funding of one-off projects</td>
</tr>
</tbody>
</table>
Infrastructure

Question 7. Do you think the infrastructure of your organisation acts as a barrier or an enabler to the use of innovative practices in e-learning? (A barrier makes innovative practices in e-learning harder, an enabler makes innovative practices in e-learning easier) 1 = Major Barrier, 7 = Major Enabler.

![Percentage of responses related to Question 7](chart.png)

**Figure: 6 Percentage of responses related to Question 7**

**Importance of appropriate infrastructure for the successful use of an innovation**

<table>
<thead>
<tr>
<th>Importance</th>
<th>6</th>
<th>5</th>
<th>Moderately important</th>
<th>3</th>
<th>2</th>
<th>Not important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extremely important</td>
<td>54.2</td>
<td>28.2</td>
<td>13.6</td>
<td>2.6</td>
<td>1.0</td>
<td>0.3</td>
</tr>
</tbody>
</table>

**Summary of responses to Infrastructure**

**Note**: Responses related to technical support are included under the Support component

**Sample quotes**

- People get frustrated when things don’t work and won’t try again.
- Managers (I am one) do not have enough understanding of these things to champion them.
- Lack of adequate technical support (in fact the presence of technical tyranny in the form of firewalls).

<table>
<thead>
<tr>
<th>Enablers</th>
<th>Barriers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology infrastructure</td>
<td>Poor web connectivity</td>
</tr>
<tr>
<td>Robust baseline infrastructure</td>
<td>Servers that cannot support the technology</td>
</tr>
<tr>
<td>Fast, reliable and efficient</td>
<td>Low bandwidth</td>
</tr>
<tr>
<td>State of the art technology</td>
<td></td>
</tr>
<tr>
<td>Access to server space</td>
<td></td>
</tr>
</tbody>
</table>
Innovate and integrate: Embedding innovative practices

**Hardware**
- Access to computer suites and technology in the classroom
- All classrooms have computers, DVDS and internet access
- State-of-the-art equipment
- Technology that meets special needs
- Low ratio of computers for teachers
- Cheap technology added piecemeal
- Slow

**Software**
- Free software
- Web 2.0 tools
- Access to software
- Red tape associated with access to new software and the internet

**Access and use**
- No restrictions of the use of the computer network
- Blocking access, especially to Web 2.0 tools is a significant barrier
- Restrictions to the use of computer network
- Firewalls

**People**

Question 11. Do you think that the culture of your organisation, specifically shared decision making and communication, acts as a barrier or an enabler to the use of innovative practices in e-learning? (A barrier makes innovative practices in e-learning harder, an enabler makes innovative practices in e-learning easier) 1 = Major Barrier, 7 = Major Enabler.

![Figure: 7 Percentage of responses related to Question 11](image)
Importance of appropriate shared decision making and participation for the successful use of an innovation

<table>
<thead>
<tr>
<th>Extremely important</th>
<th>6</th>
<th>5</th>
<th>Moderately important</th>
<th>3</th>
<th>2</th>
<th>Not important</th>
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</thead>
<tbody>
<tr>
<td>47.7</td>
<td>30.8</td>
<td>13.2</td>
<td>7.3</td>
<td>0.7</td>
<td>0.3</td>
<td>0</td>
</tr>
</tbody>
</table>

Summary of responses related to People

Sample quotes

Lack of engagement with us when designing or managing teaching tools. Very little real invitation to be involved in decision making and design.

Not having the social computing tools that would allow an appropriate level of collaboration to occur.

No consultation with educators before blocking decisions are made.

Lack of communication and understanding about ICT needs for education.

Appropriate support that isn’t driven by what the policy says must be so, but rather listens to the needs of the practitioner who is trying to find better ways to engage learners or manage programs.

Management shares their vision with staff about where they want the organisation to progress in relation to e-learning.

<table>
<thead>
<tr>
<th>Enablers</th>
<th>Barriers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Shared decision making</strong></td>
<td>• Lack of engagement in design or management</td>
</tr>
<tr>
<td>• Practitioners involved in technology</td>
<td>• No shared decision making</td>
</tr>
<tr>
<td>decisions</td>
<td>• No consultation</td>
</tr>
<tr>
<td><strong>Communication</strong></td>
<td></td>
</tr>
<tr>
<td>• Communicating the vision</td>
<td>• No social computing tools for communication</td>
</tr>
<tr>
<td>• Listening to needs and responding</td>
<td>• Lack of communication with educators about ICT needs</td>
</tr>
<tr>
<td></td>
<td>• No interest in education use of technology</td>
</tr>
</tbody>
</table>

Policies

Question 16. Do you think that the policies of your organisation act as a barrier or an enabler to the use of innovative practices in e-learning? (A barrier makes innovative practices in e-learning harder, an enabler makes innovative practices in e-learning easier) 1 = Major Barrier, 7 = Major Enabler.
Innovate and integrate: Embedding innovative practices

Figure 8: Percentage of responses related to Question 16

Importance of appropriate policies for the successful use of an innovation

<table>
<thead>
<tr>
<th></th>
<th>Extremely important</th>
<th>6</th>
<th>5</th>
<th>Moderately important</th>
<th>3</th>
<th>2</th>
<th>Not important</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>37.8</td>
<td>26.1</td>
<td>20.4</td>
<td>11</td>
<td>2.3</td>
<td>0.7</td>
<td>1.7</td>
</tr>
</tbody>
</table>

Summary of responses related to Policies

Sample quotes

1. technical support for front line practitioners – base level teacher PD is not enough 2. clear organisational goals and policies to guide front line practitioners and change attitudes which may include incentive arrangements.

The word policy fills me with dread around e-learning because it’s often about older less computer literate managers wanting to control and stop a possibility of a mistake.

There were four references to policies in the open-ended responses. One was identified as an enabler and the other three as barriers. This is reflected in the percentage of responses to this component of the RIPPLES model with 32.4% selecting a neutral response.

<table>
<thead>
<tr>
<th>Enablers</th>
<th>Barriers</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Clear policies to guide practitioners</td>
<td>• No professional development policies</td>
</tr>
<tr>
<td></td>
<td>• Don't understand legal/policy implications</td>
</tr>
<tr>
<td></td>
<td>of what they are doing</td>
</tr>
<tr>
<td></td>
<td>• Policy associated with compliance</td>
</tr>
</tbody>
</table>

Learning

Question 20. Do you think that your organisation's commitment to learning outcomes acts as a barrier or an enabler to the use of innovative practices in e-learning? (A barrier makes innovative practices in e-learning harder, an enabler makes innovative practices in e-learning easier) 1 = Major Barrier, 7 = Major Enabler.
Innovate and integrate: Embedding innovative practices

Importance of commitment to learning outcomes for the successful use of an innovation

<table>
<thead>
<tr>
<th>Extremely important</th>
<th>6</th>
<th>5</th>
<th>Moderately important</th>
<th>3</th>
<th>2</th>
<th>Not important</th>
</tr>
</thead>
<tbody>
<tr>
<td>51.9</td>
<td>23.5</td>
<td>11.9</td>
<td>10.9</td>
<td>0.3</td>
<td>0.7</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Summary of responses related to Learning

Sample quotes

Web 2.0 presents new challenges. Developing e-learning resources eg podcasting, screencasting, wikis, mobile technologies – is extremely time consuming and for many people very difficult. Making podcasts and videos requires good equipment and an understanding of recording technology. And one person cannot hope to have in-depth expertise in all of the technologies.

Do customers want e-learning? If so which ones?

Many colleagues have strong views about student receptiveness to this type of learning, especially students who are not strongly motivated, and need personal contact with teachers and students and who need individual help.

The culture of the teacher as the font of all knowledge has to be challenged before a larger uptake of e-learning is to occur.

Greater understanding among consumers about how e-learning works and can be adopted.
## Enablers and Barriers

### PEDAGOGICAL

#### Role of e-learning

- Affirming the purpose of investing in e-learning
- Putting learning and teaching above all else
- Understanding that it is not the technology that is driving the learning process

#### Implementation

- Seeing the potential value of ‘e’ to teaching and learning
- Seeing what and how others use e-learning
- Real life case studies, good practices and success stories
- Demonstration of good working models of complete programs, not just demonstration of individual objects and tools

#### Hearing learner/client perspectives

- Understanding what the client wants from the program
- Evidence that e-learning is actually what learners are wanting
- An understanding by clients about how e-learning works and can be applied
- Learner enthusiasm for e-learning as a way of achieving qualifications
- Students demanding e-learning innovation
- Younger students’ familiarity with emerging technologies

#### Evaluation

Question 24. Do you think that the quality and quantity of evaluations in your organisation acts as a barrier or an enabler to the use of innovative practices in e-learning? (A barrier makes innovative practices in e-learning harder, an enabler makes innovative practices in e-learning easier) 1 = Major Barrier, 7 = Major Enabler.
Innovate and integrate: Embedding innovative practices

Figure: 10 Percentage of responses related to Question 24

Importance of evaluation for the successful use of an innovation

<table>
<thead>
<tr>
<th>Extremely important</th>
<th>6</th>
<th>5</th>
<th>Moderately important</th>
<th>3</th>
<th>2</th>
<th>Not important</th>
</tr>
</thead>
<tbody>
<tr>
<td>32.5</td>
<td>31.9</td>
<td>20.6</td>
<td>12.4</td>
<td>1.8</td>
<td>0</td>
<td>1.1</td>
</tr>
</tbody>
</table>

Summary of responses related to Evaluation

Sample quotes

*Evaluation* was only mentioned once in the open-ended question. In was in relation to enabling e-learning through a holistic approach

- Easy access to e-learning, relevant and well set out content,
- Concise and stringent evaluation, resources, training of staff and clients on how to implement e-learning and finally support from management and organisation and well set out infrastructure. Sorry all of the above need to be available to enable good practices in e-learning.

This is reflected in the percentage of responses to this component of the RIPPLES model with 47.7% selecting a neutral response, which was the highest in this category for the seven components. Yet evaluation was considered to be an important factor for using an innovation successfully.

Support

Question 28. Do you think that the overall support system of your organisation acts as a barrier or an enabler to the use of innovative practices in e-learning? (A barrier makes innovative practices in e-learning harder, an enabler makes innovative practices in e-learning easier) 1 = Major Barrier, 7 = Major Enabler.
Innovate and integrate: Embedding innovative practices

Figure 11: Percentage of responses related to Question 28

Importance of support for the successful use of an innovation

<table>
<thead>
<tr>
<th>Extremely important</th>
<th>6</th>
<th>5</th>
<th>Moderately important</th>
<th>3</th>
<th>2</th>
<th>Not important</th>
</tr>
</thead>
<tbody>
<tr>
<td>64.3</td>
<td>23.2</td>
<td>7.1</td>
<td>4.3</td>
<td>1.1</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Summary of responses related to Support

Most of the responses related to Support. The words ‘support’, ‘supportive’, ‘supporting’ were mentioned 124 times in the enabling responses. Supportive managers were most frequently mentioned followed by mentors, colleagues, team, attitude and culture. Support was described as localised, personalised, organisational, practical, for learning, easily available, just-in-time, networks, on-site, financial, and administrative. The type of support was technical and pedagogical. Support for innovation and innovators and the uptake of innovative practice being supported were all variations of support. The words ‘mentor’, ‘mentoring’ and ‘e-mentor’ were mentioned 22 times.

Conversely, ‘Lack of’ was the most common term in the response to barriers being mentioned 120 times. In a breakdown of responses the most frequent ‘Lack of’ was time (110), for professional development, to develop resources, to commit to e-learning, to plan and to make the transition to new practices. The second was support (79) in relation to innovative teaching, administrative, encouragement, technical and from managers and peers. Others were funding (61) for time release and purchase or upgrade of technology. Fear was mentioned 27 times in relation to change, failure, technology jargon, and letting go of familiar practices. Mentioned more than five times were knowledge of what is available, of technology and experience, training in ICT skills for e-learning; understanding of innovation, good practice in e-learning technology, educator’s needs; leadership, interest and
commitment from senior management. A range of **personal factors** like lack of motivation, experience, will, incentives, confidence and encouragement were also identified as barriers.

**Sample quotes**

Staff too busy with current practice and responsibilities to have time to learn or prepare for innovations.

Fear of the machine. Many older staff have not adapted well to the change to ICT and there has been totally inadequate training to reduce the fear.

Lecturers having to learn the technology and pedagogy skills to be effective. Most lecturers have basic computing skills and for many forms of e-learning need to have a high level of commitment to learn the technology, often outside of work hours.

The IT staff are both competent and helpful, but there are far too few of them.

Stimulating and supportive team culture, driven by leadership which is forward-looking and educationally focused.

Local support is required when and where people need it. Teachers need support in faculty land, not from a central unit.

A commitment by the organisation that e-learning is valued (presence of an e-learning champion in the management cadre) and the provision of adequate infrastructure for training and technical support.

<table>
<thead>
<tr>
<th>Enablers</th>
<th>Barriers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TRAINING</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Time**

- Time to think about the possibilities, investigate, experiment, make mistakes, learn new things, develop understandings, develop quality e-learning resources, access training, share with colleagues

Lack of time for:

- Research – explore, play, trial tools, contemplate, reflect, plan for integration
- Training – learn skills and new practices
- Application – to transition to new practices
- Release – from day-to-day activities and administrative demands

**The process**

- Mentoring from experienced e-learning practitioners with a proven implementation record
- Practical hands on experience with personalised just-in-time support on a regular basis

- A training culture that is learning rather than ‘e’ learning focused
- Lack of training and support – technology and programs are just thrust under our noses and no – or very little – follow up and support
- People need support out in faculty land, not a central unit
Innovate and integrate: Embedding innovative practices

<table>
<thead>
<tr>
<th>Enablers</th>
<th>Barriers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TRAINING</strong></td>
<td></td>
</tr>
<tr>
<td>The process (continued)</td>
<td></td>
</tr>
<tr>
<td>• A support network of willing, adventurous peers for collaborative learning</td>
<td>• Don’t know what is out there</td>
</tr>
<tr>
<td>• A safe and enabling environment</td>
<td>• Poor dissemination of innovations attempted elsewhere</td>
</tr>
<tr>
<td></td>
<td>• Lack of exposure and participation in innovation sharing</td>
</tr>
<tr>
<td><strong>Support</strong></td>
<td></td>
</tr>
<tr>
<td>• Innovation and support centres within an organisation</td>
<td>•</td>
</tr>
<tr>
<td>• Readily available support</td>
<td>•</td>
</tr>
<tr>
<td>• Structured, progressive in-house training in use of e-technologies</td>
<td>•</td>
</tr>
<tr>
<td>• Having access to mentoring and support with time to learn and experiment</td>
<td>•</td>
</tr>
<tr>
<td>• Just-in-time, personalised and one-to-one support to implement real e-learning innovations in a local context</td>
<td>•</td>
</tr>
<tr>
<td><strong>TECHNICAL SUPPORT</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Customer service orientation</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Technical support</strong></td>
<td></td>
</tr>
<tr>
<td>• Competent interested and friendly support</td>
<td>• Artificial barriers put in place by over zealous ICT managers</td>
</tr>
<tr>
<td>• For specific software</td>
<td>• Very conservative ICT managers</td>
</tr>
<tr>
<td>• Just-in-time and personalised</td>
<td>• Insufficient staff in ICT support</td>
</tr>
<tr>
<td>• Provided by ICT staff and educators</td>
<td>• Lack understanding of ICT needs</td>
</tr>
<tr>
<td>• Helpful, positive and knowledgeable technical support</td>
<td>• No communication about ICT needs for educational purposes</td>
</tr>
<tr>
<td>• Readily available and sound ICT support from either experienced educators or ‘techies’</td>
<td>•</td>
</tr>
<tr>
<td>• Technical support to ensure there is no significant downtime</td>
<td>•</td>
</tr>
<tr>
<td>• Good ICT backup</td>
<td>•</td>
</tr>
<tr>
<td>• Easy access from home</td>
<td>•</td>
</tr>
<tr>
<td>• Minimal administrative or technical barriers to using the innovation</td>
<td>•</td>
</tr>
</tbody>
</table>
## PEDAGOGICAL

### Personal qualities and attributes

<table>
<thead>
<tr>
<th>Personal qualities</th>
<th>Fear (mentioned 27 times)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Desire, willingness to participate, open mindedness and passion</td>
<td>• Closed minds</td>
</tr>
<tr>
<td>• Challenging and supportive colleagues ready to change mindset</td>
<td>• Apathy towards e-learning</td>
</tr>
<tr>
<td>• Motivation of teachers to engage with e-learning</td>
<td>• Not wanting to engage with e-learning even though support is there</td>
</tr>
<tr>
<td>• Space to dream and supportive people around who understand the risk is OK</td>
<td>• Gatekeepers who want to keep the status quo</td>
</tr>
<tr>
<td>• Attitude and enthusiasm and initiative of staff (both individually and collectively)</td>
<td></td>
</tr>
<tr>
<td>• Being around people who are excited about it</td>
<td>• Fear of failure and repercussions</td>
</tr>
<tr>
<td>• Committed to pedagogy rather than outcomes</td>
<td>• Fear of the unknown</td>
</tr>
<tr>
<td>• Enthusiastic staff and staff prepared to put in many hours at night and on weekends</td>
<td>• Fear of change and not knowing how to be innovative</td>
</tr>
<tr>
<td>• Persistence</td>
<td>• Fear of the language of ‘technology speak’</td>
</tr>
<tr>
<td></td>
<td>• Fear of letting go of customary way of doing things and familiar practices</td>
</tr>
<tr>
<td></td>
<td>• Fear by older staff</td>
</tr>
</tbody>
</table>

### Modelling by peers and mentors

<table>
<thead>
<tr>
<th>Modelling by peers and mentors</th>
<th>Negative attitude towards e-learning peers making initiatives difficult to progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Seeing others in same age range using practices</td>
<td></td>
</tr>
<tr>
<td>• Teachers who are experienced and have expertise in delivering e-learning successfully</td>
<td></td>
</tr>
<tr>
<td>• Access to forward thinking staff</td>
<td></td>
</tr>
<tr>
<td>• Enthusiastic champions for technology and e-learning.</td>
<td></td>
</tr>
<tr>
<td>• Local expertise who transfer skills in local context</td>
<td></td>
</tr>
<tr>
<td>• The commitment drive and resilience of the practitioners to be innovative</td>
<td></td>
</tr>
</tbody>
</table>

### Sharing and collaboration

<table>
<thead>
<tr>
<th>Sharing and collaboration</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Networking opportunities, workshops, showcases, conferences</td>
<td></td>
</tr>
<tr>
<td>• Learning and working together as part of daily work activities</td>
<td></td>
</tr>
</tbody>
</table>

### Experimenting with new applying practices

<table>
<thead>
<tr>
<th>Experimenting with new applying practices</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Building on what is already in use</td>
<td></td>
</tr>
<tr>
<td>• Trial lots of examples of online resources</td>
<td></td>
</tr>
<tr>
<td>• Pilot trials where learning from failure is necessary</td>
<td></td>
</tr>
<tr>
<td>• Time to investigate and become familiar with the innovative practices available</td>
<td></td>
</tr>
<tr>
<td>• Different lots of support and encouragement</td>
<td></td>
</tr>
<tr>
<td>• Support to apply in a real learning situation</td>
<td></td>
</tr>
</tbody>
</table>
ADMINISTRATIVE LEADERSHIP

<table>
<thead>
<tr>
<th>Managers</th>
<th>Champions at senior level</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Forward thinking and forward looking educationally focused</td>
<td>• A senior advocate to drive the process and enable the innovation process</td>
</tr>
<tr>
<td>• Committed and have drive and resilience</td>
<td></td>
</tr>
<tr>
<td>• Enthusiastic and positive</td>
<td></td>
</tr>
<tr>
<td>• Modelling and leading by example</td>
<td></td>
</tr>
<tr>
<td>• Unqualified support and encouragement</td>
<td></td>
</tr>
<tr>
<td>• Actively seeking funding</td>
<td></td>
</tr>
<tr>
<td>• Allocating time</td>
<td></td>
</tr>
<tr>
<td>• Lack of management commitment to the future</td>
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</tbody>
</table>

General comments about barriers and enablers

Enablers
RIPPLES is a model for implementation readiness. The open questions identified a suite of general factors that were associated with the background practices of organisations rather than specifically related to e-learning facilitation. These factors related to the culture of an organisation and were deemed an enabling pre-requisite for successful implementation.

These factors include:

• a willingness to embrace innovation
• open to risk taking but acknowledging that innovations sometimes fail
• provision of rewards and incentives for innovative practice
• valuing, committing to, encouraging and supporting innovation in the workplace
• a commitment to expanding e-learning capability.

Indicators of these factors in action include:

• appropriate vision, planning and resources to implement
• an e-learning and/or innovation champion at a senior management level
• evidence of active commitment to innovation beyond vision and planning by all levels of management.

Barriers
Conversely, a number of cultural factors were identified as being organisational barriers.

• an organisation that is risk averse and blame prone
• lack of organisational vision and commitment for innovation and/or e-learning by senior management
• no strategic vision for e-learning and how it would function
• lack of support beyond the immediate local context
• little sense of connection to the organisation’s purpose and the role in contributing to that purpose.

The barriers can be summed up by this quote from a respondent:

The gap between the rhetoric and the grassroots reality. What is articulated and what is practiced in active support are worlds apart in my experience. There is rarely any discussion about what innovation is, emerging trends (like Web 2.0) and how to capitalise on that. Innovators are not understood, so we lose them at a fast rate – you can’t have innovation without innovators.

A failure to understand that it is not about the technology but about the capacity to inspire curiosity and a learning culture in the workplace.

**Summary**

The RIPPLES survey provides a comprehensive analysis of the barriers and enablers to the use of innovative e-learning practice in VET delivery. The survey highlights a complex mix of a number of interrelated factors influencing e-learning innovation implementation suggesting both personal and organisational factors are required to move an innovative practice forward.

The next section will combine this data with that from other sources to identify key themes and highlight key findings.
Section 8: Feedback to the Australian Flexible Learning Framework

Contributors interviewed for this research included participants in current and past New Practices in Flexible Learning projects, intermediaries like e-learning coordinators, institute managers, Framework Coordinators, LearnScope managers, and innovative e-learning adopters who had direct or indirect links with a New Practices in Flexible Learning project. As part of the interview process participants were given Figure 12 and asked to respond to the following question:

Given your experience, what could these stakeholder groups do in the future to more effectively enable innovative practice in e-learning to be embedded?

What follows is a synthesis of the responses of approximately 27 people.

The funding body

A significant professional development opportunity

There was unequivocal acknowledgement that participation in a New Practices in Flexible Learning project opportunity had contributed to personal growth and learning and provided a significant opportunity to explore e-learning innovations. However, there was a mixed view about the adequacy of the sponsoring organisation to enable transfer of those benefits beyond the local experience.

Have a consolidation year in 2007: In the final year of the current Framework strategy (2005-2007), have dual focuses on new practice development and new practice implementation.

- New practices need continued exploration, but they also need support to be implemented as implementation was the first stage in an embedding process.
• Develop a program to support innovation teams, early adopters, Framework Coordinators, champions and decision makers responsible for embedding an innovative practice which builds the knowledge and skills necessary to lead or influence an embedding process.

• Fund innovative practices that have demonstrated progress towards embedding regardless of their source.

Clarify purpose: Clearly define what a New Practices in Flexible Learning Project is really about – research and development of emerging technology, new pedagogies, or an organisational change process. Clearly define embedding expectations – is it local, across disciplines, or a broader national focus. Currently the New Practices in Flexible Learning Project is a product development model rather than a social influencing model which is what is required for embedding. Once the focus is on implementation the model needs to change to support that process.

Clarify the contribution of the New Practices in Flexible Learning Project to innovative e-learning development: Innovative practice in e-learning is already part of the fabric of VET and many initiatives are occurring outside the ‘formal’ New Practices in Flexible Learning projects. New practices are not necessarily the biggest movers of e-learning innovations in VET. There needs to be greater clarity about its unique role and contribution. What is its niche?

Consider the nature of the innovation: If the aim for a new practice is to be embedded, consideration must be given to its ‘embed-ability’ from the outset, which could include:

• a commitment to delivery integrated into the project requirements

• the new practice being generic enough for wide appeal and application.

Expand to a three year cycle: It is unrealistic to have any substantial embedding with the current funding and project management model. A longer timeframe is needed for the maturation process that leads to embedding. To date, the emphasis has been on the front end (development) but the back end (implementation) needs equal attention and this must be done up front as part of the funding methodology. A planning process that explicitly gives attention to both ends at once is an important factor.

Rethink a ‘project’ framework: It encourages short-term investment and application. The ‘one off-ness’ encourages a start-stop mentality with finite beginnings and endings and no accountability for sustained use.

Leverage new practices that are already demonstrating viability: There are many new practices that already have implementation success. Fund those that have demonstrated a user interest. These could include trials that are occurring within different RTO sectors.

Establish closer links with research bodies: Greater alliances with research bodies from other sectors disciplines and countries. This creates awareness of the latest research and emerging trends/issues questions, so there is more coherence about the most effective targeting. Analyse trends and practices of early adopters and champions to be better informed about what will work in a VET context. Otherwise there could be danger of funding the un-embeddable.

Pay more attention to organisational development: Many Framework initiatives have been personally beneficial, but there needs to be more attention paid to building the systems and organisational capability to embrace the changes. There needs to be parallel development of new practices and organisations.
Balance themes and priorities: Have a balance between targeting projects and open-ended projects to allow for diversity of opportunity.

Encourage consortiums: Partnerships provide fresh perspectives, new challenges and sharing of diverse knowledge and skills which in itself can be an embedding strategy. However, this should not be a selection requirement. Forced partnerships are not always the most productive, and some innovators with great ideas may not always have suitable connections.

Link formally to LearnScope: It is an established structure that can facilitate the embedding of investments in innovation. If New Practices in Flexible Learning represent the trends for e-learning, then it makes sense to encourage RTOs to engage with these trends. New Practices in Flexible Learning could also identify some of the new practices emerging from LearnScope and then scope a New Practices in Flexible Learning project to embed in particular industry areas.

Encourage fresh blood: There is a perception that New Practices in Flexible Learning is a fairly closed community. Several groups have received repeated funding, so consider an application limit or for repeat applicants to provide evidence of successful embedding of previous project as a pre-requisite to further funding.

Have a maintenance plan: Several potentially embeddable New Practices in Flexible Learning projects are sound, but are not being embedded because the content is redundant. A good example of this is the game-based learning for AQTF\textsuperscript{17} professional development. As there is often a lag time between the release of a new practice and readiness to use it, a maintenance plan is important to keep the new practice viable and encourage embedding.

The New Practices in Flexible Learning National Management Team

Level of support: It is outstanding. What is appreciated is the time to talk through projects and the suggestions for scaling back proposals so they become more manageable.

New practice identity: The source of a new practice is only important to people involved in seeking the funding. Invest in embedding the practice not in marketing the project.

Reporting process: Redirect the energy required for reporting into developing an embedding strategy. Developing guidelines and a delivery system for using a new practice would be more productive and could become a form of reporting in itself.

Be more flexible in reporting requirements: At times it seems that the reporting requirements and project management are more of a focus than the project itself. It is difficult to define and commit to deliverables at the beginning of a project as New Practices in Flexible Learning is about discovery. Deliverables can only be best guesses and mostly change. This needs a rethink.

Match reporting requirements to the nature of the innovation: The current reporting framework is designed for managing product development. Many new practices are about processes, so the current management model is not a good fit for all projects.

\textsuperscript{17} AQTF – Australian Quality Training Framework

Set up an innovation network: So that project teams, adopters and other stakeholders can talk to each other, access resources, share expertise and experience with the common purpose of developing a strategy to influence the uptake of the new practices. It provides a forum for expert input that can continue beyond the life of the ‘project’. Aim for sustainability of support systems. In 2007, set up an innovation network or more actively contribute to existing networks.

Balance the emphasis on development and diffusion: Currently the embedding component is an add-on and not well thought through. A dissemination workshop is not enough as all it can do is raise awareness. Think about more comprehensive embedding strategies such as:

- a project brief that includes an implementation strategy
- showcases by local champions who can contextual use to local needs
- an annual innovation conference
- regular publications on case studies and updates in a range of forums
- implementation guidelines and presentation pack developed as part of the project so change agents have something practical to work with once the project is released.

Take a business approach to New Practice in Flexible Learning development: There are different variations of a business model. All three 2006 projects have a business approach to the New Practices in Flexible Learning Project, but with a different emphasis.

- GippsTAFE is a business model focused on delivery, especially on tools and strategies for online communication. They use a consortium approach. The team is based within the Innovation and Organisational Development Unit.
- Holmesglen is a business model focused on product development and using a project management model to service external contracts (on time, on budget etc). Development is primarily done in-house as a project. The team is based within the Training and Development Unit.
- AMES is an adult and community learning model based on embedding better ways of providing access and skills for learners. They have a consortium and the project manager is within the Research and Learning Innovation Unit.

Consolidate the projects on the Framework website: The projects currently have minimal presence as they are archived under ‘projects’ in their year of funding or are part of the Resource Centre and are difficult to find.

Presentation of the outcomes: Dissemination must be more than a CD-ROM as this is a means to an end and not an end in itself. A CD-ROM is a dead product as it can’t be changed. Consider a dynamic website or wiki that people can access and contribute to and which can be maintained. The New Practices in Flexible Learning Project must model what it is espousing. The dissemination model needs to change if embedding is a priority.

Have a maintenance plan: Many New Practices in Flexible Learning Projects are now redundant because there is no maintenance plan. A good example is the e-games for AQTF professional development.

Support successful projects: Successful projects can be set up to fail if they are not funded to share their outcomes or to meet the demands of the interest shown. If an embedding dimension is added to project requirements then a process to enable this must also be considered.
**Innovate and integrate: Embedding innovative practices**

**Half way usability testing:** Test out the new practice products in different contexts to ascertain viability before they are complete. It is important to find out what works and what needs changing before the project is complete. This could be treated like an applied research process which informs the next step – go or no go.

**Tracking:** Currently, there is no way of knowing who has picked up the New Practices in Flexible Learning, so the degree of embedding is unknown. Some tracking mechanism may help this.

**Develop a comprehensive embedding strategy**

If the responsibility of a New Practices in Flexible Learning Project team is to embed a new practice beyond the local context, requires a consultancy model, as there is no funding beyond the initial project.

So change the requirements of participation in a New Practices in Flexible Learning Project to fund parallel phases:

- require successful applicants to commit to utilising the innovation themselves (in their context) as part of the contract
- develop an implementation program with some flow-on funding to cover their external promotion role (so they can build a market as fee-for-service consultants in this area)
- in a three year cycle, evaluate/monitor the uptake and impact (results), not the products or the processes
- link to other framework strategies and embed it within those strategies
- RTOs are used to getting things for free so may be unwilling to pay for a fee-for-service activity
- consider local champions so there is profile and presence.

**The organisation participating in New Practices in Flexible Learning Projects**

The funded organisation must drive a new practice as a business case

- Having a clear vision of where the new practice will take you and how it will live beyond the project is essential.
- The driver for considering a new practice must be the organisation and its business goals. Always think about the business case and the connection with clients/industry/students.
- You need to ask: ‘Where does this new practices opportunity fit into our business plan and how can we shape it to meet our needs’?
- Focus on the point of delivery and ask: ‘How can this new practice change teaching practice?’

**Recognise the different types of ‘innovation’ roles:** Adventurers, explorers, translators, brokers, experimenters, doers. A diverse team is needed to embed a new practice.

**Ensure enabling systems are in place:** Take an organisational development perspective. With any innovation, it is the system sitting behind it that will enable it to be embedded. A new practice, no matter how big or how small is an organisational
Innovate and integrate: Embedding innovative practices

issue. Embedding an innovation is an active process that must be prepared for and supported.

**Management support is critical:** Senior management needs to be committed. Senior champions and middle level operational managers need to be excited and actively involved.

**Assess the educational value of a new practice:** This needs an educational analysis of what the technology can do and where it fits in the design of an educational program. Move from a focus on technology tools to implementation models.

**Build new practice leadership:** Those who have an eye on what is happening, can see the benefits for their organisation, bring it back and ground it. Consider a local identity like a New Practices in Flexible Learning Champion.

**Take an interest in research:** It can really give you the edge!

**The New Practices in Flexible Learning Project Teams**

1. **The new practice**

   **Ask key questions about the value of adopting a new practice**
   - What would this new practice allow us to do or to do better than we couldn’t do before?
   - Will this be better for our learners?
   - How will it fit into a larger delivery system?
   - Is that system prepared to change its work practices to accommodate the innovation?
   - Can we keep it going after the funding stops?
   - Is this worth investing our time and money in?

   In other words, how significant is it educationally and/or organisationally?

   **A new practice is not about the technology:** The technology itself can be simple to learn. Embedding is about professional development and organisational commitment. If momentum can’t be sustained until there is a critical mass, the new practice will stop. It requires a longer term plan that is supported.

   **A new practice may be a better practice with new technology**
   The practice is not necessarily ‘new’. The pedagogy is often already good, but is limited by an older technology. The new practice is to integrate a new technology to enable the delivery of good practice to be cheaper, automated and/or portable (online casting is a good example of this). The most important consideration is that as a result, the teaching and learning is ‘better’. For example, with online voice technologies, learners have better access to spoken texts, lectures, and models.

2. **The Innovation Team process**

   **Work in consortiums:** This enables cross fertilisation, fresh perspectives, learning conversations and sharing of expertise beyond a local context. A consortium is an embedding enabler.
Be aware of the different drivers for investment in a new practice: For the innovation team it is the excitement of exploration and discovery. For the adopting practitioner, they are ‘up to their ears’ in the AQTF, compliance and daily work processes. Consider how a new practice will fit into their world.

**New Practices in Flexible Learning is one of many funding sources**

A new practice is not an event or even a project, but an opportunity to improve the business. The funding is a culmination point – a time of readiness where everything comes together and the New Practices in Flexible Learning funding helps to accelerate the opportunity. A new practice is more likely to succeed if the New Practices in Flexible Learning Project is not the sole funding source, as the investment from other sources is a sign of long-term commitment which needs to be identified by other projects and incorporated into their plan or a completely new concept around what New Practices in Flexible Learning is about. Tap into a number of funding sources as part of a wider business plan and continue to do so.

Collectively and cumulatively this could include:

- Framework; repeat funding from New Practices in Flexible Learning, Toolboxes, LearnScope, Industry Engagement
- Reframing the Future
- State/territory funding
- Institute funding
- Commercial activities.

**The intermediaries**

**Works in pairs or groups:** Never have one person responsible for embedding as perceptions can be different and the task too hard.

**Link more closely to other Framework roles:** Framework Coordinators, LearnScope managers, Toolbox Champions and engage them more strategically in the embedding process. Embedding is the common focus for everyone.

**Think more creatively about how to embed**

Start with user interest rather than the new practice. For example, a LearnScope Start Up is made up of a group of total strangers with a shared interest that has bought them together. They register their interest and in an organic way they decide what to focus on. They organise themselves and it all falls out. They are across disciplines and have different work roles and even from different organisations. At the right point, they see a need and it fires them.

**Recognise the importance of the bridging role:** Identify and support the ‘Captains of the Starship’ – who see the potential of a new practice and how it can fit into an educational framework. This can turn a research and development opportunity into a business proposition.

**Demand implementation guidelines:** Guidelines for how to introduce the new practice in a local context and how to support its growth. A brokerage role may be useful to filter information and opportunities to suit the readiness and interest of different groups.
**The innovators**

**Be mindful of the purpose:** There is a perception that some Web 2.0 innovators are operating at a professional development level. They have active networks but there is little evidence of their efforts ‘dribbling down’ to influence intentional learning. Align with early adopters who can translate new practices into educational benefits at the local level.

**The Adopters**

**What matters at the coalface is relevancy:** The key questions that adopters should always be asked about a new technology are:

- Does it meet business requirements and do we want it?
- Gee whiz technology – is it useful to the real teacher in the real world?
- Is it relevant and how will it make a difference to our learners?

**Organisational technology infrastructure:** Is the technology infrastructure robust enough to enable the utilisation of a new practice in the context of use?

Things to consider include:

- student literacy skills
- computer access for students
- clarify who is responsible for resourcing ICT upgrade requirements, if there is doubt then often nothing gets resolved and the problem persists.

**Consider the attributes of the new practice**

Is it a manageable chunk that can be learned quickly, that you can see the relevance for, have some control over and can apply readily?

**Summary**

The insights, experience and expertise of participants in New Practices in Flexible Learning projects and the intermediaries who are charged with promoting, championing, supporting and implementing those new practices, reinforce the main themes emerging from this research. Embedding new practices in e-learning is a dynamic, multidimensional, complex interconnected process that is the responsibility of a range of stakeholders who may have direct or indirect influence on the process and the outcomes. It reinforces the idea of a complex adaptive system dancing between the edge of chaos and the edge of stability as outlined in Section 5.
Section 9: Key findings

To be honest with you, most people are too busy. Increasingly, a teacher's life is fuller and fuller of expectations that haven't often got a lot to do with teaching. More and more, it takes away your capacity to deal with industry and with relationships outside. The compliance issues and issues of administration have just become so complex and so demanding, a lot of people are just saying 'I am struggling to do my job', much less, let's be honest, doing what we are talking about. It takes time and effort above and beyond what you are doing, and unless you have got people who are determined and understand that and who are committed you have to say 'What are they committed to?'

TAFE campus manager

This section draws on the broad pool of knowledge collected during this research, including results of the RIPPLES survey, the three case studies, interviews with New Practices in Flexible Learning project teams, the activities in the research wiki, the guidance of research advisors and critical friends and conversations emerging from presentations in a range of forums as well as the literature review.

The underlying tenor of the general research findings is not about resistance to or disinterest in e-learning innovations. In fact, there are healthy signs of progress towards embedding innovative e-learning and a willingness to move forward. For example, in the survey, 86% of respondents considered they were much more or somewhat more innovative than average, and 44.7% believed they were delivering innovative e-learning practices and techniques to a very high or high extent. While 53.1% believed their organisation was extremely or somewhat innovative, as a whole they believed that their organisation was using only 25.7% of e-learning innovations to a high or very high extent. The high percentage of self-rated innovativeness in this sample where respondents perceived themselves to be more innovative than the organisation they worked in and using higher level innovative practices than their organisation as a whole, suggests that this survey has attracted responses from innovators and early adopters.

This is not an unreasonable assumption, since the distribution of the survey was primarily through Framework networks so it would have reached those who had participated in e-learning professional development or research initiatives. If that assumption can be made, then the research findings represent the story of what has enabled or created barriers for this sample of VET practitioners, managers and support professionals as they move to the task of embedding e-learning in their local contexts and everyday practices.

If this is primarily the story of innovators and early adopters, then the challenge is how to utilise what has emerged from this research and shape it to reach the ‘other 85%’ that Geoghegan (1995) so aptly recognises. These mainstream adopters are the critical mass who must be targeted and convinced if there is to be significant movement along the adoption, diffusion, implementation and embedding route.

What can we learn from the experiences and insights of the contributors to this research so the Framework and other stakeholders can be informed about the appropriate paths to take to support the embedding process? The story starts with logistics.
It’s time and priorities

Key finding 1: Available time and competing priorities are limiting factors for engaging with e-learning innovations

Increasingly the VET working environment is becoming a crowded landscape with competing priorities and individuals are deciding whether e-learning is one of those priorities. The criteria for making a decision includes a mix of several interrelated factors: a work culture that embraces and supports innovation; a robust technology infrastructure; technology tools that are appropriate for teaching and learning purposes; a senior champion to drive the process; a willingness to consult and share; and supportive managers, peers and support professionals. This cluster of enablers that includes individual and organisational commitment provides a signal that e-learning is a desired and valued component of a teaching and learning repertoire and worth the time and effort.

The beginning quote for this Section is from an interview with a TAFE campus manager about the challenges of embedding e-learning innovations and sums up the reality of the working life for many VET practitioners. A significant barrier to engaging with anything new is time. Of the 229 responses to the question on barriers, time was mentioned 110 times. It is a clear message. Increasingly the work environment is becoming a crowded landscape with many agendas and priorities competing for that time. This reality was consistently recognised by managers and practitioners alike, as this manager of a regional campus observed:

I think that busyness is just incredible across the Institute at the moment where nobody has the time to do much other than what they perceive as core business.

To introduce something new is a time based process. It is a long haul commitment and individuals make choices and decisions about prioritising their time, including whether e-learning innovation is a worthwhile investment. For some it is, for some it is not and others need a tipping point to be convinced either way. While some invest their own time, others want it provided as part of their working day.

Many practitioners who contributed to this research and who were identified by their peers as innovators articulated their willingness to invest both the time and effort because e-learning innovations motivated them.

Definitely, play time. It takes time to come up with, and try out, new ideas. What many people don’t realise is that innovators make just as many, possibly more, mistakes as anyone else. We just try things out a “lot” more, we experiment, we tweak, we fix, and some things we simply discard. We may be guided by technical expertise or clarity of vision, but often we simply compact a “lot” of experimentation into a short amount of time to maintain our edge in the field. Other times, we need time to just think – to draw sketches of ideas, to muse, to bounce ideas off colleagues, peers and mentors, or to sort things out in our head.

It was the excitement of the chase that often sustained them.

A lot of the time we progress, fuelled by half a sandwich and a big idea and not much more.

They are propelled along if the conditions are right.

I thrive in my workplace because of supportive managers, who allow me to be relatively self-directed in my investigation and application
of new ideas. They see the value in letting me pursue the avenues I feel have the most potential for enhancing teaching and learning in my institute and elsewhere. I also have a very understanding work team who are themselves exceptionally talented, and don’t laugh at me too much when I get into a creative mood and come up with all sorts of new ideas for doing things better (well, “differently”); sometimes they even agree with some of them!! :) Some struggle if the conditions are not.

The greatest problems I face are from short-sighted dogmatic, bureaucratic technical or financial managers, who can only see the little impediments, and not the big possibilities. They talk about security and money, and not about teaching and learning; they understand a business case for systems that support accounting or managing of staff, but not for systems that can give our students freedom, opportunity, and new horizons. They often don’t understand education, but somehow manage an educational institution.

Most are aware of the reality of what enables an innovation.

It is fine to come up with an innovation but if the overall corporate view is to not support its implementation then the opportunity is lost and a division is created between those who may have tried it and those who did not get the chance.

There is recognition of the critical role of an internal champion.

I think we have all had to overcome some amazing barriers to innovation in order to take steps forward and we will continue to do so – I had a very supportive director who left and the acting person was the opposite; I never realised quite how many barriers a single person could throw up in such a short space of time!

The message is clearly articulated about the reality of the crowded landscape.

…all the time you’re competing with people who are trying to just stay afloat, and manage the everyday burdens that swamp them constantly. You’re competing with a whole range of other things that need to be done. Unless innovation is seen as a basic and primary objective for an organisation that needs to be relevant .. there’s no time for this ‘extra’ luxury.

Other contributors to this research, though not averse to effort or to innovative e-learning, had different criteria for making a decision. These criteria are reflected in the survey analysis which indicated that the extent to which e-learning courses use innovative practices is the result of a number of interrelated factors including the technology infrastructure, communication, shared decision making, policies, evaluation, organisational and personal support, personal innovativeness and organisational innovativeness.

This was also reflected in the responses to the open-ended survey questions. In other words, criteria for engagement include: a work culture that embraces and supports innovation and demonstrates that commitment by providing time to engage and learn; a robust technology infrastructure; technology tools that are appropriate for teaching and learning purposes, a senior champion to drive the process; a willingness to consult and share and supportive managers, peers and support professionals. This cluster of enablers that includes individual and organisational commitment provides a signal that e-learning is a desired and valued component of a teaching and learning repertoire.
These findings have mirrored what other researchers have found in other countries and in other education and training sectors and were highlighted in the literature review. While the reflection is not quite the same, it is not much different either. Embedding innovative practice in e-learning is perceived by contributors as a holistic process comprising a rich and complex mix of several interrelated factors, and a decision to engage is influenced by time and whether e-learning was perceived as a priority by the organisation.

**It's learning not technology**

**Key finding 2: There is a shift away from the ‘e’ and back to ‘learning’**

Enablers of innovative e-learning practice emphasised a move away from technology tools to a need to better understand e-learning pedagogy, client perspectives and for demonstration of good working models in local contexts. E-learning innovations tend to complement existing teaching practices indicating embedding efforts to date have been incremental. This signals a need to be clear about what we are trying to embed – new technologies (‘e’) or new pedagogies (‘learning’). They may not be one and the same.

The survey results revealed that for this sample, the most enabling component is Learning, and the biggest barrier is Infrastructure. This gets to the heart-of-the-matter of issues currently being debated both in the literature and more informally in the conversations across the practitioner networks within VET, namely

… the issue of the hype of technology and e-learning, ie the over expectation of what is possible with technology, rather than what actually is achievable and worthwhile with technology (Price et al., 2005, p. 65).

It is not surprising that the RIPPLES component of Learning is identified as the major enabler as this is VET’s core business. As a component of the RIPPLES model, Learning is described in the survey as ‘…the learning outcomes of a training or educational program. This also refers to a focus on the learner's overall experience within a training or educational program’. Responses to the open-ended questions about enablers of learning focused around an emphasis on pedagogy, client perspectives and demonstration of good working models for integrating technology into learning delivery. This highlights that pedagogy is replacing the focus on technology.

Barriers such as lack of understanding of e-learning pedagogy, the benefits of innovative practices and the difficulties of letting go of old practices suggest that the role of the ‘e’ is being reviewed. The following posting in a Framework wiki is a sample of the current perspectives being offered:

It is extremely important that when moving into a flexible delivery mode that involves e-learning that the basic principles of good teaching and learning are kept at the forefront. I know we often get caught up with what the technology can do but lose sight of what would be best for learners.

I know I am talking to the converted but I believe that until we remove the ‘e’ and just focus on learning, irrespective of whatever method we use, we will not have reached a stage where ‘e’ is a part of all learning.

(LC. wiki post, November, 2006)

Considering whether the ‘e’ is still required or is becoming a distractor signals a change in thinking by VET practitioners about the role and status of the ‘e’ in
learning. The question that may need to be asked is what new practice are we aiming to embed – new technologies (e), or new pedagogies (learning)? It is an important question as new technologies do not necessarily mean new practices.

Currently, technologies are often used where they support existing teaching practice, rather than creating experiences or activities that change the practice itself and create new ways of teaching and learning (Price et al., 2005, p. 65).

This stance is supported by Collis and Moonen’s (2001) ‘18 lessons’ derived from their experiences with ICT over a number of years. ‘Lesson 5 After the core, choose more’ emphasises that a core technology – the dominant teaching method – requires ‘pervasive contextual pressure’ to change and therefore technology usually complements that core. In other words, the dominant practice remains. If this is the case, then the nature of the innovation rather than the technology becomes the focal point. What innovation are we seeking? Is it improvement to existing practices (incremental innovation), is it the transformation of those practices (radical innovation), or is it both? Indications from this research suggest that the major efforts to date have been on improvements to existing practice – incremental innovation.

An executive manager commented that with all the attention on e-learning and innovation, it was important not to lose sight of the most critical embedding issue.

It’s not the new practice we want to embed, it’s the results we want to embed. We must not forget it has to serve the needs of the students to be effective.

In other words, while new practices are about processes, the outcome is what is important – results.

**It’s a readiness chasm**

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**Key finding 3: There is an organisational readiness chasm**

Innovative practitioners are outpacing the readiness of organisational systems and services to provide the infrastructure required to support those practices. While individuals have benefited from professional development opportunities, what has fallen short and is now becoming evident is the lack of equal and parallel attention to stakeholders, like educational and IT managers, whose ‘buy in’ is required to support implementation. The results of this research indicate that embedding an innovative practice requires the right innovation, innovative practitioners, innovative managers, innovation business systems, innovative workplaces and a commitment to a common vision for e-learning. It requires strategic alignment and interconnectedness between all the seven components identified in the RIPPLES model. If one component is out of alignment it creates barriers to progress suggesting interdependence between those components akin to the concept of a complex adaptive system. Consequently, the focus on embedding – the use of an innovation by the critical mass as a routine practice – may be ambitious and premature until the systems are more fully aligned.

While the role of ‘e’ is being challenged, what was challenging for many respondents were technology Infrastructure barriers. With the advent of Web 2.0 the e-learning landscape is changing and many tools now invite, facilitate and even demand a change in practice. But practitioners indicate significant barriers to the use of and access to these tools.

While 51.7% of respondents identified technology infrastructure as a barrier, 20.1% percent were neutral and 28.2% considered it an enabler. Enablers identified in the open-ended responses included a robust baseline infrastructure, state-of-the-art equipment in training rooms and classrooms, access to software and networks, and competent, interested and friendly technical support professionals. For example, one enabler was described as:
The kindness and enthusiasm of individual teachers and technicians. In TAFE, if you keep trying to get something new going, someone, somewhere will help you if you are persistent.

Barriers focused more on access issues, lack of consultation in decision making and a conservative approach by IT managers. Red tape and blocking access without consultation with teachers were significant barriers as reflected by this respondent:

   Security rules every decision.

This is a significant barrier as 98.7% of respondents believed an appropriate technology infrastructure was important to successful use on an e-learning innovation.

This appears to be a common issue in other countries and sectors, as other studies have highlighted technology infrastructure as a major barrier to the progress of e-learning innovations (Burkman 1987; Ely 1999; Surry and Ely 2001; Farquhar and Surry 2001; Grunwald 2002; Seufert and Euler 2003; Elgort 2005; White 2006).

As highlighted in the literature review in Section 4, several chasms have been identified that create barriers to the progress of e-learning implementation. Moore (1999) identified a chasm between early and mainstream adopters. Geoghegan (1994) identified a chasm between the support structures required for early and mainstream adopters which he labelled as ‘the other 85%’. Elgort (2005) identified a chasm between innovative technology and innovative teaching practice.

This research proposes another chasm – a readiness chasm.

Figure 13: The readiness chasm

It suggests that innovative practitioners are outpacing the readiness of organisational systems and services to provide the infrastructure required to support those practices. The investment by the Framework and other initiatives over several years has made a significant contribution to capability development of practitioners and this is widely recognised.

   Everything that I now use in practice I have learned in the past 4–5 years of LearnScope/Reframing the Future funding.

Participants in New Practices in Flexible Learning projects particularly highlight the personal benefits of this opportunity.

   It is an outstanding opportunity that no-one else gives you.
   You learn a lot from it and that’s what New Practices is all about.

However, while individuals have benefited from this investment, barriers around issues of infrastructure, resources and the other five components of the RIPPLES model, indicate a lack of parallel attention to organisational development. This has
been a barrier to the embedding process, a perspective reinforced by a senior organisational development manager with e-learning implementation responsibilities.

Names on the labels [of different models] don’t matter. The point is that a model assumes/asserts that you have to get all the areas more or less in alignment to get sustainable change and innovation. I’m convinced the unit of sustainable/embedded change is the training organisation, not the practitioner. At the moment it is too PD-and-technology driven, as if innovation is a variation of self-development of educators.

In other words, innovative e-learning initiatives have been managed more as a professional development activity rather than as an organisational development strategy. This is reflected in the interviews with VET managers and practitioners with responsibilities for e-learning innovation. While the baseline infrastructure was sound and catered well for established practices, the capacity and readiness to respond to innovative practices was where the challenge lay. For example, a senior manager commented that:

It [the technology infrastructure] has never been better I’d say. For us we take for granted the fantastic ICT service and infrastructure that we have got.

However, this same manager acknowledged that innovative practice challenged the system.

[Innovator] will no doubt tell you the experiences he has had in the last couple of years of fighting our bureaucracy and our approach to security in some of his online activities like the use of the chat room. He was shut out of that considerably in the early stages of the evolution into our ICT work. I think he still has got some limitations on that.

For the practitioner working with a new practice, this can be a frustrating and unrewarding experience.

You can’t get a voice board, you can’t hear it, or you can hear it, but you can’t record on it or you can’t see this because it is too big. Or you can’t get students to send you stuff because it is in a file that won’t get through the walls.

The impact on ‘the other 85%’ is obvious.

There are departments in our institute who need specialised software for their students to use and the IT department will not support it. They are not allowed to be installed and if someone brings it in and something happens, they will not do anything about it. … and [the teachers] think ‘Bugger it, it is too hard.’ You can only push people so far.

These scenarios are not unfamiliar. As one set of issues gets resolved another set surfaces. Some practitioners used New Practices in Flexible Learning projects as a leverage to force change.

… you told people that we either did it or gave the money back! I mean really, it was really that much cut and dried.

Many practitioners are caught in bureaucratic red tape resulting in.

Corporate lockdowns that make it a hassle for anyone to try anything new on their workplace computers.

There is little doubt that to unlock this ‘lockdown’ warrants greater clarity and communication between different stakeholders about the role and benefits of innovative e-learning and how it contributes to an organisation’s mandate.
While the new practices now testing the system have been fostered at a practitioner level, what has fallen short and is now evident, is the lack of equal and parallel attention to stakeholders whose ‘buy in’ is required to support the implementation of those practices. These include executive and operational managers and professional support services staff. As a senior manager responsible for such efforts noted:

As far as change is concerned, one excited manager is better than a gaggle of excited practitioners.

One executive manager expanded on the importance of explicitly targeting decision makers if real progress was to be made.

**Snapshot from the field**

*Executive manager*

*Teaching and learning portfolio*

There has been a high level of good solid professional development for practitioners in recent years, and this has been really effective in supporting their capacity to innovate. There is almost an equal need for decision makers to be professionally developed so that they have the knowledge and understanding to support and guide innovation within their organisations. This applies, I suppose, to reluctant bureaucrats such as myself who need to ensure that innovation is corporately and philosophically aligned, and also to the IT managers and similar within organisations, who are faced with the responsibility of ensuring the integrity and security of systems and data, and have not been well-supported in terms of exploring how innovation can sit comfortably with those demands. From that perspective maybe it's time for us to move away from focusing on more new practices, and instead to move our attention to the art of embedding – to stabilise before we diversify further.

The survey results revealed significant differences between executive managers and other respondents in 10 key areas. Nineteen executive managers responded to the survey, and had a significantly more positive view about the degree in which opinions were considered, decisions were shared, their organisation had an enabling culture, their policies were enabling, commitment to a high quality e-learning experience and learning outcomes, the quality and quantity of evaluations, and the quality of pedagogical support. However, the executive managers also believed the resources for e-learning were allocated less appropriately than did other respondents. This profile was put to an executive manager who was invited to offer a response. What follows it that response.

**Snapshot from the field**

*Executive manager*

*Teaching and learning portfolio*

You asked me how I responded to the significant differences between executive managers and other respondents in 10 key areas. My response was to cringe – to cringe because I know it's probably true. Executive managers, indeed leaders of any kind, run a real risk of becoming isolated from the real action in their organisations, or of seeing what's going on from their own sometimes rose-coloured perspectives, or of being fed what they want to hear – a filtered version of reality which won't place them in any discomfort. For me the data confirmed that I have to consciously work against this, particularly if my vision is for my organisation to become and remain an innovative, responsive, agile business. So to ensure I don't become isolated from the real world of innovation and practice I have to be out in that real world talking to people, interacting and seeking to understand. This will also ‘untint’ my rose-colored glasses, as will my sense of integrity and accountability for the people I lead and the outcomes we achieve. And I suppose I can avoid being fed filtered information by
building real relationships with my people based on mutual trust and respect. All stuff I should be doing as a leader anyway!

This frank response, while the voice of one executive manager reinforces what other stakeholders are saying – that in order to support the embedding of e-learning innovations senior decision makers may need a more realistic picture about the challenges faced by practitioners at the coalface.

The results of this research clearly indicate that embedding an innovative e-learning practice requires more than a focus on the practice and the practitioners. Practitioners themselves acknowledged that it took more than their enthusiasm and effort to make a difference and indicated that point of difference was often management support.

If it is not important to my manager, it is not important to my organisation, so it is not important to me.

Some veteran Framework participants had a hard-line view based on many years experience with the outcomes of professional development initiatives.

Most of the projects are initiated by the practitioner. If it all falls over, they are doing what they are doing anyway. ‘Right oh! That’s the end of the project, let’s get back to the classroom.’

As one observed:

You can’t fit new practices into an old environment.

But there was also recognition of another reality:

Managers – how they influence is how they get support themselves.

It has been a challenge to represent the diverse range of responses emerging from contributors to this research. Needless to say, it is a complex and multidimensional picture. Embedding innovative practice requires innovative practitioners, the right innovation, innovative managers, innovative business systems, innovative workplaces and a commitment to a common vision. It requires strategic alignment of all the components identified in the RIPPLES model.

Strategic alignment means deliberately arranging all parts of an enterprise, including its IT function and investments in its IT capability, to be consistent with the enterprise’s overall business purpose and priorities (mission, vision, measurable goals, strategies, etc.) as a whole (Interoperability Clearinghouse 2003).18

The GippsTAFE case study provides a good example of working towards this alignment.

18 <http://www.ichnet.org/glossary.htm>
Innovate and integrate: Embedding innovative practices

Case Study 1: An organisation – getting down to business
The GippsTAFE case study identifies the factors that are creating an alignment in their context. The core is a clear vision – to be the best provider of flexible learning in Australia. The CEO articulates and drives the vision, an innovation manager at senior level champions the vision, a dedicated Innovation and Organisational Development Team grounds the vision, senior managers understand and support the vision and practitioners implement the vision. The results are evident. While there is not a perfect alignment there is progress as the innovation manager and champion reflects:

Your case study tells me that they [the survey contributors] understand the value of flexible learning. It also tells me that they feel there is a good return on investment. And most of all I feel that the biggest fight is over. They understand the vision, they understand what we are doing and they want to do more. The cultural attitude has changed, even if the cultural practice still needs work. (Feedback on case study, used with permission)

Snapshot from the field
A senior manager with e-learning responsibilities who was a critical reader of this research, made the point that the success factors identified in the GippsTAFE case study could be transferred to embedding other innovations. While there was no doubt that vision was a central driver, that vision may not always include e-learning as a central focus. In other words, this is a good model for embedding any type of innovation that was considered a priority for a VET organisation.

A synthesis of the enablers identified by the RIPPLES survey (See Appendix 2), reinforces the need for alignment and interconnectedness between all the seven components. If one component is out of alignment, it creates barriers to progress suggesting an interdependence akin to the concept of a complex adaptive system as highlighted in Section 5. While organisational readiness to implement innovative practice is a mixed picture, ranging along the continuum from awareness, adoption, diffusion, implementation and embedding, the level of readiness favours the early phases in the adoption process. Consequently, the focus on embedding – the use of an innovation by the critical mass as a routine practice – may be ambitious and premature until the systems are more fully aligned.

It may be timely to reinforce another perspective as to why this alignment is worthwhile and indeed an imperative. That perspective is context.

It’s context – the knowledge society

Key Finding 4: Purposeful use of technology is a core competency in a knowledge society
Productive functioning in the knowledge society requires a mix of individual and social competence and purposeful use of technology (Collis and Moonen, 2005). Social software are ‘core tools’ for participating and contributing in a knowledge society and are integral to expressing, sharing, collaborating, communicating and co-constructing. E-learning innovations that support the new competencies for lifelong learning and living, learning and working in a knowledge society need to be supported as legitimate and credible innovations.

Context is the circumstances or the environment in which something is placed. What is the role of innovative e-learning in the current VET context? While response to local, state/territory and national priorities are emphasised as key drivers for
innovative e-learning, there is also a wider context to be considered – the knowledge era.

The knowledge era is gaining momentum as a focus of attention in VET. Recent research by Staron et al. (2006) on developing capability for working and learning in the knowledge era has started to influence how some TAFE institutes are re-conceptualising their organisational development strategies. For example, the proposed model of life-based learning which incorporates a strength-based approach to capability development is being used for innovation and organisational development planning at Sydney Institute, TAFE NSW.

Julie Collareda, Manager of Learning and Innovation explains this orientation.

**Snapshot from the field**

Sydney Institute, TAFE NSW
Julie Collareda, Manager, Learning and Innovation

During the last six months the Learning and Innovation team have been reviewing our professional development model. The review has highlighted that the current model is grounded in a deficit-based approach. This model does not meet the needs of the VET profession of the twenty-first century (Staron, et al., 2006; Kearns, 2005). This includes teachers, managers and non teaching staff.

After extensive inquiry we believe that the Life Based Learning and Ecology Model as proposed by Staron et al. (2006) is the way we need to move forward in implementing learning and innovation. Life-based learning expands the potential of work-based learning and expert-centred learning. It focuses on the source of learning, acknowledging the person’s entire learning contribution and recognises the different ways in which learning is significant to the individual. Ecologies focus on the living systems and their dynamic relationships. Focusing on these relationships allows the individual to be more mindful and conscious of relationships in the environment and their impact on how we work and learn.

To accomplish this change we have realigned our professional development program to a capability development framework which includes a focus on leadership (for staff who manage others), core capabilities that are necessary for all staff working in VET and VET teachers.

The program has a strength-based approach focusing on using new technologies such as conversation-based learning including Appreciative Inquiry, strategic and café style conversations, and open space technologies, and will incorporate e-tools like learning management system, wikis, blogs, and RSS feeds.

Collis and Moonen (2005) place the role of technology and learning explicitly into a knowledge era context because that context ‘… has a major impact in the ways in which we work and interact with each other’ (p. 9). They propose that productive functioning in the knowledge society requires a mix of individual and social competencies and the purposeful use of technology. Social functioning involves ‘co-constructing knowledge with others’ and includes working in multidisciplinary teams, contributing to both local and global communities, and using electronic networks effectively and efficiently. This requires taking responsibility for knowledge sharing, coaching, and helping others to learn from their own experience. Individual functioning involves ‘using technology as a workbench for managing your own learning and for building and sharing knowledge with others.’ (p. 10). This requires individuals to continuously update and change skills, handle the mobility of services, information and the workforce and taking responsibility for their own learning. These functions and characteristics are synthesised in Figure 14.
The message is clear.

Thus for the individual, productive functioning in the knowledge society requires more independence and, at the same time, new forms of interdependence. Network technology as well as new approaches to learning are essential for both (p. 10).

Collis and Moonen refer to the World Bank’s 2003 description of this new approach to learning ‘as moving away from learning as a product being delivered toward learning as the process of doing, participating as close to the real world as possible’ (p. 14). This requires individual competencies like handling complex streams of information, social competencies to function as part of increasingly diverse and distributed knowledge communities, and a commitment to lifelong learning because of the rapidly changing nature of skill requirements (p.15). Collis and Moonen emphasise that structured learning situations in a knowledge society require a pedagogical model that incorporates both personal and interpersonal competencies and propose a combination of two basic types of pedagogical model identified by Sfard (1998) – the acquisition model and the participation model.

In the acquisition model, learning is a matter of individual construction and acquisition of pre-specified knowledge and teachers are providers, facilitators and mediators. Knowledge is seen as residing within the individual mind and often includes solving well-structured problems. The participation model refers to learning as a process of participation in shared learning activities and social processes of knowledge construction where teachers and learners are co-collaborators in the learning process. Collis and Moonen (2005) offer the unique perspective of ‘The Contributing Student’ model, where learners use a combination of acquisition and participation to
actively contribute to learning experiences and building resources. They articulate why this is important.

The need for participation reflects current development in society. Internationalisation, the world becoming a global community, the fact that individuals can expect to work in different settings and as members of multifaceted teams, and the need for social skills and the capacity to function effectively as a member of a team; all are commonly described as characteristics of living and working that are rapidly gaining importance (p.16).

In this context, social software provides the tools for participation and contribution. From this perspective, far from being adjunct nice-to-have ‘cool tools’, they are instead ‘core tools’ which are integral to expressing, sharing, communicating and co-constructing for active citizens of the knowledge society. They are the tools for lifelong learning which is now essential to

...evolve with new work and personal situations, and with new forms of mobility that call for regular redefining of one’s skills and one’s ways of looking at the world (p.14).

This provides another perspective as to why e-learning innovations like social computing are important to VET delivery. They support the new competencies required for living, learning and working in the knowledge era. This is not lost on VET practitioners who repeatedly articulated the complex and social component of learning in this contemporary environment.

It comes back to the whole area of the organic nature of human interaction. We learn together and we learn from each other.

Developing these competencies requires support. Access to and use of social computing tools and a greater understanding of e-learning pedagogies were two key areas requiring support identified by contributors to this research. The alignment is remarkable, but perhaps not unexpected.

It’s targeted support to implement

<table>
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<th>Key finding 5: Targeted support is required to implement an innovative practice</th>
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<td>The focus on e-learning has moved from ‘why’ to ‘how’ and this orientation requires relevant stakeholders to actively provide support for implementation. This support includes training, technical support, pedagogical support and administrative leadership. The need for targeted support was a dominant message from the field.</td>
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Responses to the open-ended questions aligning with the Support component of the RIPPLES model was the most prolific, which is not surprising given that it was divided into the four types: training, technical, pedagogical and administrative leadership. Support was identified by 87.5% of respondents as either extremely or very important to the use of an innovative e-learning practice 34.9% identified Support as an enabler, 47.4% as a barrier and 17.8% returned a neutral response. The biggest input to this research from contributors was for better support for implementation.

Support enablers for training included time, mentoring, practical hands-on experience, access to networking opportunities, and support for training that was personalised, localised and just-in-time. Technical support enablers related to competent, service oriented IT staff, access to up-to-date hardware and software, and reliable robust systems. For pedagogy, personal qualities and attributes including motivation and willingness to engage and take responsibility was well
Innovate and integrate: Embedding innovative practices

represented. Other factors included modelling by peers and mentors, sharing and collaboration and experimenting with different learning models that incorporated technology. **Administrative leadership** enablers included champions at senior level and actively supportive and enthusiastic line managers.

These types of support enablers align well with Geoghegan’s (1995) early mainstream adopter profile. His observation was that the early majority educators are more concerned about teaching or learning solutions, demonstrated benefits and proven application of technology. They require shared decision making, peer support in a local context, a focus on teaching and learning, and on highly adoptable uses of technology.

As one senior manager with an e-learning portfolio observed, the focus has shifted from justifying *why* e-learning is beneficial, to *how* is can be enabled to progress.

> The questions are not about ‘why’ anymore, they are about ‘how’ and there is frustration when they [teachers] can’t go forward.

This reinforces the primary messages that there is a readiness to move forward, but there must be more support to do so, and relevant stakeholders must actively participate in the process.

> You have got to go sideways as well as up and down. By sideways I mean involve all the people who can influence the outcomes.

In other words, embedding innovation is a team sport and a movement forward requires diversity.

**It’s diversity of styles and strategies**

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<th>Key finding 6: Embedding innovative practice requires diverse strategies and styles</th>
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<td>Diverse strategies are essential for a comprehensive approach to embedding an innovation. While innovative practices may differ in the degree of novelty and change, they are all important to the creating, implementing and embedding process. Catering for this diversity must be more explicit in planning and implementation processes.</td>
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*Wikipedia* (2006) defines diversity as ‘the presence of a wide range of variation in the qualities or attributes under discussion’\(^{19}\). What is under discussion here is the concept of ‘innovativeness’ in its various strategies and degrees of novelty.

In the RIPPLES survey, innovativeness was defined as ‘being open to change and willing to adopt innovative tools and practices.’ Given this definition, 86% of respondents rated themselves much more or somewhat more innovative than the average person. However, when asked to indicate their level of innovative practice, 44.7% indicated that they were using very high or high innovative practices and only 25.7% believed their organisation as a whole was using that same level of practice.

Thus, there are clear differences between perceived personal innovativeness, the perceived level of personal innovative practice, and the perceived level of innovative practice in their organisations. One could summarise this in three statements that typify this finding: ‘I am innovative. I am more innovative than my practice. My practice is more innovative than the innovative practice in my organisation as a whole.’

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\(^{19}\) [http://en.wikipedia.org/wiki/Diversity]
Innovate and integrate: Embedding innovative practices

This is a challenge to unpack, as it represents the respondent’s own perception of their and others’ innovativeness, rather than an independent measure. However, the responses to the open-ended questions aligns with the position put forward by Cros (2005) that:

Innovation is not about bringing something new to the world, but something new in a particular context, for a particular use. It carries an operational dimension. In other words, innovation is something highly contextualised (Cros 2005).

This contextual nature of innovativeness is reflected in the following statements from various respondents, which demonstrate various strategies of innovation:

Visioning the purpose:

To enhance innovative practices and to see potentials.

Envisioning the possibilities for others (scenarios, case studies, working examples, hypotheticals).

Exploring new territory:

Dream up an award for the most innovative ideas in e-learning for members of the teaching team.

Provide teachers with time release to work on the investigation and adoption of innovative practices in e-learning.

Experimenting with application:

Time to investigate, become familiar with the innovative practices available and try them out.

Having the chance to practice and experiment, sitting with someone and showing them how to apply a new innovative practice to their unique situation.

Modifying to fit a local context:

Give people time to learn and implement small innovative practices into their teaching.

Develop an e-learning culture where learners are supported in using innovative ways … a little at first moving to more complex tasks.

These four sets of respondent comments match well with the research by Miller (1999) and represent a diversity of strategies that he believes are essential in developing a comprehensive approach to innovation that can be adopted and embedded.

Miller proposes that all people have the capacity to be innovative; they just have different mixes in their preferences, approaches and strategies. He observed these differences when facilitating ‘innovation searches’ as senior research consultant for managing innovation and change at SRI International (formerly Stanford Research Institute) in the mid 1980s, and when working with clients in his own consultancy since 1987. Expanding on the work of Kirton (1978, 1984) as well as a conceptual correlation to the Myers Briggs Type Indicator (MBTI) (Myers, 1990), and based on subsequent research on these differences over a number of years, he developed a model called Innovation Styles® which identified four distinct approaches to innovation:

- **Exploring**: discovering new perspectives, assumptions, and unchartered territory.
- **Visioning**: developing a clear sense of long-term purpose, with bold, ideal solutions to achieve it.
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- **Experimenting**: combining and testing existing elements in novel combinations.
- **Modifying**: building on and optimising past and present achievements.

The styles differ in how they combine the answers to two fundamental questions: ‘What approach do you take to innovation?’ and ‘What stimulates your innovative thinking?’ The results are shown in the Figure 15.

<table>
<thead>
<tr>
<th>How do you approach the innovation process?</th>
<th>What stimulates your innovative thinking?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modifying and Visioning styles are more focused, well-planned, and results-oriented</td>
<td>Visioning and Exploring styles primarily use intuition, insights, and images</td>
</tr>
<tr>
<td><strong>VISIONING</strong></td>
<td><strong>EXPLORING</strong></td>
</tr>
<tr>
<td>People who have Visioning profiles like to imagine an ideal future and let long-term goals be their guide – they envision and idealize</td>
<td>People who have Exploring profiles like to question assumptions and discover novel possibilities – they challenge and discover</td>
</tr>
<tr>
<td><strong>MODIFYING</strong></td>
<td><strong>EXPERIMENTING</strong></td>
</tr>
<tr>
<td>People who have Modifying profiles like to build on and improve what has been done – they refine and optimize</td>
<td>Those people who have Experimenting profiles like to test out various combinations of new ideas and learn from the results – they combine and test</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Figure 15: Overview of Innovation Styles® (Miller, 1999)**

All four styles represent legitimate and valuable kinds of innovations – they may differ in their degree of novelty and change yet they are still ‘innovations’ none-the-less. They are all important in creating, implementing and embedding an innovation, and different styles may be more prominent at different phases in this process. For example, Table 7 shows the relation between the four Innovation Style® strategies and various degrees of novelty/change.
Table 7: **Relationship among levels of innovation, style/strategies, features, readiness, and adoption**

<table>
<thead>
<tr>
<th>Degree of novelty/change</th>
<th>Most incremental (Evolutionary; tried-and-tested)</th>
<th>Most breakthrough (Revolutionary; new and unique)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovation Style/Strategy</td>
<td>Modifying</td>
<td>Experimenting</td>
</tr>
<tr>
<td>Features of innovation/innovativeness</td>
<td>Trusted enhancements: a ‘new and improved’ version of what the educator knows and trusts. Immediately useful and fits with what is already known and done</td>
<td>Practical and adaptable: can be utilised in many situations. Multiple features/benefits to try out for viability under different circumstances</td>
</tr>
<tr>
<td>Level of adopter change required</td>
<td>Small change</td>
<td>Small/medium change</td>
</tr>
<tr>
<td>Demand on other system changes</td>
<td>Little demand on other systems</td>
<td>Some demand on other systems</td>
</tr>
<tr>
<td>Change to practice</td>
<td>Enhances/optimises existing practice</td>
<td>Complements existing practice</td>
</tr>
<tr>
<td>Example</td>
<td>ARED rapid development tools</td>
<td>Digital storytelling</td>
</tr>
</tbody>
</table>

In addition, these strategies point towards a critical issue that impacts on whether innovative e-learning products will be readily adopted by educators and their institutions: ‘Does the degree of innovativeness of the product match the degree of innovativeness sought by the educators and the institution?’ The potential for everything from ideal matches to very poor matches is illustrated in Table 8.

Table 8: **How the level of innovation (novelty/change) of a project matches with the level needed by the potential individual adopter**

<table>
<thead>
<tr>
<th>Degrees of novelty/change</th>
<th>Incremental</th>
<th>Breakthrough</th>
<th>ADOPTERS: ‘We want projects that are…’</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Modifying</td>
<td>Experimenting</td>
<td>Visioning</td>
</tr>
<tr>
<td>Incremental</td>
<td>ideal</td>
<td>ok</td>
<td>Fair</td>
</tr>
<tr>
<td>Practical, adaptable</td>
<td>ok</td>
<td>ideal</td>
<td>ok</td>
</tr>
<tr>
<td>Distinct, long-term value</td>
<td>Fair</td>
<td>ok</td>
<td>ideal</td>
</tr>
<tr>
<td>Radically new, novel</td>
<td>Poor</td>
<td>Fair</td>
<td>ok</td>
</tr>
</tbody>
</table>
According to Miller, these four Innovation Style® strategies are reflective of the personal preferences and tendencies of individuals and teams who are developing and adopting the e-learning innovations. The Innovation Styles® model proposes that:

- Each person has the capacity to be innovative, so the main issue is not ‘Am I innovative?’ but ‘How am I innovative?’
- Individuals have equal potential for being innovative, yet take different approaches to innovative thinking.
- Individuals use a mixture of the four different approaches (styles).
- Each style represents a different strategy for innovating – a different way of thinking – not a type of person.

Starting in 1988, Miller first developed a well validated, self-assessment tool that measures a person’s inclination for using each style in a work context. The survey has evolved into a 20-item online tool with companion application resources. The resulting profile shows the balance/mixture of an individual’s preferences among all four styles. These materials have all been used in this research to highlight the Innovation Styles® profiles of three different case study groups:

1. **A group of peer-nominated innovators:**
   The 17 peer-nominated innovators who used the research wiki to collaboratively develop a response to supporting innovators in VET.

2. **An innovation team:**
   The GippsTAFE Innovation and Organisational Development Team.

3. **An innovator:**
   The case study on Michael Coghlan and his journey as an innovator.

The profiles of each group reveal some interesting findings that have implications for supporting practitioners in both developing and embedding innovative e-learning practices.

The profiles highlight that the perception of ‘innovators’ may be skewed.

**It’s how we perceive innovators**

**Key finding 7: There is a skewed perception of ‘innovators’**

Peer-nominated innovators tended to have one particular innovation style – *Exploring*. This focuses on only one of four identified approaches to innovation. Consequently, innovators with different approaches may not be recognised either by themselves or their peers as being ‘innovative’. There may be great benefit in profiling the suite of different approaches required for creating, adopting, diffusing and embedding e-learning innovations.

A question posed to contributors to this research was ‘Who do you regard as an e-learning innovator in VET?’ Several names were consistently mentioned. As a result, 17 people were contacted and invited to participate in contributing to a ‘self-organised’ response to the following questions posted on the research wiki:

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20 [http://designplanet.wikispaces.com]
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- How would you describe an innovator?
- What enables an innovator to thrive in a work environment?
- What barriers do innovators face in a work environment?
- What role should an innovator have in implementing an innovation at the coalface? Should they have a role?

A very rich resource resulted and provided insight into the world of these peer-nominated innovators. A compilation of the results is included in Appendix 3. Of equal interest was the Innovation Styles group profile of the 15 people who completed the self-assessment. It revealed that this peer-nominated group had an Exploring profile. (See Appendix 4).

![Figure 16: Innovation Styles Profile of Peer-Nominated Innovators (Miller and Rostain, 2006)]

This is how Miller describes the Exploring profile:

In essence groups with an Exploring profile like to discover novel possibilities without the need for a long-term goal or specific process; they challenge and discover. They are adventurous and enthusiastic in the face of uncertainty – challenging assumptions to open up potential for dramatic breakthroughs. In finding and implementing innovative solutions an exploring group will quite naturally generate ideas that would be expansive, adventurous and rule-changing and seek novel, breakthrough solutions. However, they may also get off track, flying off in new directions and ‘leap before they look’.21

The responses by this group in the research wiki confirm their Exploring orientation:

> Just as the parachute was conceived before the invention of powered flight, I think innovators often make creative leaps before, or even without, the necessity to do so. They may or may not be the people to then fill in the gaps, or actualise their visions or concepts, but they will invariably inspire and motivate others around them to think about it … .

There was also self awareness of these preferences:

> Innovators are not necessarily good implementers. They get bored with the detail. I think it would be a good idea to make sure they are paired up with someone (or a team) who understands what the innovation is about, but are more grounded in the realities of what it

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takes to make it happen at the coalface. You don't want to suck the inspiration out of them.

There was an awareness that embedding innovation is a collaborative effort:

I prefer to work with others in implementing ideas as there is rarely an innovation that involves only the skills I bring to the table! I believe that my strengths lie in seeing what might be possible, enthusing others with those ideas and drawing together the skills and characters to make things work – sort of a glorified train driver!

There was recognition that innovation is a shared achievement:

I also believe absolutely in reflected glory. If all those around me feel that they have achieved something special and have ownership of what we are doing then I am the happiest person of all. If anyone exceeds their own expectations then we have really achieved something!

The key insight emerging from the group profiles, is that people who were perceived as ‘innovators’ by their peers, tended to have an Exploring profile. Thus, there was a limited perception of an ‘innovator’ – focusing on only one of the four legitimate approaches to being innovative: discovering new territory (Exploring). Only one member of this group was a Modifying innovator, and some had mixed profiles like Visioning/Exploring, yet Modifying (improving on what has been done), Experimenting (combining elements in novel ways), and Visioning (envisioning bold, long-term solutions) are equal components of a comprehensive approach to innovation.

If this group of practitioners is predominantly perceived to be innovative by their peers and their profile is Exploring, there are several issues to consider for supporting the embedding of an e-learning innovation:

- The perception that innovation is about exploring new territories – this is a limiting perception.
- The Exploring profile may not be the most effective for embedding an innovation, yet those with this style are associated with being innovative.
- Raising the profile of other approaches to innovation will be important for embedding as a suite of approaches is important to move an innovation forward.
- Innovators with different approaches and strategies may not be recognised as innovators, either by themselves or by their peers.
- There may be benefit in a greater emphasis on the diverse skills required for successfully embedding an innovation.
- There may be different types of support required to meet the learning needs of these diverse approaches.

**Case Study snapshot**

Case Study 1 on GippsTAFE’s Innovation and Organisational Development Team, provides a detailed analysis of how attention to Innovation Styles® and the different strategies that support innovation to move forward can be a practical tool for guiding individuals and teams to utilise their unique talents and skills more effectively to support the innovation process.
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Case Study 2 maps the journey of Michael Coghlan, a pioneer of voice technology. It highlights the unique contributions of an innovative practitioner and the factors that have contributed to this success.

Looking at innovation and innovators through an Innovation Styles® lens has highlighted several issues that align with the findings of other researchers:

- Geoghegan (1995) – the need for qualitatively different approaches for groups who may be at different stages in an innovation process and prefer different innovation strategies.
- Forman (2002) – the need to pay attention to both innovative practices and established practices as equal but different contributors to the overall fitness of an organisation.
- Nutley et al. (2002) – the innovation strategies for creating, implementing and embedding an innovation may differ so choice of innovator for different phases is important for credibility and communication.
- White (2006) – proven application in one context may not be effective for transfer into another.
- Staron et al. (2006) – the need to focus on developing capability by working with strengths, taking a holistic perspective, understanding the dynamics of a learning ecology and personalising the professional learning process.
- Adams (2003) – an innovation has different attributes and levels of complexity. Different innovations may appeal to different people and therefore require different strategies and support systems.
- Carlisle and McMillan (2006) – organisations must pay attention to the whole as it may be greater than rather than equal to, the sum of the parts. Organisations work more like complex adaptive systems than well-oiled machines.
- Surry and Ely (2001) – embedding innovative e-learning is an individual and organisational responsibility which requires alignment between several interrelated components.

Perhaps the strongest message emerging from the Innovation Styles® analysis is that innovation can manifest in different ways. It can be through quantum leaps or incremental improvements. All approaches are valid contributions to embedding innovative practice in e-learning and must be acknowledged and proactively introduced across the entire spectrum of the adoption, diffusion, implementation and embedding process. This lends itself to a portfolio approach where a range of innovations are invested in to meet diverse needs, states of readiness and approaches.

The value of this diversity is well understood by a Modifying innovator who recognises that working with a colleague who has a very different approach to e-learning innovation increases versatility.

Most of my work results from being pushed along by [colleague], so I would have been interested to see an innovation profile done on her – I bet she would have come out either as a visionary or experimenting. I know the reason why we work so well together is that we both see different views which when combined work well. She tends to see the larger picture and is more willing to take large risks, whereas I focus on the practicalities. We work together like Yin and Yang.
It’s a strength-based orientation

Key finding 8: A strength-based orientation fosters innovation and builds capability

Barriers are deficits, enablers are strengths and embedding anything is fostered by a strength-based orientation. The enablers identified for fostering innovative e-learning practice align with the organisational enablers identified in recent research on a strength-based orientation to developing capability for working and learning in the knowledge era. This suggests that embedding innovative e-learning practice is really about building individual and organisational capability.

Recent research on capability development in VET referred to ‘foundation values and truths’ such as generosity, sensitivity, authenticity, integrity, trust and goodwill as the new constants for living and working in the knowledge era, and the bedrock on which developing capability is built (Staron et al. 2006). It is an explicit return to a focus on human technology and the importance of relationships, values, wise thinking and actions which culminate in a strength-based orientation to change.

Informed by positive psychology which focuses on human strength, wellbeing and healthy institutions, a strength-based orientation provides an alternative to the deficit based model that is characteristic of the industrial era (Seligman and Steen 2005). The recent research on strength-based approaches to capability development by Staron et al., shares many synergies with the findings of this research. While one focuses on embedding e-learning innovations and the other has a broader focus on capability development, there is a meeting point. Both emphasise that a rich learning environment and organisational enablers are critical to the change process.

In fact, the organisational enablers identified by Staron et al. as essential for developing capability mirror those arising from a synthesis of the enablers for fostering innovative e-learning in this research and documented in Appendix 2. If ‘capability development’ was replaced with ‘embedding e-learning innovation’ the alignment is remarkable. While the configurations may be different and the detail contextualised, both emphasise:

• valuing connections and networks
• developing a culture that supports job reshaping for personal growth
• creating space for exchanging and sharing ideas
• supporting learners as designers of their own development
• balancing control and creativity
• modelling wise leadership
• capitalising on the benefits of an intergenerational workforce
• focusing on futures in education.

This suggests that the enablers for embedding innovative e-learning and developing capability for working and learning in the knowledge era are philosophically, strategically and operationally aligned. In fact, the new competencies for living and working in the knowledge society identified by Collis and Moonen (2005) – individual and social competencies and purposeful use of technology – suggests they are one and the same.

Put simply, barriers are deficits, enablers are strengths and embedding anything is fostered by a strength-based orientation. It is a common sense observation that is not lost on contributors to this research who identified barriers as being associated with
deficits like ‘lack of’ (time, resources, funding), ‘fear’ (of change, failure, technology) and ‘lockdowns’ (IT access and consultation). Enablers however, were associated with strengths like ‘vision’, ‘commitment’, ‘modelling’, ‘support’, ‘sharing’ and ‘communication.’

The core message is that enabling e-learning innovations to be embedded is fostered by a strength-based orientation:

- The strength of practitioners to be open to change, willing to take risks, to collaborate and develop their practice to match the needs of contemporary environments and changing student demographics.
- The strength of managers to prioritise their efforts, make innovation one of those priorities and to actively support its growth and development.
- The strength of leaders to legitimise innovation by building a vision, supporting its implementation and fostering a culture that enables innovation and innovators to thrive.
- The strength of funding bodies and their contractors to create the right opportunities and processes that align with needs of clients and a readiness to adopt and embed.

**Summary**

The fundamental focus of this research project was on embedding innovative e-learning practice within a VET context. To embed means to ‘set in place’ and to become an integral part of something. Embedding also has a nested connotation – one component is embedded within another. This reinforces the position taken in this research that embedding innovation requires dynamic interconnections and alignment between different components and stakeholders.

To successfully embed an innovative practice may not only require the identification of a set of good practices to model or the production of implementation models and checklists of enablers. It is clear from the research findings that the VET community understands and can articulate that it takes more than this.

Embedding also requires a mindset change and an acknowledgement of the lived experience of learning and working in the crowded landscape that is VET. This research concludes that the real innovation is to embed a new way of thinking about innovation, learning, change, context and developing capability that promotes strength-based orientation. It is about the will, courage, determination and drive to take action by utilising the conceptual and practical enablers identified in this research to jump the readiness chasm so that innovators, early adopters and ‘the other 85%’ are enabled to not only take on e-learning innovations – but also to see them through.

This leap takes planning, preparation, determination and collaboration because:

>You can't cross a chasm in two small jumps.’

*David Lloyd George*
Section 10: Four-phase strategy for embedding e-learning innovations

This strategy has been developed in collaboration with William C Miller and incorporates some of his original work.

Key features of the strategy

In this strategy, representatives from different stakeholder groups work together to develop and coordinate processes aimed to maximise the development, implementation and embedding of e-learning innovations.

Key features:

It is a strategy not a model

As a strategy it provides a general framework rather than a detailed prescription. This acknowledges that there is no one way or no one model to embed an e-learning innovation. Adapting the strategy to local needs is encouraged and expected as its purpose is to alert stakeholders to the issues that need to be considered if embedding is to be successful. While phases 1–2 (proposals and development) are well known and well documented processes, phases 3–4 which focus on early and mainstream adoption are less well defined and will require stakeholder groups to provide the details as experience develops. It is hoped that the strategy provides enough substance to guide local planning.

It incorporates key research findings

- It addresses the readiness chasm by aligning what is being proposed with what the adopter groups require and are ready to adopt.
- It recognises the interconnectedness between different stakeholder groups by including them in all phases of the strategy.
- It recognises the key role of champions in driving an innovation forward.
- It gives equal attention to the innovation, the adopters and the organisation.
- Key questions are framed around issues emerging from the research.
- It explicitly plans for different levels of readiness to adopt.
- It can be customised to different contexts.
- It utilises the four innovation styles to ensure different perspectives are considered.
- It utilises the resources generated by VET contributors to this project.
- It utilises useful tools identified in the research.

There are four phases

1. Needs-assessment/selection/funding
2. Development of the innovative practices
3. Early adoption

Each phase focuses on current needs and prepares for the next phase of implementation.
There are three foundation questions

1. Is there a portfolio of both incremental and breakthrough innovations – for short-term and long-term needs?
2. How well does this innovation match the short-term and/or long term needs of the adopter groups?
3. To what degree is the organisation ready to implement the innovation?

Process inclusive of all stakeholder groups

Five stakeholder groups have been identified: funders/project managers; developers; early adopter champions; mainstream adopters and IT managers. Each group has responsibilities and tasks throughout the four phases, though the emphasis will change. IT managers have been targeted as a stakeholder group because of their explicit role in enabling implementation.

It is managed horizontally

The project managers coordinate activities across the five stakeholder groups throughout the four phases.

It is based on a portfolio approach

A portfolio approach ensures the best mix of incremental and radical innovations to meet present needs and to explore future possibilities. Short-term improvements build momentum for success and longer term investments lay the foundation for the future. A percentage of modifying, experimenting, visioning and exploring initiatives is required to ensure a diverse portfolio that meets a range of needs.

It is time based

A three-year process is suggested based on corporate models and input from VET contributors.

There are tasks and key questions for every phase

The key questions help focus on tasks and processes and ensure a balanced perspective.

Four innovation strategies provide a structure

Adapted from the work of William Miller and used with permission.

Two analysis templates have been developed for use in all four phases. The templates are designed to capture developer and adopter perspectives on key issues to ensure the best possible outcomes.

Protocols for teamwork are also considered.

Templates for analysis

Use these two templates at each of the four phases to assist with analysis.

- **Template 1: Alignment between proposed innovation and adopter needs and readiness.** This checks the match between what is being proposed and what the adopter group requires and is ready to adopt.

- **Template 2: Innovations portfolio.** This checks there is a sufficient range of innovation strategies being employed in the portfolio of projects to meet the needs for both short-term incremental innovations and long-term breakthrough innovations.
## Template 1: Alignment between proposed innovation and adopter needs and readiness

This template assists developers, adopters and organisations to align what is being proposed with what is required and can be adopted. It can be used as a pre-assessment tool for an innovation proposal and for developing implementation strategies for the four phases in this embedding process.

<table>
<thead>
<tr>
<th>Kind of Innovation (degree of novelty/change)</th>
<th>Most incremental (Evolutionary; tried-and-tested)</th>
<th>Most radical (Revolutionary; new and unique)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovation Style/Strategy</td>
<td>Modifying</td>
<td>Experimenting</td>
</tr>
<tr>
<td>THE INNOVATION</td>
<td>Trusted enhancements: a ‘new and improved’ version of what the educator knows and trusts. Immediately useful and fits with what is already known and done</td>
<td>Practical and adaptable: can be utilised in many situations. Multiple features/benefits to try out for viability under different circumstances</td>
</tr>
<tr>
<td>Incremental to radical</td>
<td>Developer: What innovation strategy is proposed?</td>
<td>Adopter: What innovative strategy do you need?</td>
</tr>
<tr>
<td>THE ADOPTER</td>
<td>Enhancing/optimising existing practice</td>
<td>Complementing and combining with existing practice</td>
</tr>
<tr>
<td>The change to practice</td>
<td>Developer: What change in practice will be needed?</td>
<td>Adopter: What change to practice are you prepared to make?</td>
</tr>
<tr>
<td>THE ORGANISATION</td>
<td>Little demand on systems to change</td>
<td>Some demand on systems to change</td>
</tr>
<tr>
<td>Readiness to adopt</td>
<td>Developer: What demand does it place on systems to change?</td>
<td>Adopter: What demand on systems to change is your organisation ready to make?</td>
</tr>
<tr>
<td>Examples of New Practices in Flexible Learning projects (a best guess)</td>
<td>ARED rapid development tools</td>
<td>Digital storytelling Podcasts</td>
</tr>
</tbody>
</table>
Template 2: Innovations portfolio

An innovations portfolio tests the fit between what is being proposed and what is required by the adopting market. Some will require trusted enhancements and others will be looking for radical change. The percentage of funds allocated to the different degrees of innovation will align the portfolio to market needs and readiness to adopt.

It can also help match the right champion to the type of innovation being developed: an Exploring champion for a radical innovation and a Modifying champion for an incremental innovation. These alignments help ensure organisational systems and structures are put in place to enhance the potential for successful embedding.

<table>
<thead>
<tr>
<th>Kind of innovation (degrees of novelty/change)</th>
<th>POTENTIAL ADOPTER</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>THE INNOVATION “This innovation is intended to be…”</td>
<td>‘I need and am ready to adopt innovations that are …’</td>
<td>Incremental</td>
<td>Practical, adaptable</td>
<td>Unique long term value</td>
</tr>
<tr>
<td>Incremental</td>
<td>Trusted enhancement</td>
<td>Ideal</td>
<td>Ok</td>
<td>Fair</td>
</tr>
<tr>
<td>Radical</td>
<td>Practical, adaptable</td>
<td>Ok</td>
<td>Ideal</td>
<td>ok</td>
</tr>
<tr>
<td>Radically new, novel</td>
<td>Unique long-term value</td>
<td>Fair</td>
<td>Ok</td>
<td>Ideal</td>
</tr>
<tr>
<td></td>
<td>Radically new, novel</td>
<td>Poor</td>
<td>Fair</td>
<td>Ok</td>
</tr>
</tbody>
</table>

Key: IDEAL = a good match between development proposal and adopter needs and readiness
OK = secondary markets for the innovation
FAIR and POOR = not a good investment prospect for adoption

Different configurations of the template can be used at different phases – for example, early adopter, mainstream adopter, organisational readiness, marketing needs, support.

Protocols for working together

As a diverse range of stakeholders will be co-coordinating the development, implementation and embedding process, it is important to capitalise on strengths and work with differences. The following set of questions can help to clarify purpose, identify a set of values and establish working protocols at each phase of the process.

<table>
<thead>
<tr>
<th></th>
<th>Modifying</th>
<th>Experimenting</th>
<th>Visioning</th>
<th>Exploring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clarify</td>
<td>Why are we investing in e-learning innovation?</td>
<td>To refine and optimise what has been done before</td>
<td>To combine different elements to create many options</td>
<td>To define a clear vision to drive the creative energy</td>
</tr>
<tr>
<td>Values</td>
<td>What do we value?</td>
<td>What values are most important to guide us?</td>
<td>What personal values do we need to incorporate?</td>
<td>What are the ultimate values we stand for?</td>
</tr>
<tr>
<td>Working together</td>
<td>How can we best work together?</td>
<td>What methods can we adopt from past successes?</td>
<td>What best work practices can we combine?</td>
<td>What would be the ideal way to work together?</td>
</tr>
</tbody>
</table>
Innovate and integrate: Embedding innovative practices

Four-Phase Strategy for Embedding e-Learning Innovations

Phase 1
Needs assessment
Selection
Funding
4-6 months

Phase 2
Development of the innovative practices
10-12 months

Phase 3
Early adoption
8-10 months

Phase 4
Mainstream adoption
8-10 months

Identify tasks for stakeholders

Template 1
Analysis

Template 2
Innovations portfolio

Key Question
Useful resources
Processes

Key Question
Useful resources

Key Question
Useful resources

Key Question
Useful resources

Australian Flexible Learning Framework 108
**Phase 1: Assess e-learning needs and readiness of potential future adopters; select and fund projects; set-up project management**

**Suggested timeline: 4–6 months**

Phase 1 needs-assessment, selection, funding, and set-up includes:

1.1 – Key tasks for stakeholders
1.2 – Alignment between proposed innovation and early adopter needs and readiness
1.3 – Innovations portfolio – champion early adopters
1.4 – Key questions
1.5 – Useful resources.

### 1.1 Key tasks for stakeholders

**Summary of key tasks:** Researching trends, identifying priorities, proposing projects, making selections, identifying early adopter champions, overseeing implementation readiness, preparing IT systems for interface and implementation, and developing/implementing an adoption marketing plan.

<table>
<thead>
<tr>
<th>Funders/project managers</th>
<th>New Practices in Flexible Learning developers (innovators)</th>
<th>Early adopters (champions and their institutions)</th>
<th>Mainstream adopters (educators/institutions)</th>
<th>IT managers (in potential adopter institutions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research trends for e-learning to identify priorities</td>
<td>Develop proposals based on response to perceived needs for an e-learning innovation</td>
<td>Assess population for: (a) perceived needs (b) early/late adoption potential</td>
<td>Assess population for: (a) perceived needs (b) early/late adoption potential (c) 'implementation readiness'</td>
<td>Determine: (a) interface protocols for e-learning projects that might be IT dependent (protocols such as risk-tolerance for open-systems) (b) IT readiness for possible future e-learning projects/processes</td>
</tr>
<tr>
<td>Assess perceived needs for innovative e-learning in the VET sector</td>
<td>Identify and sign up an 'implementation champion' from early adopter group</td>
<td>Identify potential 'implementation champions' from mainstream adopter group who will help approve, guide, and eventually implement a specific e-learning initiative</td>
<td>Provide input to potential projects re: IT issues faced</td>
<td></td>
</tr>
<tr>
<td>Solicit proposals based on those needs</td>
<td>Assess potential for 'implementation readiness' of the champion’s organisation</td>
<td>Work on 'implementation readiness’ issues.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Create interaction between VET adopters and project funders/managers to ‘tune’ the proposals to match needs</td>
<td>Develop plan with champion to enhance 'implementation readiness’ to adopt the innovation under development</td>
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</tr>
<tr>
<td>Identify ‘implementation champions’ to help review/approve proposals and to become part of project supervision team</td>
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</tr>
<tr>
<td>Fund proposals with identified development/diffusion teams. Includes development and implementation support</td>
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<td></td>
</tr>
<tr>
<td>Oversee analysis of ‘implementation readiness’ of potential adopters</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Develop marketing strategies to raise awareness of e-learning innovations</td>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>
1.2 Alignment between proposed innovation and adopter needs and readiness

Use the analysis template (Template 1) to check alignment between proposed innovation and early adopter needs and organisational readiness to adopt. Develop appropriate interventions based on identified needs.

1.3 Innovations portfolio – champion early adopters

Use the innovations portfolio template (Template 2) to help match the right ‘early adopter champion’ to the type of innovation being developed, – eg an Exploring champion for a radical innovation. This alignment helps ensure a willingness to beta-test the developing innovation and put in place the organisational systems and structure to enhance the potential for successful embedding.

1.4 Key questions

These key questions will guide the development process, act as conversation starters, ensure a range of innovation strategies are considered and inform an early adoption innovation strategy. Mix and match to suit your context.

<table>
<thead>
<tr>
<th>Innovation Style/Strategy:</th>
<th>Modifying</th>
<th>Experimenting</th>
<th>Visioning</th>
<th>Exploring</th>
</tr>
</thead>
</table>

Assessing learner needs for the innovative practice

| Addressing learner needs | How will this innovation build on what our learners are doing already? | What different methods could be integrated and synergised to better meet learner needs? | How will this innovation meet our learners’ aspirations? | How will this innovation offer uniquely new and exciting solutions? |

Assessing early adopter champion needs for the innovative practice

| What to ask early adopter champions | What e-learning are you currently doing that needs improving? | What new synergies – of, technologies, pedagogy, etc – would you like to test out? | What are your long-term visions and aspirations for e-learning? | What totally new e-learning possibilities excite and attract you? |

Assessing early adopter readiness to implement

| The degree of organisational readiness | Are we ready to make small incremental changes? | Do we see the practical benefits and are ready to make small to medium changes? | Are we ready to make considerable investment in making major changes? | Are we ready to make a radical change? |

Clarifying the innovation developer’s proposals

| Questions to address for developer proposals | How will the proposed innovation build on what your clients are already doing? | How will the proposed innovation give your clients well-tested, credible ideas and solutions? | How will the proposed innovation meet your client’s goals for the future? | How will the proposed innovation offer your clients something radically new and exciting? |
Innovate and integrate: Embedding innovative practices

<table>
<thead>
<tr>
<th>Innovation Style/Strategy:</th>
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</tr>
</thead>
</table>

Demand on the technology infrastructure to support the innovation

<table>
<thead>
<tr>
<th>Demand on technology infrastructure</th>
<th>Little demand on technology infrastructure</th>
<th>Some demand on technology infrastructure</th>
<th>Major demand on technology infrastructure</th>
<th>Significant demand on technology infrastructure</th>
</tr>
</thead>
</table>

1.5 Useful resources

Tools

- RIPPLES implementation readiness model or equivalent.
- Top 10 tips for successfully embedding an innovative practice, and organisational enablers (Case Study 1: GippsTAFE).
- Rogers’ five innovation attributes template (Case Study 3: Digital Storytelling).
- RIPPLES: VET community synthesis of enablers for fostering innovative e-learning.
- Research wiki: Models and strategies for embedding innovation across the VET sector.
- Innovations Styles® Profile22 or equivalent to provide a team innovation profile.
- An innovator’s journey (Case Study 2: There’s something about Michael).
- Research wiki: strategies for supporting innovators.

Processes

An innovation showcase to select projects

For example, sponsor an ‘innovation showcase’ attended by potential early or late adopters and project team. Have three sections to attend: ideas being proposed; projects being worked on; projects completed and ready for adoption. The first section is to get input on the most viable project ideas; the second is to get potential early adopters to ‘sign up’ for using the project when completed; the third is to get potential early or late adopters to take on a ready project immediately. Thus, this idea would apply in Phases 2, 3 and 4 as well.

Phase 2: Develop projects, review progress, and sign off on successful initiatives

Suggested timeline: 10–12 months

Phase 2 includes:

2.1 – Key tasks for stakeholders
2.2 – Alignment between proposed innovation and adopter needs and readiness
2.3 – Innovations portfolio – early adopters
2.4 – Key questions
2.5 – Useful resources

22 <http://www.innovationstyles.com>
2.1 Key tasks for stakeholders

Summary of key tasks: Review progress, oversee coordination between developers and adopters, develop ‘turn key’ implementation processes and guidelines, begin working on implementation readiness issues, seek early adopter feedback, set up networks, develop marketing strategy.

<table>
<thead>
<tr>
<th>Funders/project managers</th>
<th>New Practices in Flexible Learning developers (innovators)</th>
<th>Early adopters (champions and their institutions)</th>
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</thead>
<tbody>
<tr>
<td>Review progress of projects periodically (standard project management process)</td>
<td>Develop project with reviews by funders/project management group and early adopter champions and their organisations</td>
<td>Begin working on any ‘implementation readiness’ needs that are important for early adoption</td>
<td>Begin working on any ‘implementation readiness’ needs that are important for mainstream adoption.</td>
<td>Interact with project teams and early-adopter champions regarding potential for IT to support the project – or ways the future adoption of the project might be hindered by IT protocols or readiness issues</td>
</tr>
<tr>
<td>Oversee coordination between project teams and implementation champions</td>
<td>Develop ‘turnkey’ implementation processes and guidelines for early adopter champions to easily test the project output and prepare for implementation</td>
<td>Be part of team that reviews progress on chosen project. If possible, be involved as a ‘test site’ during the project itself</td>
<td>Tailor implementation work to the kind of readiness needed depending on the potential match of early/late adoption and the kind of project(s) likely to be adopted.</td>
<td>Check RIPPLES or other readiness models for key issues to be addressed</td>
</tr>
<tr>
<td>Oversee implementation readiness’ work in both early and mainstream adoption candidates</td>
<td>Seek early adopter feedback in formative evaluation process</td>
<td>Identify and involve mainstream adopters in awareness raising activities</td>
<td>Identify other possible ‘early adopters’ for mentors as these projects take shape and near completion</td>
<td>Participate in evaluation processes</td>
</tr>
<tr>
<td>Set up and facilitate community of practice for stakeholders and adopters groups</td>
<td>Seek feedback and refine implementation guidelines as part of the project deliverables</td>
<td>Participate in community of practice and relevant networks</td>
<td>Observe/participate in early adopter implementation</td>
<td></td>
</tr>
<tr>
<td>Develop marketing strategy for mainstream adopters to build profile of the e-learning initiatives</td>
<td>Participate in community of practice and relevant networks</td>
<td>Target other sources of funding to facilitate implementation</td>
<td>Explore networks and communities of practice</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Be a critical friend to the early adopter implementation group</td>
<td></td>
</tr>
</tbody>
</table>

2.2 Alignment between proposed innovation and adopter needs and readiness

Use analysis template (Template 1) to check alignment between proposed innovation and early adopter needs and readiness to adopt. Develop appropriate interventions based on identified needs.

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23 Turnkey is a process in which everything needed to perform a certain type of task is put together and presented as a complete package which is ready for immediate use.
2.3 Innovations portfolio – early adopters

Use the innovations portfolio template (Template 2) to test how well the degree of novelty/change of the proposed innovation match the level of readiness of early adopters to support the implementation.

You can also use the template to help match the right ‘early adopter’ to the type of innovation being developed, eg an Exploring champion for a radical innovation.

2.4 Key questions/considerations

These key questions will guide the process, act as conversation starters and ensure a holistic perspective inclusive of different innovation strategies and thinking styles.

<table>
<thead>
<tr>
<th>Innovation Style/Strategy:</th>
<th>Modifying</th>
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<tbody>
<tr>
<td>Features of innovation/ innovativeness:</td>
<td>Trusted enhancements: ‘new/improved’ versions of what is known and trusted. Immediately useful and fits with what is already known and done</td>
<td>Practical and adaptable: can be utilised in many situations. Multiple features/benefits to try out for viability under different circumstances</td>
<td>Distinct, long-term value: visionary and imaginative. Investment in future, long-term benefits. Investment helps achieve long-term goals</td>
<td>Radically new and novel: totally unique and revolutionary. Allows exploration and discovery using ‘cutting-edge’ knowledge and technology</td>
</tr>
</tbody>
</table>

Clarifying the degree of change required by individuals and organisations to implement the innovation

| The degree of change required for individuals and organisations | This innovation will require small incremental changes | This innovation has practical benefits and will require a small to medium change | This innovation requires a considerable investment in the future and calls for major change | This innovation has never been seen in VET before and calls for radical change |

Assessing degree of support required for early adopters

| Support to adopt the innovation | What is one small change that would make the biggest difference in supporting you to implement this innovation? | What types of support could we mix and match to provide the best combination to meet your needs? | What would be ideal to support you to implement this innovative practice? | What totally new way could you be supported? |

2.5 Useful resources

Tools

- Implementation plan – based on Rogers’ five phases in the adoption process (Case Study 3: Digital Storytelling PART C).
- Top 10 tips for successfully embedding an innovative practice, and organisational enablers (Case Study 1: GippsTAFE).
- Organisational enablers (Case Study 1: GippsTAFE).
- Rogers’ five innovation attributes template (Case Study 3: Digital Storytelling PART B).
- RIPPLES: VET community synthesis of enablers for fostering innovative e-learning.
• Research wiki: Models and strategies for embedding innovation across the VET sector.
• Innovations Styles® Profile or equivalent to provide a team innovation profile.
• An innovator’s journey (Case Study 2: There’s something about Michael).
• Research wiki: strategies for supporting innovators.

**Phase 3: Implement projects in early-adopter organisations**

**Suggested timeline: 8–10 months**

Phase 3 includes:

3.1 – Key tasks for stakeholders
3.2 – Alignment between proposed innovation and mainstream adopter needs and readiness
3.3 – Innovations portfolio – mainstream adopters
3.4 – Key questions
3.5 – Useful resources

**3.1 Key tasks for stakeholders**

**Summary of key tasks:** Oversee early adoption efforts, review effectiveness of turnkey processes, begin implementation and marketing, evaluate implementation with early adopters, participate in networks, continue working on implementation readiness issues.

<table>
<thead>
<tr>
<th>Funders/project managers</th>
<th>New Practices in Flexible Learning developers (innovators)</th>
<th>Early adopters (champions and their institutions)</th>
<th>Mainstream adopters (educators/ institutions)</th>
<th>IT managers (in potential adopter institutions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fund early adopt initiatives</td>
<td>Work with early adopter champions and other early adopters to modify/review turnkey process for mainstream adoption</td>
<td>Begin testing/implementing the innovation. Work with project team to strengthen turnkey adoption process.</td>
<td>Continue working on any 'implementation readiness' needs that are important for mainstream adoption</td>
<td>Interact with early adopter champions to assist in implementing selected projects</td>
</tr>
<tr>
<td>Oversee continuity of 'implementation readiness' work</td>
<td>With early adopters, develop mainstream adoption strategy in consultation with mainstream adopters to co-create appropriate strategy</td>
<td>Begin spreading the word</td>
<td>Identify and contact potential candidates for mainstream diffusion and start appropriate support strategies</td>
<td>Also, find innovative solutions regarding potential barriers to IT implementation</td>
</tr>
<tr>
<td>Oversee early adoption efforts</td>
<td>Evaluate implementation with early adopter champions and respond to feedback</td>
<td>With project team, develop mainstream adoption strategy</td>
<td>Identify early adopter mentors to support the adoption process</td>
<td></td>
</tr>
<tr>
<td>Review effectiveness of turnkey processes for adopting each project</td>
<td></td>
<td>Participate in networks and take active role in promoting implementation experience</td>
<td>Join and participate in networks</td>
<td></td>
</tr>
<tr>
<td>Facilitate networks for early adopters</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Facilitate ‘spreading the word’ as needed</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
3.2 Alignment between proposed innovation and mainstream adopter needs and readiness

Use analysis template (Template 1) to check alignment between proposed innovation and mainstream adopter needs and readiness to adopt. Develop appropriate interventions based on identified needs.

3.3 Innovations portfolio – mainstream adopters

Use the innovations portfolio (Template 2). This portfolio focuses on organisational needs and readiness to implement an innovation and a marketing strategy to target the diverse needs of mainstream adopters.

3.4 Key questions

These key questions will guide the process, act as conversation starters and ensure a holistic perspective inclusive of different innovation strategies and thinking styles.

<table>
<thead>
<tr>
<th>Innovation Style/Strategy:</th>
<th>Modifying</th>
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<th>Visioning</th>
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</thead>
</table>

Assessing mainstream adopter needs and readiness

| What to ask mainstream adopters | What are you currently doing that needs improving? | What new synergies – of, technologies, pedagogy, etc – would you like to test out? | What are your long-term visions and aspirations? | What totally new possibility excites and attracts you? |

Marketing to mainstream adopter groups – use a variety of strategies to cover all styles

| Promoting to prospective adopters | Here is how this innovation builds and improves upon your current practice | Here is how this innovation can be used to fit a variety of circumstances and increase your choices | Here is how this innovation provides long-term value and will benefit you in the long run | Here is how this innovation is leading edge and provides a new and novel approach |

Determining level of readiness of mainstream adopters to embed e-learning innovative practices

| Readiness requirements | How ready and capable are you for supporting innovations that augment what you are already doing? | How ready and capable are you for supporting innovations that need to be combined with other approaches and used under various conditions? | How ready and capable are you for supporting innovations that require long-term investment and vision for vocational and technical education? | How ready and innovations that require major changes in how technology is used and/or how learning is conducted? |

Assessing degree of support required for mainstream adopters

| Support to adopt the innovation | What is one small change that would make the biggest difference in supporting you to implement this innovation? | What types of support could we mix and match to provide the best combination to meet your needs? | What would be ideal to support you to implement this innovative practice? | What totally new way could you be supported? |
3.5 Useful resources

Tools

- Innovation implementation plan. This plan is matched to the stages in the adoption process (awareness, interest, evaluation, decision, adoption. (Case Study 3: Digital Storytelling PART C).
- Implementation plan adapted as formative evaluation tool (Case Study 3: Digital Storytelling PART C).
- Develop mainstream adoption strategy (Geoghegan, 1994).
- Develop mentoring program for mainstream adoption.
- Use networks to collaboratively co-design a support strategy.
- An innovator’s journey (Case Study 2: There’s something about Michael).
- Research wiki: strategies for supporting innovators.

Phase 4: Implement projects in mainstream-adopter organisations

Suggested timeline: 8–10 months

Phase 4 includes:

4.1 – Key tasks for stakeholders
4.2 – Alignment between proposed innovation and mainstream adopter needs and readiness
4.3 – Innovations portfolio –mainstream adopters
4.4 – Key questions
4.5 – Useful resources

4.1 Key tasks for stakeholders

Summary of key tasks: Implement mainstream adoption strategy, embed projects within organisations, oversee continuing work on ‘implementation readiness’, promote larger scale adoption of projects in education environments.
4.2 Alignment between proposed innovation and mainstream adopter needs and readiness

Use analysis template (Template 1) to check alignment between proposed innovation and mainstream adopter needs and readiness to adopt. Develop appropriate interventions based on identified needs.

4.3 Innovations portfolio – mainstream adopters

Use innovations portfolio (Template 2) to help match the kind of innovation with the needs/preference of innovation of educators who are potential mainstream/majority-adopters.

Use this template to help assess organisational readiness of potential mainstream adopters to implement an innovation.

4.4 Key questions

These key questions will guide the process, act as conversation starters and ensure a holistic perspective inclusive of different innovation strategies and thinking styles.

<table>
<thead>
<tr>
<th>Innovation Style/Strategy:</th>
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<tbody>
<tr>
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<td>Distinct, long-term value: visionary and imaginative. Investment in future, long-term benefits. Investment helps achieve long-term goals</td>
<td>Radically new and novel: totally unique and revolutionary. Allows exploration and discovery using 'cutting-edge' knowledge and technology.</td>
</tr>
</tbody>
</table>
### Innovation Style/Strategy: Modifying, Experimenting, Visioning, Exploring

<table>
<thead>
<tr>
<th>Assessing mainstream adopter needs and readiness</th>
<th>Modifying</th>
<th>Experimenting</th>
<th>Visioning</th>
<th>Exploring</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>What to ask mainstream adopters</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What are you currently doing that needs improving?</td>
<td>What new synergies – of, technologies, pedagogy, etc – would you like to test out?</td>
<td>What are your long-term visions and aspirations?</td>
<td>What totally new possibility excites and attracts you?</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Marketing early adopter achievements to mainstream adopter groups</th>
<th>Modifying</th>
<th>Experimenting</th>
<th>Visioning</th>
<th>Exploring</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Promoting early adopters achievements</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Here is how this innovation has improved current practice</td>
<td>Here is how this innovation fits a variety of circumstances and increased choice</td>
<td>Here is how this innovation will provide benefits in the long run</td>
<td>Here is how this innovation provided a new and novel approach</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Mentoring mainstream adopters</th>
<th>Modifying</th>
<th>Experimenting</th>
<th>Visioning</th>
<th>Exploring</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Identifying starting points</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What small change could you make to your existing practice?</td>
<td>What practical benefits could this innovation bring?</td>
<td>What innovation would be an ideal for you?</td>
<td>What could we try that has never been done before?</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Assessing degree of support required for mainstream adopters</th>
<th>Modifying</th>
<th>Experimenting</th>
<th>Visioning</th>
<th>Exploring</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Support to adopt the innovation</strong></td>
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</tr>
<tr>
<td>What is one small change that would make the biggest difference in supporting you to implement this innovation?</td>
<td>What types of support could we mix and match to provide the best combination to meet your needs?</td>
<td>What would be ideal to support you to implement this innovative practice?</td>
<td>What totally new way could you be supported?</td>
<td></td>
</tr>
</tbody>
</table>

### 4.5 Useful resources

**Tools**

- Implementation plan – based on Rogers’ five phases in the adoption process (Case Study 3: Digital Storytelling PART C).
- Top 10 tips for successfully embedding an innovative practice, and organisational enablers (Case Study 1: GippsTAFE).
- Organisational enablers (Case Study 1: GippsTAFE).
- Rogers’ five innovation attributes template (Case Study 3: Digital Storytelling PART B).
- RIPPLES: VET community synthesis of enablers for fostering innovative e-learning.
- Research wiki: Models and strategies for embedding innovation across the VET sector.
- Innovations Styles® profile or equivalent to provide a team innovation profile.
Section 11: Case Study 1: An organisation – getting down to business

This case study of GippsTAFE (Central Gippsland Institute of TAFE) identifies the key organisational factors that have progressed its vision of becoming the best quality provider of flexible learning solutions in Australia. A particular emphasis is the role of e-learning innovations in contributing to achieving that vision. It is a synthesis of comprehensive interviews with three campus managers, the Innovation and Organisational Development Team, innovative teachers and team leaders and observations from colleagues outside the institute. It also provides input from the results of an institute wide RIPPLES survey in which 67 staff identified key enablers and barriers to embedding innovative practice in e-learning innovations.

Case study structure
This case study is in two parts.

PART A
Part A identifies organisational enablers for embedding innovative practice including 10 top tips. This is the voice of GippsTAFE because where possible, quotes from interviews highlight the key points.

Section 1: Organisational enablers
• flexible learning is the vision
• a CEO who drives the vision
• an e-learning innovation champion at senior level
• an experienced and talented innovation team dedicated to the task
• a business approach to building capability
• committed and supportive senior managers.

Section 2: Ten top tips
• Ten top tips for successfully embedding innovative e-learning practice are aimed at colleagues with similar roles to the Innovation and Organisational Development Team.

PART B
Part B is an independent analysis of the Innovation and Organisational Development Team’s Innovation Styles® Profile. This ‘team advisor’ (a report on the team’s

24 <http://www.innovationstyles.com>
Innovate and integrate: Embedding innovative practices

Innovation Styles® Profile) identifies the different approaches to the innovation by the team and provides a guideline on how these strengths can be utilised to more effectively achieve its role in supporting innovative practice in e-learning.

PART A

Section 1: Organisational enablers

These are the six key organisational enablers for embedding innovative practice in e-learning identified by GippsTAFE senior managers and the Innovation and Organisational Development Team.

1. Flexible learning is the vision

GippsTAFE aims to be the best quality VET provider of flexible learning solutions in Australia.

GippsTAFE Vision

Enabler: Awareness that this is the direction we need to be going in, professional development opportunities.

Survey respondent

Enabler: The stated focus of the institute: it looks like this way of teaching is really being pushed at last.

Survey respondent

2. A CEO who drives the vision

Inaugural Flexible Learning Fellow

Clarity

Dr Peter Whitley

CEO

I really respect the CEO we have got now. I respect him for his vision, his experience and where he wants to take us.

Manager

Empowering

He's a hard task master, which I like. I'm quite happy to have that. And we're accountable, I love that. Everyone should really be accountable for their actions. He's been very clear about giving us the authority and the power to make our own decisions. He's empowered us to do that and I relish that. He's taken down a hell of a lot of barriers for us.

Manager

Motivating

I suppose the second string to the institute is our mission statement and our vision – to be the best flexible delivery institute in Australia. When that first came out I thought 'We are setting ourselves up for a failure here.' That was four years ago. Now all of staff and particularly management – that's second nature to them now and
Innovate and integrate: Embedding innovative practices

we just expect that we will be the best in Australia. \hspace{1cm} \textit{Manager}

\textbf{Connecting}

I’ve read a lot of management books. The CEO does the same. We swap a lot of ideas and books and what not. \hspace{1cm} \textit{Manager}

\textbf{Supporting}

A dedicated unit for innovative e-learning. A CEO who is prepared to champion it and direct resources to it. \hspace{1cm} \textit{Survey respondent}

3. An e-learning innovation champion at senior level

… the growth in e-learning just gets more and more significant, this week alone I have meet with 2 new clients with significant projects. (Informal email Bradley Beach, 03/11/2006)

Bradley Beach is the Manager of the Innovations and Organisational Development Team which is a senior position within the institute.

\textbf{Provocative}

Workshops don’t change practice, nor do they meet a customised need

Make sure the program gets the benefit and the recognition.

What’s politically real is not politically correct. It’s naïve to think that the driver is what is best educationally. It’s money first and education second. \hspace{1cm} \textit{Bradley Beach}

\textbf{Forward thinking}

I think Brad’s scope of looking is not just in Gippsland, it is worldwide. And if I could go universe wide, Brad would be looking there. And he has bought the managers along with him on the ride. It’s been fantastic. \hspace{1cm} \textit{Manager}

He has great vision. He is one of those that see an opportunity and he doesn’t ask the usual types of questions. He really sinks to the heart of the actual concept, and while most people see it in black and white – we can do a bit there, and there – Brad just sees it in one big glance – yes we can do all that but, we can do this here. We can on sell – his vision of those things is exceptional. \hspace{1cm} \textit{Manager}

\textbf{Business acumen}

Understand what your organisation wants and then exploit New Practices to give them that.

You need to ask: Where does this New Practices opportunity fit into our Business Plan and how can we shape it to meet our needs? \hspace{1cm} \textit{Bradley Beach}

But to me it starts with the institute and what you need. Then after you have identified that, then let’s try and marry it with the funding that is out there. I admire Brad for that. I think that is why they have
done better than a lot of others.
Innovations and Organisational Development Team member

His moneymaking abilities are second to none. 
Manager

High credibility and availability

You go to Brad and you come away with a dozen things that are options for you, including online options which you could do within the time frame. So conversations with Brad are enormously important.
Manager

I find that if you have a conversation with people like Brad, all of a sudden there are 10 things on the table whereas before you had none.
Manager

I’ve only just had a meeting with Brad last week to indicate to him that I would much rather contribute to the additional targets myself and take it away from him so that I can still come and have the conversations with him about things relating to flexible learning.
Manager

Teaching background

My observation would be the reason why Bradley has been so successful is that while he has obviously had the vision, he’s come from a teaching background. He is pragmatic enough to make the jumps.
Manager

Bradley is where he is because he came in [to TAFE] – and would always acknowledge this – in the mid nineties, not with years and years of TAFE background, but as a young enthusiastic teacher who didn’t have a lot of baggage. He came into an environment where the innovation and the different ways of doing things were being encouraged. He came in and it was said, basically, ‘If you want to keep your job, this is the sort of thing you have got to do’.
Manager

Extensive networks and national profile

Bradley and I talk a lot. He has had to develop it. He has had to think it through for himself often. He’s had the benefit of a lot of external support and he has developed it.
GippsTAFE uses Voice Tools for online courses (via Brad Beach, but then so are most things)
Research contributor

High level of interpersonal skill

We are fairly lucky with Brad. Brad Beach stands out shoulders ahead with his innovative ideas and the way he has presented himself and his department. He is so user friendly.
Manager

Facilitative

He facilitates avenues to a lot of funding, but if you can take the funding opportunities throughout the institute and offer people money that will contribute to their commercial targets for a start, you will get ears pricking up – there’s money in this for me. And then you have got the opportunity to get their attention to think that there are also benefits in terms of how we do things here and the mindset
Innovate and integrate: Embedding innovative practices

that the might have and change during that process

A capable team

He’s got a department with innovative thinkers along with himself and he’s done that under some difficulties. If I had my way I’d give him a lot more freedom.

4. An experienced and talented innovation team dedicated to the task

'The GippsTAFE Innovation and Organisational Development team

'Ve don’t just talk about it, we do it'

About the Innovation and Organisational Development Team

Roles within the unit include team management, online learning, educational design, professional development and change management. Manager Innovation and Organisational Development, Organisational Development Coordinator, Curriculum Officer, Pathways Officer, Online Project Officers, Online Content Developer, TAFE VC Administrator, Online Project Officers.  

Three staff have been Flexible Learning Leaders and one worked for five years at TAFE Frontiers.  

Team’s self assessment

High level of trust and autonomy within team, own networks and national profile, innovative forward thinking, opportunistic, personalities that complement each other, diverse skill set.

A philosophy of progressively and consistently build capability

GippsTAFE has actively participated in Framework initiatives since its inception in 1998. It has been a concerted effort over nine years to develop capability in online facilitation. GippsTAFE also utilises other Framework resources, including Toolboxes, as well as national, state/territory and institute funding and commercial ventures. Participation has been focused on progressively building capability in online delivery.

Staff have participated in LearnScope, Flexible Learning Leaders, NET*Working conferences, E-learning for Creative Community Partnerships, Networks of the Australian Flexible Learning Community/E-learning Networks, Inclusive e-Learning and New Practices in Flexible Learning Projects. Over 100 teachers, managers and support staff have participated in Framework activities. The current CEO was also an inaugural Flexible Learning Fellow.

25 For four years the team was know as the I-Learning Team
26 TAFE Frontiers was the peak body supporting all Registered Training Organisations within Victoria in flexible learning.
Recognition of the importance of a dedicated team to support the implementation process

**SUPPORT: THE KEY ENABLERS IDENTIFIED FOR USING INNOVATIVE E-LEARNING:**

(Summary of responses from staff to the RIPPLES survey identifying key support enablers)

<table>
<thead>
<tr>
<th>Encouragement and support from e-learning staff</th>
<th>I-Learning Support Team</th>
</tr>
</thead>
<tbody>
<tr>
<td>The 'innovation' department; innovative leadership is really there</td>
<td>The I-learning team are dedicated team who go above and beyond to help staff</td>
</tr>
<tr>
<td>Support of the e-learning team</td>
<td>Having an I-learning department to provide support</td>
</tr>
<tr>
<td>A small but innovative team which needs to grow</td>
<td>Having an e-learning support area that can assist with the development of innovative and flexible training alternatives</td>
</tr>
<tr>
<td>Support from I-learning department</td>
<td>People I network with from the I-learning team, also other online teachers – voice network – although the teachers are from other departments, the problem with isolation is in my own area of teaching, not online teaching as a whole</td>
</tr>
<tr>
<td>Management support for the e-learning team</td>
<td>Access to resources Support from I-learning department</td>
</tr>
<tr>
<td>Quality of staff involved in the e-learning team</td>
<td>The support I have personally received from the I-learning team has been invaluable and has allowed me to move easily into the area of on line teaching. I would like to do more.</td>
</tr>
<tr>
<td>Organisational commitment to e-learning</td>
<td></td>
</tr>
<tr>
<td>e-learning and Innovation dept. support</td>
<td></td>
</tr>
<tr>
<td>Fantastic e-learning support team and managers like it</td>
<td></td>
</tr>
<tr>
<td>Support for professional learning</td>
<td></td>
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<tr>
<td>Support through Innovation Department;</td>
<td></td>
</tr>
<tr>
<td>I-Learning Support Team and their culture of 'we are here to help' 'what do you want to achieve?' 'how can we help you?' 'what do you need from us?' 'is this of any use to you?</td>
<td></td>
</tr>
<tr>
<td>I-Learning Support Team</td>
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<tr>
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<td></td>
</tr>
</tbody>
</table>

From interviews with campus managers

**High credibility**

I have individuals who rely heavily on the support that is coming out of there.

We are very fortunate with Glenda being there now and the team that Brad has. So it is not that difficult creating the environment for me to have a conversation with Brad. The difficulty is with making the time amongst all the other things you have to do.

Learning, that’s another thing. I’m really happy with this. Through Malcolm, it’s the staff development the learning the skills with good feel things – yoga and all of that. We want more yoga and activities and a bowl of fruit for staff. It’s not just a workplace anymore then – it’s ‘Gee, I like it’ That’s what we are kind of after. That’s a real plus.

**Education/pedagogy focus**

… the teacher needs someone they can talk to, whether they be a technical Dale, or conceptual and implementation Bradley.

[Vanessa] is critical to online teachers on a day-to-day basis.

All our mentors are teachers. Teachers working with teachers.

**A service orientation**

For the change in culture on this campus I rely very heavily on Brad for that in many ways and Malcolm as a backup. Those two people have been tremendous. Malcolm with his PD role will bend over backwards to source professional development for staff. So I don’t
Innovate and integrate: Embedding innovative practices

Personalities that complement each other
Brad’s referred the staff in the Koori Unit to people like Dale to talk about some of those other tools. Because they are already familiar with digital storytelling. They have already been training again through Malcolm. That was very successful and in fact they have used that pretty well when they have gone back. It has continued by luck, but not by dedicated investment. They were so impressed with digital storytelling and its relevance to Indigenous learners.

Opportunistic
They are making some incredible leaps and bounds over there. I can’t keep up with all the funding that goes through from the [Australian] Flexible Learning Framework and the other areas. I can’t keep up with it.

Provide solutions
So I think I would describe that as ‘bloody awesome’. We have picked up a product that was done by a trainer at the centre, improved it significantly and that’s ready for release. So I mean that is a project initiated through a couple of different innovation funding opportunities.

We’ve used digital storytelling and a whole lot of online options that they had never heard of and they are using them gradually in some of their delivery methods.

A business approach to building capability
The Manager of the Innovation and Organisational Development team was clear about the role and purpose of innovation, funding and process. It was to build the business.

Organisational needs drive innovation efforts

‘We will do this one way or another regardless of New Practices [in Flexible Learning] funding.’

Bradley Beach

Demonstrate how wins support progress
TAFE VC (Virtual Campus) was introduced into the organisation in 1998.

<table>
<thead>
<tr>
<th>Year</th>
<th>Approximate number of online learners</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>40</td>
</tr>
<tr>
<td>2000</td>
<td>100</td>
</tr>
<tr>
<td>2001</td>
<td>300</td>
</tr>
<tr>
<td>2002</td>
<td>500</td>
</tr>
<tr>
<td>2003</td>
<td>700</td>
</tr>
<tr>
<td>2004</td>
<td>1,500</td>
</tr>
</tbody>
</table>
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Seek funding that aligns with goals

We have got a whiteboard of tasks we think as a department we need to do for the next 12 months to progress the institute and then go OK, what bits can easily fit into our known funding bundles? And we actually don’t chase money that isn’t going to do what we want to do. And organisations do that all the time. They see money, they try and get it, then get themselves in all sorts of bother. Whereas Brad’s really clear on going – I don’t think this is going to do what we want.

Innovation Team Member

Seek multiple sources of funding

We decide what we think we need to do to progress the institute. If we want to do task X, then where is the best money to get the funding from for that. Whereas I think some of the other organisation tend to think ‘Oh, here is X money around. Oh I guess what we could probably do is …

Glenda McPherson

Target champions to maximise outcomes

Don’t spread funding from LearnScope across too many people. Concentrate it on one good person.

Bradley Beach

An experienced and talented innovation team

See separate profile: Identified the key success enabler by institute staff

An e-learning specialisation to focus efforts and build reputation

Focus on facilitation and delivery.

You must focus on the point of delivery and need to ask: How can this New Practice change teaching practice and improve/expand the services and products that you already offer?

Bradley Beach

If you think GippsTAFE, then you think facilitation. And so it really was that real focus on what they thought they were good at and so they built a reputation.

Glenda McPherson

A distributed model for embedding innovation

Personalised, extended support in local context.

Situate mentors in the local context and design a personalised mentoring program that supports the targeted teacher throughout an entire delivery cycle. It is critical to assist the teacher through the entire delivery cycle. They then achieve results and become the local champions. And if you have supported them through the entire delivery cycle more that once, ideally three times, you have changed their practice. When you stop being so supportive, there is

<table>
<thead>
<tr>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2,500 = 250,000 student contact hours</td>
</tr>
<tr>
<td></td>
<td>50% solely online</td>
</tr>
<tr>
<td></td>
<td>50% blended</td>
</tr>
</tbody>
</table>

Australian Flexible Learning Framework 126
nothing for the teacher to go back to. It has been three delivery occasions where they have not done the same old same old. So they continue with what they now know, because it is too hard to go back to the old way given that they have not done that for 3 delivery occasions.

— Bradley Beach

### View innovation as a progressive investment

This has been GippsTAFE’s journey with e-learning facilitation which demonstrates its progressive, persistent and intentional growth.

<table>
<thead>
<tr>
<th>Year</th>
<th>Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>Key staff developed in online facilitation skills.</td>
</tr>
<tr>
<td>2001–2002</td>
<td>Build capacity in online facilitation.</td>
</tr>
<tr>
<td>2001</td>
<td>Introduction to Online Facilitation Program (30 hours).</td>
</tr>
<tr>
<td>2003</td>
<td>Discovered online voice technologies.</td>
</tr>
<tr>
<td>2003–2004</td>
<td>Explore options around how online voice tools including costs and access. Talk with teachers and managers to get opinions. Market upwards given there will be costs involved.</td>
</tr>
<tr>
<td>2004</td>
<td>Seek funding to purchase online voice tools. Work with others to find the best way to use the tools in terms of which servers, how many seats, in or outside of the learning management system, etc. Very important continue to talk to teachers about how they could use the tools. Extremely important continue to talk to managers so that they understand the business opportunities the investment will provide.</td>
</tr>
<tr>
<td>Late 2004</td>
<td>Secure online voice tools via commonwealth equipment grant.</td>
</tr>
</tbody>
</table>
| 2005    | • Seek New Practices in Flexible Learning funding to assist in the best use of voice tools in teaching and learning. This involves key champion teachers.  
          • Share good news stories and highlight the work the teachers have done, to other teachers, managers, Institute Council and the wider VET community.  
          • Quickly find a commercial application for the voice tools as it is important to demonstrate that the new practice has in fact expanded your business.  
          • Find an application of the new practice which allows you to do something you could not do before, ie Medical Terminology or Middle East online voice exchange. This again demonstrates quickly that the new practice is expanding your core business. This will mean that managers will be supportive and encourage the longer term embedding of the new practice. |
| 2006    | • Seek other funding opportunities to allow for the embedding of the technologies. However, the funding is not enough. You need to make an investment in time and effort to progressively embed the practice across the organisation. However, your organisation won’t do this unless you have demonstrated that this leads to expanded core business.  
          • Remember embedding is not just finding a sustainable system solution. |
5. Committed and supportive senior managers

GippsTAFE Campus Managers

Phil Thompson  
Morwell Campus

Doug Mullen  
Warragul Campus

John Cargill  
Leongatha Campus

These are quotes from interviews with three campus managers. They illustrate diversity, yet show a common purpose. Their focus was on organisational enablers and barriers and their role in contributing to building capability in e-learning innovation and embedding those outcomes within the institute.

Clear about the vision

Our vision is all about being the best quality TAFE/VET provider of flexible programs in the country.

Active support of the Innovation and Organisational Development Team

I think we are a long way off in terms of being a perfect institute in terms of how we support the I-Learning Unit. I don’t think Brad has wanted to have a commercial target ever and he has got a commercial target and I think so long as that’s there and gets added to I think it is proposed for next year, it will continue to divert their attention from being able to spend more time out and diffusing the message.

I hope we can retain the services from the likes of Brad for a long time into the future and I think we need to release him of some of the chains he has got around him and let him focus on what is our strategic vision.

Understanding innovation challenges

Brad has got a conflict between being the innovator in the institute and managing various other priorities of his role. Conflicting work pressures work against the principles of him being available to help with that diffusion.

Nurture champions

I’ve got my second round starting to put their hands up saying ‘Gee this looks good’. The first lot has gone through, the second lot is really interested and the third lot may never be interested. But I don’t mind. They are the chalk and talk teachers, but the champions have done the job. I have to make sure that my champions have a smile on their face for the others to say ‘Hey, this is pretty good.’

Having the right people

I’ve been fortunate to work with the right people. I’ve had a couple of staff that have been leaders in wanting to do things differently.

I’ve always worked to surround myself with the best possible people I can. They are going to make me look good and to make my role a whole lot easier.
I think a lot of it rotates around individuals and what their experiences are – why they are here at work, how long have they been working for us, what is their history, are they here because it is a job that pays them money or are they here because they have an interest in it and a commitment to doing things.

Recognising opportunities

Like it was just evolved that way. We were developing it for the learners, for the clients and then it got developed and everyone was indicating that there was a market for it out there and we can do a lot more with this at the same time. So we can kill two birds with the same stone. High level of trust and respect.

Progressive

I can look at people and say, ‘It’s never going to happen with you’ because I know some of them and how they operate and it will never happen. You have new people who will come in. I guess I favour bringing new blood into the institute.

Facilitative

I gave them open boundaries to do that and to report back weekly, so I know where they were going. We gave them the scope to do that and all I ever said to them was ‘Just keep letting us know how we can support you better.’

Trust staff

Yes. They must share. So we’ve got our champions and they are sick to death of hearing from me that those champions do nothing but tell at staff meetings at special meetings and special presentations where I can get CEOs in to give them a pat on the back for all those innovative things that they are doing. And to me that’s important because none of us know what they are doing. We see them sitting at computers with earphones on and talking. I say ‘What are you doing?’ and they say ‘I’m running a class up in the Northern Territory.’

Personal qualities

If anything, I’ve always gone out of my way to be truthful. I’ve never lied to staff. I have criticised management and myself when I think things are wrong. So I get some respect for that.

I want staff to have pride in what they are doing and enjoy the workplace. To say that it is good to come to work. We all have our ups and downs. But most of the time it is good to go to work.

That was a huge task with no resources or anything. And that was good and that has been a successful department ever since. I made a lot of mistakes. I cut my teeth on management in those days. So I have come up the hard way I suppose and realise what it is to get support – where’s my office? Well go find one if you can. Well where is my desk? I don’t know! I was expected to know everything. I didn’t know how to do a rec. What’s a budget? I didn’t have any of the skills to do that. Those things have changed now – induction and all those things. I think it is for the best.

Leadership style

I lead from the back, not the front.

I find I can’t imitate someone else’s management style. I’ve got to be myself.
Advocacy

I wouldn’t tie him [Brad] down so much with the red tape that happens in TAFE. He looks after the innovative areas and the HR restructure types of areas. Why is he doing that? His money making abilities are second to none. I’d be giving him exactly what he wants.

The question for me is the strategy and the approach has worked, but how do you translate Bradley’s role – take the personality out of it – how do you convey the message, the strategy at all levels of the organisation. It is not always easy. He’s forever bound in this being busy money making cost centre. Is it an investment the organisation should be willing to make even.

Section 2: Ten top tips
Ten top tips for successfully embedding innovative e-learning

These top tips are from staff in the Innovation and Organisational Development team who have synthesised their key success factors for embedding innovative e-learning. They are aimed at colleagues who have similar responsibilities.

1. **Ask four key questions for embedding new practice and achieving results**
   - **Do I have the right teacher?** A prerequisite is a proven track record as a good teacher in a face-to-face environment. The ‘right teacher’ has particularly good communication skills and believes strongly in taking the lead in proactively supporting students.
   - **Are the resources available?** We are not developers, we are deliverers. Utilise what is out there already. Only develop if a commercial client pays you to, and then only if there is also a call for training afterwards. Sustainable income comes from re-occurring business. Although development can lead to more development a product is only developed once, training is regular and repeating.
   - **How am I going to market this?** Is there a market that is ready? Is it a viable market? Go back to your business case.
   - **Is the learner group or the market ready?** How can we help them be ready? Utilise the team of educational designers (a much broader focus than instruction design as they are active teachers with field credibility and understand the realities of the coalface – auditing, contact hours). Readiness includes having the right infrastructure and the right attitude.

2. **Personalise your stories for different stakeholder groups to increase your strike rate and your reach**
   - **CEO** – a numbers story
   - **politicians** – heart stories
   - **managers** – achieving business goal stories
   - **teachers** – stories about better work/life benefits for them as teachers, the offshoot is that there may be benefits for your students.

3. **Have a senior champion to advocate**
   This ensures representation at the decision making levels.

4. **Focus on utilising rather than developing products**
Come up with a model of how to make the products work. The key is to get teachers using resources because it is the delivery that matters.

5. **Think about the bigger picture and long term sustainability**
   Don’t apply for a New Practices in Flexible Learning Project because it is a short-term diversion or a money generating opportunity. Do it because it fits into the bigger picture of your organisation’s business goals. Apply because it contributes to your commercial activities, improves service to your clients, or increases your student contact hours.

6. **Have a specialisation**
   GippsTAFE’s specialisation is online facilitation and they are building a reputation for that.

7. **Use multiple strategies:**
   Demonstrate success, market internally, give success to work teams, highlight good news stories, focus on a specialisation, seek funding to grow the opportunities, involve teachers and managers and inform decision makers, customise stories to different stakeholders, target and invest in champions.

8. **Integrate development and utilisation as a parallel process**
   It is not a linear process of development and delivery. A range of staff are involved from the outset and through continual trialling have shaped the process.

9. **Have a distributed and ‘embedding’ model:**
   Situate mentors in the local context and design a personalised mentoring program that supports the targeted teacher throughout an entire delivery cycle. This is critical to the entire delivery cycle. They then achieve results and become the local champions. And if you have supported them through the entire delivery cycle more that once, ideally three times, you have changed their practice. When you stop being so supportive, there is nothing for the teacher to go back to. It has been three delivery occasions where they have not done the same old same old. So they continue with what they now know, because it is too hard to go back to the old way given that they have not done that for three delivery occasions.

10. **Use an investment model**
    Gradually and persistently building up expertise by targeting ‘winners’ and working with them at the coalface to improve teaching practice.
PART B:

Innovation Styles® Profile

The Innovations Styles® Profile is a commercial product used for this research. Individuals completed an online profile and received both an individual and team report. This is the team report for their Exploring/Experimenting profile.

GippsTAFE Innovation-OD Team
Team Profile: Exploring / Experimenting

TEAM ADVISOR

Your Team Profile:
At a Glance
The Four Innovation Styles:
A Quick Overview
Your Team Profile:
Instant Coach

December, 2006

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**Interpretation key:**

The triangle is the team’s average
The open circle is the Manager of the Innovation and Organisational Development (team leader)

**Date:** 6 December 2006.
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Your *Exploring / Experimenting*
Team Profile – At a Glance

Teams that have an overall profile of *Exploring / Experimenting* are more likely to question assumptions and discover novel possibilities, while they try out various combinations of ideas and learn from the results. They are inclined to seek totally new perspectives, while learning through experimental trial-and-error.

### Finding and implementing innovative solutions

Your team will quite naturally seek to:

- Generate ideas that would be expansive, adventurous, and rule-changing
- Make sure that new ideas goals are workable and meet short-term

But watch out … your team may:

- Get off track, frequently flying off in new directions
- Get lost in the exploring process and forget about focusing on key goals

### Working well together

You are likely to build and energise your teamwork by asking:

- ‘What would be a novel way of organizing ourselves?’
- ‘What processes and practices can we combine from different sources?’

In addition… consider the value of asking:

- ‘How can we become aware of what’s ‘missing’ in our teamwork process?’
- ‘How can we work together as a ‘world class’ innovative team?’

### Selecting the best ideas

When evaluating creative options, your team will tend to:

- Use *facts* to prioritise options and *intuition* to determine overall potential
- Use *broad* approach to consider all options

Without realizing it… your team may have a tendency to:

- Miss the long-term perspective, and struggle to find harmony between exploring new possibilities and focusing in on the most relevant options
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**Tapping into personal and team values**

Your team will be inclined to define its values by asking:
- ‘What would challenge us to grow in our values?’
- ‘What values are important to us to succeed in each aspect of our work?’

On the other hand... your team may miss some key values by neglecting to ask:
- ‘How do we integrate everyone’s own values into a team values-statement?’
- ‘What ultimate values do we stand for?’

**Managing stress**

When the pressure is on, your team will tend to gain confidence and fortitude by:
- Seeing the ‘degrees of freedom’ offered by the uncertainty
- Ensuring that the process will lead to reliable, trustworthy results

However... if you let stress accumulate, you may end up being:
- Resistant to needed planning, and inflexible to changes in the process

**Developing team versatility**

Be sure to build into your teamwork the *structures* and *discipline* you need to be versatile:
- Leverage work that has already been done
- Keep a focus on results even while entertaining ‘speculative’ ideas
- Be imaginative in how you might test the viability of bold, far-reaching ideas
- Be open to ideas even if they seem either too idealistic or too basic
The Four Innovation Styles

A Quick Overview

Recognising the different ways we like to innovate is a key to working together successfully – in a team or in an organisation. We all have our own unique approach to meeting a creative challenge, using our own mixture of four Innovation Styles: Visioning, Modifying, Exploring, and Experimenting. To nurture a healthy team environment for innovation, each approach must be recognised, valued, and put to its best use… while practicing versatility among all four approaches.

**VISIONING**

People who have Visioning profiles like to imagine an ideal future and let long-term goals be their guide – they envision and idealise.

**MODIFYING**

People who have Modifying profiles like to refine and improve what has already been done – they refine and optimize.

**EXPLORING**

People who have Exploring profiles like to question assumptions and discover novel possibilities – they challenge and discover.

**EXPERIMENTING**

Those people who have Experimenting profiles like to test out various combinations of new ideas and learn from the results – they combine and test.
Innovate and integrate: Embedding innovative practices

Your Exploring / Experimenting Team Profile – Instant Coach

Use this Instant Coach to identify quick leverage points that will give a boost to your team innovation, just where you need it most!

The Task: Developing e-learning innovations that get adopted and embedded

The key task of your team – as seen by its members – is to be at the forefront of developing and implementing innovative e-learning products, services, and technologies for the VET environment in any of the following four areas:

- developing innovative products or technologies
- using existing products/technology to improve teaching, learning, or assessment
- dealing with technology issues
- developing new approaches to teaching (not necessarily based on technology)

Your group is most likely to embrace projects that call for continuous learning and development even during the adoption process – either because the projects are radically new and novel (Exploring), or because they have the flexibility to be tried and tested in a variety of circumstances (Experimenting). While your group will also work well with projects focused on short-term enhancements (Modifying), you are less likely to seek projects that are more focused on long-term vision and investment (Visioning).
Table 1.1 – **Relationship among levels of innovation, style/strategies, features, readiness, and adoption**

<table>
<thead>
<tr>
<th>Level of Innovation (degrees of novelty)</th>
<th>Most incremental &lt;&lt;&lt;&lt;&lt;&lt;&lt;&lt;&lt;&lt;&lt; &gt;&gt;&gt;&gt;&gt;&gt;&gt;&gt;&gt;&gt;&gt;&gt;&gt; Most radical (Evolutionary; tried-and-tested) (Revolutionary; new and unique)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovation Style/Strategy</td>
<td>Modifying                                         Experimenting                                         Visioning                                         Exploring</td>
</tr>
<tr>
<td>Level of adopter change required</td>
<td>Small change                                       Small/medium change                                    Major change                                       Radical change</td>
</tr>
<tr>
<td>Demand on other system changes</td>
<td>Little demand on other systems                    Some demand on other systems                          Major demand                                       Significant demand</td>
</tr>
<tr>
<td>Institutional readiness</td>
<td>Can be low                                         Can be medium                                        Must be high                                       Must be very high</td>
</tr>
<tr>
<td>Change to practice</td>
<td>Enhances/optimizes existing practice              Complements existing practice                         Challenges existing practice                         New core practice</td>
</tr>
<tr>
<td>Example</td>
<td>ARED rapid development tools                       Digital storytelling                                  Web 2.0 tools                                      Second Life</td>
</tr>
</tbody>
</table>

A key challenge will be to have these innovations aligned to the actual short-term as well as long-term needs of the education community who will adopt these projects (or not). A key issue involved in this alignment is shown in Table 1.2, the potential for ‘disconnect’ between the degrees of innovativeness (novelty/change) of an innovative project, and the degree of innovativeness preferred by potential adopters.

Table 1.2 – **How the level of innovation (novelty/change) of a project matches with the level needed by the potential individual adopter**

<table>
<thead>
<tr>
<th>Degrees of innovation (degrees of novelty/change)</th>
<th>ADOPTERS: ‘We want projects that are…’</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Incremental</strong></td>
<td>Trusted enhancement                  Practical, adaptable                   Distinct, long-term   Radically new, novel</td>
</tr>
<tr>
<td><strong>Breakthrough</strong></td>
<td>Ideal                             Ok                                        Fair                               Poor</td>
</tr>
<tr>
<td><strong>DEVELOPERS: ‘The project is…’</strong></td>
<td><strong>Trusted enhancement</strong>            <strong>Practical, adaptable</strong>                <strong>Distinct, long-term</strong>  <strong>Radically new, novel</strong></td>
</tr>
<tr>
<td>Incremental</td>
<td>Ideal                             Ok                                        Fair                               Poor</td>
</tr>
<tr>
<td>Breakthrough</td>
<td>Ok                                Ideal                                     Ok                                  Fair</td>
</tr>
<tr>
<td>Distinct, long-term value</td>
<td>Fair                             Ok                                        Ideal                              Ok</td>
</tr>
<tr>
<td>Radically new, novel</td>
<td>Poor                             Fair                                      Ok                                  Ideal</td>
</tr>
</tbody>
</table>
Since your group is likely to focus on developing innovations that require continuous learning and development even during the adoption process – either because the projects are radically new and novel (Exploring), or because they have the flexibility to be tried and tested in a variety of circumstances (Experimenting) – some people in your organisation might view your work as not being focused enough on achieving tangible long-term or short-term goals. Thus, your group could find itself facing a ‘chasm of focus and achievement’ in your relationships with the stakeholders you wish to serve.

**Achieving the team mission and goals**

As a team, you have a diversity of opposite individual profiles: Modifying opposite to Exploring, and you have some significant Experimenting but virtually no Visioning. So when you think of ‘the system’ – how the organisation functions – you are likely to want to substantially transform it or at least restructure it in verifiable steps. This will impact the kind of solutions you seek to meet your innovative challenges. The potential drawback is creating a mismatch between your ideas and what your clients (inside or outside your organisation) are actually looking for. Whether you are pursuing exciting, novel breakthroughs or looking for new synergies (of partnerships, technologies, or processes) that are relevant in the short-term, perhaps the real need is to have your final results fulfill bold, far-reaching goals. That is where you will need to keep your attention on your ‘customer’ as you do your work, and find out what degree of change they are ready and eager to implement.

You are probably pretty good at working with a process for learning and improving over time, as well as looking out for ‘what’s next’ on the horizon. Watch out for changing perspectives and direction too often as you go, and losing perspective on what matters long-term. This is where you can bring the Modifying and Visioning styles to the foreground; use them to focus on a detailed plan for short-term results and a long-term plan to track progress toward the goal. This will help your team develop versatility and bring out the best each person has to offer to achieve your goals.

**Cultivating synergistic relationships**

When it comes to working together, you will likely aspire to having a novel way of organising yourselves while adapting and combining work processes you’ve learned from successful teams you’ve been on in the past. You will also want a lot of flexibility in doing your work, plus a balance of intense work periods with time for study and reflection. Is there a problem with that? Only if you don’t allow for steadiness and detail-orientation in developing new ideas. If you experience tension in your team relationships due to this imbalance, make sure you look to the Modifying style members on your team; they can help if you allow them to. In addition, as a whole your team may not provide the time to dream and unfold long-term ideas; you will need to consciously seek to bring more of the Visioning style into your work together.

You may find that certain people on your team are quite opposite to each other in how they approach solving a challenge: those who want to explore ideas that are adventurous, unique, and revolutionary vs. those who modify current circumstances to optimise them. Rather than seeing this as a problem, you can take advantage of the diversity. To benefit from such differences, synergise them by practicing patience, recognising the limitations of using only one over the other, and ultimately ‘trying on’ the opposite to see the true value of what the other person(s) can give to your team.

Team values are what bring people together to work collaboratively towards mutually-important goals. To identify your team values, your tendency will be to ask: ‘What values prompt us to learn and expand in new ways? what values are already
evident in your day-to-day activities? What values do we trust as reliable guides in different aspects of our lives and work? You can round out the potential set of values for your team if you also ask which values represent your highest ideals. From that full plate of choices, your team can focus in on the core values that will energise your commitment to work well together, as well as the perseverance it takes to succeed.

**Leading and innovative team**

Leading an innovative team has three significant tasks: ensuring team achievement, empowering the talent, and strengthening team values. That means, first of all, to guide and facilitate how well the team practices its Innovation Style strengths and addresses its potential pitfalls, as outlined in the ‘At a Glance.’ In addition, here are a few other tips to consider.

When charged with a new assignment, your team will likely want to take off by questioning core assumptions about how the assignment itself is defined, as well as seeking solutions that might develop from novel combinations of what already exists. Secondarily, there would be a push inside the team to look at the refinements or short-term successes. Those are important impulses for heading towards solutions no one has considered before. But be aware of the potential need for, and lack of, a long-range vision that could provide a greater sense of boldness and creative drive in your work.

What feeds innovative thinking is new knowledge and learning, and your team leadership can nurture the climate by introducing learning that includes new, relevant information and the opportunity to develop totally new skills. At times, you may also need to intentionally introduce learning that builds on current skills and focuses directly on achieving a long-term vision – even if this emphasis might not be as popular with the majority of team members.

Team values are the glue that holds a team together, especially when facing the adversity of a difficult goal. You can strengthen the team’s values by making sure that a dialogue on values is a frequent part of the life of your team: ‘What are they? What do they look like in practice? How well are we living up to them in our work and our decisions?’ You are likely to get a good response if you ask, ‘How can we encourage each person to freely work in their own best way?’ and ‘How can we integrate everyone’s values into our teamwork?’ Be sure to also include a discussion of how your team can be resourceful and relevant, and achieve excellence in all you do. That will help to include all perspectives and round out the discussion.

**Team - leadership dynamics**

Your team leader prefers Exploring as a ‘first impulse’ Innovation Style, with Visioning as a ‘mild’ secondary preference. The emphasis on Exploring can be both the good news and the bad news. On the plus side, he and the team are both oriented to being broad and perceptive; on that basis, it can seem easy for them to develop strong ‘style’ rapport with the majority of the team. But they cannot lose sight of the need to give a special ear to those on the team who are more focused on short-term, practical accomplishments, especially the Modifying team members.

Since there are no other team members with Visioning as a first or second style tendency, the team leader will need to emphasise and bring out his own preference for Visioning more strongly. They need to take the lead in developing a longer-term vision and using it to keep the team focused in its activities. This will fill a void that would otherwise keep the team ‘off balance’ in achieving its goals of developing and implementing innovative e-learning products, services, and technologies.
In all of this, the team leader’s emphasis needs to be on bringing out and synergising the opposite styles within the team – something that could be difficult if there are pressures to achieve a challenging task. To optimise team innovation in such a situation, it is important to cultivate within the team an overall attitude of ‘respecting differences,’ while developing personal versatility in all of the styles.
Section 12: Case Study 2: - An Innovator – there’s something about Michael

Mapping an innovator’s journey

The essence

The following 10 points are the key issues extracted from the interview with Michael Coghlan. Use them as conversations starters about the role of innovators in your organisation!

1. An innovative practice is often initiated and developed outside a work context and there can be a time lag before the workplace is ready to embrace it. Therefore, the innovation can be more ‘innovative’ to the workplace than it is to the innovator.

2. An innovative practice is often initiated through personal interest and motivation and involves a significant out-of-work-hours investment. This is an innovator’s ‘parallel life’. The workplace is often unaware that this activity is taking place.

3. Active networks are critical to sustaining an innovative practice and these networks may not be part of a work context. There can also be blurred boundaries between professional and personal networks.

4. Champions can often see the potential for an innovation before an innovator does. Their role as ‘opportunity spotters’ and advocates often enable innovators to develop their expertise.
5. Catalyst opportunities can propel the innovation and the innovator into the spotlight. The Framework is a significant catalyst for many innovators to build their capability and profile.

6. There can be a difference between interest in the innovation and interest in change processes. Innovators may not be interested in or skilled at leading the implementation of an innovation.

7. Innovators look for opportunities to buy their autonomy. This enables them to continue their journey of growth and development.

8. Organisations can be both active and passive supporters of innovators. Passive support means allowing innovators to explore their innovations through self-funding opportunities. Active support is providing that funding, an enabling environment and a legitimate role.

9. There can be an uneasy relationship between innovators and their workplace and if managed well, this can be a creative tension that benefits both the innovator and their organisation.

10. Organisational restructuring destabilises an innovation focus, so innovators can be either assets or liabilities depending on where an organisation is in its restructuring history.

**Highlights**

These key quotes from Michael's interview will help you decide whether or not to read the full transcript.

**Defining innovation**

The only way it makes sense to me and is of value, is where you have got a context or an environment where people are allowed, encouraged and supported to experiment and try something new. So it is that kind of thing for me. Innovation is a space you can operate in.

**Blurred boundaries**

Work and play are no longer separate.

**Leveraging voice technologies**

Janet said ‘Why don’t you do the voice thing? That is what you should do.’ It was just so normal to me to be using voice in my work online which is so natural and normal and background noise. I hadn’t thought of it as being something that might be considered as innovation because for me it was already years old.

**Parallel lives**

… I felt I was leading parallel lives. There was really no connection between those two lives. Let’s call it the life of the innovator and the life of a person who is doing what they were paid to do within TAFE.

**Integration takes time**

Whereas now there are people inside TAFE who are aware of what I do in my other life and are asking me to bring the skills and knowledge that I have into TAFE. That’s been really satisfying as in a sense it’s come full circle.
Momentum ebbs and flows

If you wound me back four years, I was right in there with the devil of the implementation and really happy to be part of it. I’ve been thinking about this lately looking at it now. I just don’t know whether I can anymore, because we got to a point where in many respects South Australia led the nation, and then we wound back the clock.

Motivation

It is that motivating thing where it is internalised. You are just on that path because you are enjoying it and you know it is worth it and you do what you need to do to achieve the end.

The role of champions

Within the TAFE structure I was fortunate. Other people were looking at what I was doing and saying ‘Bring him in here.’ It’s funny that I didn’t push or knock on a door.

LearnScope funding

The appeal of that was that you were able to continue with your interest in e-learning funded by an outside body and that was recognised by TAFE as a legitimate part of your role.

Flexible Learning Leaders (FLL)

And then came the FLL program with its wonderful funding and its sense of freedom to work within a given context, to explore it in a way you saw fit.

A way of life

I spend a lot of time after hours. You have this other life that people basically don’t know about and that wasn’t bad. I was happy about doing that. Crazy, but some other people watch TV or some people read books, which is a big hole in my life. I wish I had time to read books, but instead of that, I have all of these connections.

An insight

It has dawned on me in the last couple of years – and I am a bit slow. I am paid to think! In a lot of what I do now, I am paid to think.

Qualities of people in your network

Interest in other people; interest in you; interest in change; interest in talking about new and different things in education, interest in your private life. An irreverence in all things controlled and controllable. A sense of humour. They have got to be people who you can connect with one way or another.

Background

An informal interview question for this research was ‘Who in the VET sector would you describe as an innovator?’ A number of names were mentioned. (Those identified were invited to use the research wiki to collaboratively co-design a strategy for supporting innovators. This is presented as part of this case study).
Innovate and integrate: Embedding innovative practices

A frequently mentioned name was Michael Coghlan, one participant describing him as ‘the voice guy’. Michael has had a significant role in introducing voice technologies into the VET sector. When asked why Michael was considered innovative, the response was essentially visibility and availability. Michael demonstrates and utilises his expertise on a regular basis in a number of local, national and international forums in both face-to-face and online contexts.

Michael has a high profile within the Framework community. He has been an active participant in several Framework initiatives including LearnScope, Flexible Learning Leaders, NET*Working Conferences, Australian Flexible Learning Community (2001–2004), the current E-learning Networks community, New Practices in Flexible Learning projects and The Knowledge Tree e-journal. For several years, his expertise with voice technologies has been utilised in many events and he is a regular presenter at showcase days, workshops and conferences. He has also written several articles and his network extends beyond the Framework. These activities have all been documented on Michael’s website which shows that since 1998, he has presented at over 40 conferences and facilitated 50 workshops.

Michael’s background is as an English as a Second Language (ESL) teacher. He has also been an e-learning facilitator, e-learning coordinator, and a professional development facilitator. In 2006, he is working at TAFE SA Adelaide North in South Australia for four days and one day a week in his own consultancy. The four TAFE days have been divided between work within the institute and secondments to two Framework projects – New Practices in Flexible Learning (Online Casting) and E-learning Networks.

What is life like for an innovative practitioner like Michael? What enables him and what creates barriers? What does he perceive as his role in embedding innovative practice and does this align with what is expected of him in his workplace?

This case study is an interview with Michael that maps his journey using voice technologies. It demonstrates a rich mix of personal drive, extensive networks that support and affirm, the impact of champions, the significant contribution of the Framework as an enabler of his development, the expectations from his organisation and the challenges and triumphs of working on the edge.

While this is Michael’s story, it reflects the story of many innovators within VET.

Thank you Michael, for the courage to tell your story.

Thank you to Adrian Marron, Executive Director TAFE SA Adelaide North and SA Flexible Learning Advisory Group (FLAG) member, for allowing it to be told.

Introduction

To prepare for this interview, Michael was asked to map his ‘voice tools’ journey and to identify key enablers that facilitated the development of his expertise. This was the focus of the interview. Michael’s journey started in 1997.

27 FLAG is responsible for the strategic planning, implementation and accountability of the Framework.
### Explanation of abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC</td>
<td>Michael Coghlan</td>
</tr>
<tr>
<td>Webheads</td>
<td>International community of practice for teaching English as a Second Language.</td>
</tr>
<tr>
<td>EFI</td>
<td>English for the Internet, international community for teaching English as a Second Language</td>
</tr>
<tr>
<td>OES</td>
<td>Online Education Service. Central service for TAFESA</td>
</tr>
<tr>
<td>Learning Times</td>
<td>An international online community of education and training professionals</td>
</tr>
<tr>
<td>FLL</td>
<td>Flexible Learning Leaders</td>
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<tr>
<td>Framework</td>
<td>Australian Flexible Learning Framework</td>
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<tr>
<td>NW Conferences</td>
<td>NET*Working Conferences</td>
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<tr>
<td>ELNET</td>
<td>E-learning Network of Australasia: an independent community of e-learning professionals working in the e-learning industry</td>
</tr>
</tbody>
</table>
**Explanation of abbreviations**

<table>
<thead>
<tr>
<th>Abbreviation</th>
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</tr>
</thead>
<tbody>
<tr>
<td>NetSpot</td>
<td>An e-learning technology and internet communications provider that has worked closely with the Australian Flexible Learning Framework</td>
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</tbody>
</table>

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**Transcript of interview with Michael Coghlan (16 October 2006)**

Marie: Michael, the focus on this research is embedding innovation. So I'd like to get your idea of what innovation is.

Michael: I know I've said it to you before, I was very uncomfortable with the whole idea of being an innovator, and I wasn't quite sure what innovation was apart from something new. And it is only very recently I think the only way it makes sense to me and is of value, is where you have got a context or an environment where people are allowed, encouraged and supported to experiment and try something new. So it is that kind of thing for me. Innovation is a space you can operate in.

Marie: What type of space allows that to happen?

Michael: There is an aspect of freedom about it. Not a sense of control which means well how are you going to measure that as per curriculum, or the training hours or the auditor. So there is also trust that if you try this new way, you as the educator, the teacher, know what you are doing and you will make sure that your students are going to pass the course. So all those external things you can be happy – I'm thinking of a manager or someone who is in that support role – you have to trust that your lecturers are going to do the right thing in terms of the external requirements, but may be experimenting at a micro level with their students. And that's to be encouraged.

Marie: What do you think the qualities of an innovator are?

Michael: I've been thinking lately about that question, more in the context of online and e-learning. Why do some people latch onto it and think this is great and others think I can't be bothered? I can see that it is great but I can't be bothered. Like I said I've always had a bit of a struggle understanding the concept of innovation. But lately, I'm starting to think that it is along those lines of people who like change and get a kick themselves out of implementing change. That chap that we heard a couple of weeks ago – the keynote speaker – I thought the most significant point in his little show was that if you see something that is worth the effort there's no concept of the time involved. You simply do it. And so I think the innovator recognises an outcome that might be a new practice, something different. And they don't care about the effort involved. It is internalised. It becomes what you are doing.

Marie: Like drive and passion?

Michael: Yes. I kind of baulk at the use of the word ‘passion’ these days, because it has been flogged to death. But it is that motivating thing where it is internalised. You are just on that path because you are enjoying it and you know it is worth it and you do what you need to do to achieve the end.

Marie: You have got here a map of your journey since 1997 right up until this year. It shows the whole range of your networks and the influences you have had that have assisted you on that journey. Where did it start for you?

Michael: Well, as you have heard me say before and is not actually indicated on this diagram here, is that it was actually in TAFE. We came back from summer holidays and had the Internet on our computers. I had no idea what it was. Very soon after that, I discovered English on the Internet which was a volunteer organisation. They
were asking for volunteers to teach ‘English on the Internet’ (EFI). So because I didn’t use it in my TAFE life, there didn’t seem to be any fit, I very quickly leapt outside – because I was teaching English at the time. I spent a lot of time teaching English online as a volunteer and that lead to the Webheads. Because a couple of people from ‘English on the Internet’ – Vance Stevens was one of them – went off and decided to do his own thing outside EFI, and I followed him. And we met in a virtual world called ‘The Palace’.

**Marie:** And what sort of environment was ‘The Palace’?

**Michael:** It was a 2D virtual world where everyone had an avatar that was a smiley and you could put hats on and ride bicycles and sit in chairs, but basically your avatar was a smiley you could hang things on. It was very basic, very low end because we only had dial-up back then, but it was really successful with students.

**Marie:** Engaging?

**Michael:** Really engaging, because you had a text chat and a button above your head and you had conversations and could move into different spaces. And that’s where Vance and I both had classes which were up against each other – my class and then Vance’s. And we would keep finishing classes. And students would say ‘Can we have another one?’ and we would start a new class and we realised that classes were irrelevant. People just liked meeting together on a regular basis and that’s how it started. And that small group of half a dozen to 10 people, just slowly grew to where it is now – maybe 200 to 300. And it is that daily supply and exchange of information about teaching English and how to use the internet in education was where it got rolling for me.

**Marie:** So it was more about the educational benefit rather than the technology – or a combination of both?

**Michael:** A combination of both. Always a combination. Vance was very clear on that from the beginning. He identified that this appears to be a group of people who want to teach and learn English, like hanging out together and love to experiment with the new stuff. The Webheads are the first to try the new things.

**Marie:** And nearly nine years down the track you are still in Webheads?

**Michael:** Yes. I wrote to them last night explaining my absence from Second Life®28 which is where they all are at the moment and that’s simply because my computer can’t cope with it.

**Marie:** So would you say that Webheads has been a mainstay and an important network for you throughout your journey?

**Michael:** It has been home. It has been e-learning home. Definitely.

**Marie:** How important is it to have that home?

**Michael:** You don’t really know until it is not there, and it’s still there and I just think that if it disappeared, I’d spend a long time wondering about those people. Where they are and what is happening to them. So I think it is very important and that is the scaffolding idea where we all feel very comfortable saying ‘have you seen this or have you tried this because it looks like it might be interesting, but we really have no idea. So together we try things and that’s in terms of the professional stuff. Personally, it’s been a really interesting space as well because things happen in people’s lives and that’s where you have this crossover between work and play that just blurs the boundaries.

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28 Second Life is a registered trademark of Linden Research.
Marie: It integrates?

Michael: Yeah. Work and play are no longer separate. I saw this as unpaid work, when I was doing this with the Webheads initially, and then it became a social thing as well. And then as you know my son spent an evening with one of the Webheads who I have never met and that kind of thing happens all the time. So it has become very much integrated into real life.

Marie: So Webheads – that was in 1997. What were some of the other influences in your working life?

Michael: Well, in a word, it’s Deb Bennett. A job became available for professional development in e-learning – or online education as we called it then. And she said ‘This is ideal for you.’ By then I had started doing some blended learning stuff – some ESL in the classroom with my students. I’m not quite sure how it came about, but Deb obviously knew about it and I feel like she tapped my on the shoulder and grabbed me by the scruff of the neck and ripped me out of there, but I’m really glad she did. And then I met all the people in the TAFESA Online Education Service (OES) Unit. And that was very much WebCT, in fact it was all WebCT. And that again had a kind of difference and a feeling of excitement. You were this little gang of people who were off on this journey – we were going to change the world. And slowly we learnt the error of our ways. But WebCT was important because what grew out of that slowly was WebCT was an international organisation and because people like Neil Strong, who was manager of OES at the time, identified and supported me and gave me the opportunity to attend conferences. And in case of our own conference here in Adelaide he basically handed over to myself and Deb. ‘We are going to have an Australian conference. You two organise it.’

So we were thrown into a situation where we had links to the international WebCT community. So here was another kind of community. The Webheads was one. It’s interesting now when I look back at that because I think there were very few of us – when we stopped using WebCT in South Australia, the emotional connection for me was that I had lost a connection with a lot of people and Deb and Catriona felt the same. The average user of WebCT in South Australia didn’t give a damn about that because they didn’t have that experience and it is actually interesting thinking about it now. I didn’t care about the product. But that product connected me to a bunch of people. So I guess I have always been seduced by communicating with a large group of people who are geographically dispersed. I just find that endlessly entertaining, and coming from ESL, it was hardly surprising.

Marie: And was there any other group at that time that supported you?

Michael: At that time there was Online Education Services. And I’ve got MindMedia here in kind of parallel. They happened around the same time and I discovered people like you, Tim (Cavanagh) and Jeff (Catchlove). You were not the WebCT group. You were this other group out there dealing with I suppose what could be even then labelled as innovation in a broader sense. It wasn’t just about online and e-learning, it was about new learning. Helping people do things differently – instructional design. There was a big e-learning component. When I came in, I felt like an outsider for a bit. In the long run, I mean that unit and you personally have been enormously supportive. But in the beginning I think it was a question of ‘Who the hell was he and who the hell are they and what are we doing?’

Marie: So there is a period of testing out with networks before decisions are made about who you link with?

Michael: Yes. And sometimes too going back to the WebCT example, I was teaching students online via email and websites and Yahoo® and whatever else you cobbled together, and then I was getting lured into this WebCT environment and I started
teaching with it with my students. And they all said ‘Can we go back to this other way?’ So I had this experience of the mechanism that joined me with these people wasn’t actually a great mechanism as far as the students were concerned.

**Marie:** The WebCT experience was an excellent anchor to many opportunities for you.

**Michael:** It was formal. The WebCT structure was formal paid work where I had a title and a job role and Webheads was after hours and on my own.

**Marie:** So there was a transition there. From the personal commitment and then translating it into a job role.

**Michael:** Yes. And that is where I know I have been very fortunate. People like Deb Bennett, like Neil Strong, like yourself – because I think it was actually you who said ‘Why don’t we get this Michael guy to come and work in our unit’. Within the TAFE structure I was fortunate. Other people were looking at what I was doing and saying, ‘Bring him in here.’ It’s funny that I didn’t push or knock on a door. There’s something about the Innovator too. You don’t mind that sense of other – being a little bit apart and out there. That is actually how you like it.

**Marie:** That’s a psychological sense of freedom.

**Michael:** If you get too close, you inevitably find it is less easy to do what it is you want to do.

**Marie:** Exactly!! So let’s move on. Now we are up to around 1999–2000 and now LearnScope starts to kick in.

**Michael:** And that was very much through the TAFE connection and MindMedia which was you, Tim and Jeff. And of course MindMedia was the home of LearnScope, this Framework professional development initiative. And initially, Liz Roarty said ‘Why don’t we get some funding to do a LearnScope project?’ I guess at this point Liz and I declared our hand. We were really interested in this stuff and if we were able to do it inside our working lives, then fantastic.

**Marie:** So when you declared your hand, who listened to you?

**Michael:** My manager. So we did have an educational manager who always wanted e-learning to happen and he recognised Liz and I made a start. So he certainly wanted us to go for this and he was really supportive and when the funding came through, everyone got half a day off a week and lots of support from the manager. Not only in that project, but all the way through. And that was a succession of LearnScope projects. The appeal of that was you were able to continue with your interest in e-learning funded by an outside body that was recognised by TAFE as a legitimate part of your role. So I think there were four or five or maybe even more LearnScope projects that I facilitated.

**Marie:** They have been a solid foundation, experience and opportunity.

**Michael:** And of course from there, you get further links. But then again I was probably fortunate to be working with yourself and Tim (Cavanagh) as you had the connections with LearnScope nationally – people like Robby (Weatherley) and Rose (Grozdanic) who to this day are regulars in my life and in my network, not just as colleagues, they are now friends.

**Marie:** What was the catalyst for you with voice tools online? Exploring that and developing expertise in that?

**Michael:** Well that goes right back to square one. Because when I volunteered to do this volunteer teaching for English for the Internet, this guy in San Francisco said ‘That’s great! Welcome to the gang. How do you feel about teaching listening?’ I’m all
of three months old on the Internet and I go ‘What the...? How is this possible?’ So he gives me a few tips and I suppose via email, he probably pointed me to a couple of websites – I am not quite sure. My first teaching job on the Internet was all to do with audio. So internet and education to me was audio right from the start. So I just potted away with the various tools that came on board. To me it was normal, and I know you’ve heard this before because I am eternally grateful to Janet who was Janet Simpson then and now is Janet McMillan. Because I had a go at a Flexible Learning Leader (FLL) application and she beat me and I didn’t get it!

Marie: That’s right! I remember that!

Michael: And the second time around it was Janet who said ‘Why don’t you do the voice thing? That is what you should do.’ It was just so normal to me to be using voice in my work online which is so natural and normal and background noise. I hadn’t thought of it as being something that might be considered as innovation because for me it was already years old. But Janet was so right!

Marie: It was innovation in that context at that time.

Michael: So Janet, God bless you because that just changed everything. The right people, the right time.

Marie: And the right champions.

Michael: Yes.

Marie: That sounds like a pretty important part of the whole thing. So what was that Flexible Learning Leaders experience like for you as far as accelerating this journey looking at voice tools online?

Michael: Huge. Exponential you could say. Just to go back. I had the Webheads community. Then there was the WebCT community and then there was the LearnScope community, so I guess by now I’m starting to feel to myself ‘My God, this is pretty exhausting!’ Keeping track of all these connections. And then came the FLL program with its wonderful funding and its sense of freedom to work within a given context, to explore it in any way you saw fit. And again it is connections with more people because within the Webheads community were people that I wanted to go and meet so I could. I got to meet Vance (Stevens).

Marie: So that was the first time you met Vance? In 2003? So you had been working with him since 1997 and the physical meeting was in 2003? Wow!

Michael: And a crucial part of the FLL was LearningTimes. I had no idea about Learning Times, but because my interest was voice, and I was looking for a space where I could put my materials and maybe run workshops, experiment with voice tools and run a listerv. Alan Carrington from Adelaide Uni had come into the picture – one way or another he said LearningTimes. I contacted LearningTimes, Jonathan Finkelstein – this name rings a bell. I had met Jonathan years before at a WebCT conference briefly when he was interviewing Deb Bennett as an innovator in WebCT. So Jonathan was working for HorizonLive and interviewed Deb. I was there as a bit player in that little event. And I realised Jonathon was one of the brains behind LearningTimes. There is so much one could say about the FLL program, but it gave you and extended group of colleagues and friends within Australia and the international stuff was just cemented and new links forged. And of course what happened as a result of that hook-up with LearningTimes was that LearningTimes became an integral player in Framework activities for the next couple of years.

Marie: So you brought that into the Framework?

Michael: I guess I kind of did. You never think of it in terms of ‘I’m bringing this in’.

Marie: You were the catalyst!
Michael: Yes. I had worked with this community and people saw it and thought it was good and thought ‘Why can’t we use that? Michael, you talk to them.’ So I talked to them, then the hook-up was made.

Marie: So at what point do people start to focus on you as an innovator and want to tap into your expertise? When you look at your map, it seems that with your Flexible Learning Leader (FLL) focus, your networks seem to become more dense and more complex.

Michael: Yes it does doesn’t it? Just to be fair I need to skip back and mention something prior to the FLL thing. Was there any other support? Douglas Mawson Institute Council Fellowships.

Marie: That was a fairly lively time!

Michael: It was. It wasn’t e-learning specific and a number of people were given these fellowships. That was enormous for me as well.

Marie: What did you do with that?

Michael: I went and presented to a conference in Israel. I spent a lot of time working with the WIMBA tools.

Marie: That was another catalyst to accelerate you a bit.

Michael: I remember being asked when I talked to the Douglas Mawson Institute Council and being asked what were the outcomes of the trip and I remember saying something like ‘I don’t think that is going to be apparent for years’. And I was right.

Marie: So how do you live ahead of your time like that Michael, in an organisation like TAFE?

Michael: I spend a lot of time after hours. You have this other life that people basically don’t know about and that wasn’t bad. I was quite happy doing that. Crazy, but some other people watch TV or some people read books, which is a big hole in my life. I wish I had time to read books, but instead of that, I have all of these connections.

Marie: So there is a huge underground investment that is not apparent in your daily work practice to build up your expertise and your networks?

Michael: Well, I guess it could be put like that. Like parallel lives. And sometimes they crossed over and when they crossed over as that little diagram shows, as the years go by there is more and more crossover. In fact it is almost to the point now where the crossover, where the other world is calling more than the TAFE world.

Marie: What is the difference between those parallel worlds? What is the TAFE world like for you?

Michael: It has changed over time. When there was the WebCT stuff happening, MindMedia – I felt very much part of the organisation. I cared where the organisation was heading, I liked the directions that we were taking, I felt there was a level of support. And we don’t need to go into the detail – but years later I find myself – and we talked earlier about an innovator doesn’t always liked to get bogged down with the details of the implementation. If you wound me back four years, I was right in there with the devil of the implementation and really happy to be part of it. I’ve been thinking about this lately, looking at it now. I just don’t know whether I can anymore, because we got to a point where in many respects South Australia led the nation, and then we wound back the clock.

Marie: The organisation?

Michael: Yes. It feels to me like we lost momentum. We lost our way and I can’t …
Marie: So you have got to keep moving and you are not prepared to do the catch-up again?

Michael: I’m not willing to say not prepared to. I know it is a big struggle for me at the moment. I just think ‘We did all this before and then we let it all slip away’. I’m fumbling for words here as I’m not quite sure where I am in my thinking for that bit. When you are part of that process of change and it is supported and encouraged, I didn’t worry about the detail. I realised that the detail was important.

Marie: You could see the impact and you were part of the impact.

Michael: Now it’s like I’d rather function at a level slightly above the detail. Maybe too because I am older and a bit wiser I have more knowledge. Maybe that’s just a natural process. But there are still things that I’m very happy to be involved with – like the implementation of virtual classrooms, training in e-facilitation and the integration of blended learning approaches – quite a lot of stuff really.

Marie: Maybe that is where your growth is at.

Michael: It has dawned on me in the last couple of years – and I am a bit slow. I am paid to think! In a lot of what I do now, I am paid to think.

Marie: You are paid to think. Is that thinking valued within the organisation?

Michael: Now, yes. And it has been something of a … Look we all know there has been upheaval in TAFE South Australia. But I guess there are always reasons whatever the context, but as I said, I felt I was leading parallel lives. There was really no connection between those two lives. Let’s call it the life of the innovator and the life of a person who is doing what they were paid to do within TAFE. It was perfectly satisfying. Whereas now there are people inside TAFE who are aware of what I do in my other life and are asking me to bring the skills and knowledge that I have into TAFE. That’s been really satisfying as in a sense it’s come full circle.

Marie: So the recognition is coming back and that recognition allows you to ground it more.

Michael: Yes. How come that changed from feeling a little bit on a limb to now looking at how you can integrate it a little bit more?

Marie: Who has enabled that?

Michael: Well Alison Russell was one.

Marie: She’s a General Manager (at TAFESA Adelaide North)

Michael: And I don’t know how that happened. I’d have to stop and think actually. It is undoubtedly people.

Marie: It seems that when you are talking about your journey, there have been a number of people who have been catalysts or champions that have created a space to enable you to do things or have seen your potential or the time has been right.

Michael: And I always come back to who I also liked. We got on.

Marie: How important is that?

Michael: It is baseline. I can’t do it if that is not there. I just can’t do it.

Marie: What is it about those people in your network who facilitate your growth and keep your energy moving? What is it about them that appeals to you?

Michael: You know, there is basic decency, take that as read. Interest in other people; interest in you; interest in change; interest in talking about new and different things in education; interest in your private life. An irreverence in all things controlled
and controllable. A sense of humour. They have got to be people who can connect one way or another.

**Marie:** How do you harness the power of innovators in an organisation like TAFE, so that the unique contribution they make is an asset? A lot the stories when you talk to innovators, is that they spend a lot of time ducking and weaving and staying under the radar screen, and are very champion dependent. What would it take for an organisation to recognise the role of an innovator in a legitimate way?

**Michael:** Cold hard data or step-by-step plans – I have no idea. I think it is the culture. Allowing the time and the psychological space for it to happen. And I mentioned that I just think we have just got it so wrong, in so much of what we do. This is what I used to do instinctively and it is very interesting to think about this now. I was a classroom teacher. I had a roll book I had to sign and tick off to make sure my students were passing the competencies that were mentioned in the curriculum, but I never did it in order. I’d give the curriculum a scan so I knew very broadly what we were supposed to be doing. Then I would do what I thought was right and what they clearly wanted. And every four–six weeks, or maybe once a term, to go back to the curriculum and tracking documents and fill in after the fact. And if you operate that way, you can do all sorts of interesting things. Cater for student needs and do it all in reverse. I just think … . Your question was how do you support educators – suggesting things like that. Don’t be a slave to this document. Trust yourself as an educator. Do exciting things. You know what these people need. Get there any way you reckon is a good way to get there. And yet at the end of the day, we are an organisation that has got to account for the money that we are given and we want people to pass to an accepted standard, make sure all the dots and stuff are filled in. But how you get there is up to you.

**Marie:** So where does New Practices [in Flexible Learning] fit into all of this?

**The actual program.**

**Michael:** Well apart from the fun and the hard work! Well again I was invited to take part on a New Practices [in Flexible Learning] project on voice technologies. So again this became a situation where money was coming into the institution that could release me to take part in the project. So it was a legitimate form of activity within my TAFE working life because it was paid. In terms of my TAFE working life, zero connection. The ultimate goal of these things to have people use them back in their classroom or with each other in professional development or with meetings is almost zero connection. And I guess probably I felt this is where I may need to be wrapped over the knuckles a bit, in terms of my headset when I am involved with those projects, I don’t give much mental time to the idea that people will actually use this in the workplace in TAFE. I’m thinking of how people will use it in other places.

**Marie:** Why are you thinking that?

**Michael:** Well I guess I see evidence of it in other places and I don’t see evidence of it where I work very much. It is changing slightly.

**Marie:** So there is that state of readiness in an organisation to pick up and run with a new practice?

**Michael:** Yes.

**Marie:** And from your experience, what is the nature of that readiness?

**Michael:** Well I think we touched on it earlier and it is really quite simple. They have an immediate need and realise they have to change things so they bring in the hotshots – whoever they need to make it happen – Now please!
Marie: You’re doing a bit of hotshot work around the country and internationally, so can you paint a picture of what your life has been like this year as far as where you have been and what you have done and who you have engaged with? Just give a snapshot of that parallel life you are leading?

Michael: Because this year I actually opted to work a day a week for myself, and because approximately a day a week is allocated to a New Practices [in Flexible Learning] project which takes me interstate a lot, probably on average every second week this year I have been interstate somewhere. Sometimes it is part of the formal New Practices in Flexible Learning projects because there is a lot of professional development attached to that now and people are actually asking – again other states and other places – are asking us to come and run workshops as a result of what we did last year. And because I guess I have made it known I am available to do things like conference presentations, run workshops, provide some e-moderation online, it has been all go. I now get – and I’m sure you have this too and it’s humbling – I now get phone calls from people I have never heard of asking me if I could do this for them.

Marie: You have been recommended by other people?

Michael: Or as someone said the other day. ‘We have a need. We have a virtual classroom. We have got to do this and we went searching on the Internet and I found your name. Can you help?’

Marie: So how do you build up a profile and a reputation like that where people are now coming to you as a valuable source of expertise?

Michael: Really good question. And this is where from the start I did something – and I don’t know why I did it – but I did something smart. I started a website. And pretty well just documented everything.

Marie: A pretty comprehensive website.

Michael: From the garbage to the good, from the beginning to now, it is all there. And the number of times I have had contact with people through that – which sometimes is a pain in the neck, because basically you don’t know them and they say ‘How do you do this and can you do that?’ So you’ll spend several hours over the course of a couple of months helping this person out. And there certainly is no money involved. It is just another little internet transaction where you are out there being the good guy passing on your skills and knowledge as I have certainly been a recipient of that.

Marie: Generosity of spirit.

Michael: The pioneering thing is out there on the Internet so I like to do that. But then two years later, because they know someone else, it comes back in from another place and they want to do something. So it has actually helped my profile I suppose. Just be there. And I smiled when Marc Prensky was here in Adelaide earlier this year and he said the best thing that any teacher can do is to put it all up on the net. Every single lesson plan you ever give, put it all up daily. Just put it up. My wife who is an ESL teacher did it for a while and things started to happen for her.

Marie: So it is presence.

Michael: Online presence. Get it out there and the world will come to you. It sounds corny doesn’t it, but that is what happens.

Marie: There are two philosophies there. One is that you keep your knowledge to yourself and become the guru. And the other is that you give it away to create new space for new things to come in. Do you think that innovators have
got that generosity of service and sharing and wanting to engage with other people?

Michael: Certainly my experience within the Framework, within the web and the New Practices [in Flexible Learning] community is yes. It’s very much a spirit of sharing. In fact that is what it is about.

Marie: So looking at your experience and your journey and considering the community of innovators in Australian and elsewhere, if you were to give them some words of wisdom or advice about how to thrive within an organisation to keep your innovation potential moving forward, what would you say?

Michael: A lot of what you need to do to keep the momentum, you have to do in your own time – outside the system so to speak. But within the system, within your working environment, find the good guys because there are plenty of them. And I don’t think it is enough just to say – I know I say it sometimes in conversations with people like you – I just can’t be bothered with it – but the reality is while I am there I do bother with them because that is the name of game. It comes back to relationships again. So people represent different sides of an issue. Let’s say IT versus the teacher one which is a bit of a false thing to set it up like that. Where it is a really good idea to get to know those people, because the more you know them, the more you show interest in them as people, the more likely they are to help you and they will help you and we are actually on the same side. So you are going to have to do a lot of stuff on your own in your own time. But that is the nature of innovation. It is not easy and I don’t think that anyone is suggesting it is easy. If you go down the innovation path, you are going to work late, you are going to put in more hours because that is the nature of who you are and the nature of the beast. But that is where you get your satisfaction. So I don’t think that any innovator is going to complain about that. Cultivate relationships within your workplace because you just never know. In fact I had a conversation with a couple of TAFE people who wanted to talk about a 15 year vision for TAFE. They, like me, have had other lives and we just had this conversation that blew me away. And I thought ‘Did I just have that conversation about TAFE?’ In a TAFE room? On a TAFE campus? And I did. And who knows what will come of it. There’s a couple of people who are thinking out there that we have got to change what we are doing.

Marie: So how do you as an innovator or do you, influence stakeholders within organisations like managers and decision makers?

Michael: I don’t.

Marie: And why not?

Michael: When our keynote speaker last week asked what you did on your first date I couldn’t answer because I didn’t have one. And maybe way back then, I didn’t court girls. (Mostly because I didn’t like competing with other guys!) I didn’t ask them for dates. And there is something similar in this. I don’t court favour. I don’t try and get people to do what I want to do. I think I go quietly about doing what I want to do. Allow it to bubble up?

Michael: Yes. And if people happen to spot it and come on board, great! My role is not to change an organisation. My role is to do good practice.

Marie: Critical points. So those spotters who see the potential of what you do are doing are really translators of that.

Michael: And good on them I suppose. They are the people who are more important. If you are looking at organisations, they are the ones you need. You need both I suppose, because I am not going to go change anything.
Marie: You need a range of roles and diverse contexts and spotters and innovators and doers and implementers. And they are all important. Equally. They are just different.

Michael: And you need people who are able to change the infrastructure. And it is not the IT infrastructure. But the tracking and the monitoring and all that stuff that bogs us down and makes it so hard to change. You need those people to be on side as well.

Marie: As we wrap up Michael, on final reflection about the role of innovators, you are saying that your role might not be to embed. Your role might be to lead and to open up new opportunities. So where do you think innovators fit within an organisation? Their unique role?

Michael: I don’t know. I think they probably exist in all levels of an organisation. And some might be very public and influential and some very kind of low key and doing their business in the corner of the institute somewhere.

Marie: So you can’t necessarily pick them.

Michael: No, I don’t think so. What do you think?

Marie: I think there are the loud ones, and I think there are the quiet ones. I think there’s those who make great leaps and those who make small steps. I think they are all important.

Michael: They are in there and they are loving it.

Marie: And I guess it’s about attitude and relationships and about valuing the human technology and encouraging them to be the best they can be, however they choose to label themselves.

Michael: It is progress. It is moving forward. It is betterment. And if that means outside the square where the idea of innovation really comes in, that’s what has got to be allowed and encouraged.

Marie: Different shapes.

Michael: Yes!
Section 13: Case Study 3:- An innovation – embedding digital storytelling

Digital storytelling is the art of telling stories with some mixture of digital graphics, text, recorded audio narration, video and music to present information on a certain topic.

Bernard Robin (2005)\textsuperscript{29}

This case study maps the growth of digital storytelling as an innovative e-learning practice in VET from the perspective of a digital storytelling innovator – Carole McCulloch. It focuses on identifying the key characteristics that have contributed to digital storytelling becoming a well embedded innovation in VET.

Case study structure

The case study has three parts.

PART A

An interview with Carole McCulloch, a pioneer of digital storytelling in VET, highlights the key factors that have enabled digital storytelling to become an everyday practice for many VET practitioners and their learners. Of particular note is the critical role of a core group of practitioners who have used their networks to spread digital storytelling across VET and how champions have fostered that process.

PART B

Innovations that are perceived by individuals as having greater relative advantage, compatibility, trialability, observability and less complexity will be adopted more rapidly than other innovations.

Rogers and Scott

The focus of Part B is on using Rogers’ five innovation attributes as a template to document key factors that have contributed to making digital storytelling ‘embeddable’. These five attributes are: relative advantage; compatibility; complexity; trialability and observability. This template can be used as a guideline for determining whether or not an innovative practice is likely to be embedded.

\textsuperscript{29} <http://www.coe.uh.edu/digital-storytelling/powerpoint/educational-uses-of-DS.ppt#256,1>The Educational Uses of Digital Storytelling>
PART C

This is an implementation plan based on Rogers’ five stages in the innovation adoption process. These stages are: awareness, interest; evaluation; decision and adoption. It demonstrates how the use of an adoption and diffusion template coupled with some key questions, can focus attention on what needs to be done to influence the uptake of the innovative practice at different stages in an embedding process.

Part A: An interview with Carole McCulloch

Carole McCulloch
Interviewer: Marie Jasinski
Date of Interview: 30 September 2006

Macro Dimensions website: <http://www.macro-dimensions.net/>

The essence

The following 10 points are the key issues extracted from the interview with Carole McCulloch. Use them as conversation starters about the factors for embedding innovation in your context.

1. An innovative practice is often initiated by a group of enthusiasts who build initial expertise and then influence uptake by taking on a professional development role.
2. Seek alternative sources of funding if one avenue does not work out. If the new practice is worthwhile, it will find a way.
3. The backing of a champion at senior level cannot be underestimated.
4. Selecting the right level of technology for the user group can make the difference. There’s no need to start with high-end technology.
5. A catalyst for success in embedding a new practice includes working with a multi-disciplinary team who share a common vision, but may have different interests and expertise. This can spread influence in different contexts and for different purposes.
6. A facilitated and funded network provides an anchor and a focus and supports the uptake of an innovation. Providing free resources and tools can also make a difference.

7. An innovative practice that demonstrates immediate benefits, solves a training problem, and is easy to learn can be embedded very quickly.

8. Sophisticated use of an innovation like digital storytelling can have humble beginnings as starting from the personal gives meaning and builds confidence.

9. Interest in digital storytelling can be a catalyst to develop computer skills as people are motivated to learn new skills in order to complete a task.

10. An innovation like digital storytelling that is adaptable to a range of contexts, easy to use, costs little, places small demands on the infrastructure, and demonstrates immediate benefits is a formula for successful embedding.

Highlights

These key quotes from Carole’s interview will help you decide whether or not to read the full transcript.

**Passion is the driver**

If I didn’t have the passion, I wouldn’t be doing what I am doing now.

**A champion is critical**

She could see its potential and I think one of the reasons I like working with her so much is she had an open door policy, and an interest in innovation was always there.

**Core drivers**

And we learned from our days at Australian Centre for the Moving Image (Melbourne) how to run workshops, so each of us then went off and ran our workshops.

**Acknowledging different styles**

It’s calm, it’s purposeful, it’s passionate and she embraces the methodology and always turns it around to fit the person.

**Using networks to influence**

In 2005 we were building the network, we were exploring again how to enthuse people, to give things for free.

**Focus on improving**

So we were looking for ways around the difficulties. Always seeking solutions …

**Extending boundaries**

Once I had moved beyond the boundaries of Victoria, it was easy to see the potential of it nationally and internationally. So being part of that network with the online events was another big jump forward to share the digital storytelling learning.

**Adaptable and versatile**

The manager of the abattoir saw it as an immediate way of embedding the learning for the new slaughterers on the floor in a way that suited their work pattern.
A tipping point
… digital storytelling took another leap forward when it was accepted as a creative report. As soon as we said you may send in your report as a story… that is where it took off big time.

Keep a practitioner focus
Right now I see myself as coach and mentor. More of an enabler than a practitioner I guess, but I do like to do the practitioner job too, otherwise I can’t understand the changes people are asking me to help them with.

Barriers
The barriers are those that teachers often bring up – no time to play, not having [Microsoft® Windows®] XP. There’s always financial barriers. There were infrastructure barriers like contracts.

Digital storytelling as a tool
People come in to learn about computing because they want to download their photos and they want to build their photo album into a story so they have to learn a bit more about the software. ICT learning by stealth!

Innovation
For me, innovation is looking at a new way of doing something that you have always done. It’s not an invention. It’s an innovative way of doing a task or building something or a new look at something. To me, that’s the way flexible delivery was striking me – what we need to do is think differently.

Managing innovators
They need to be given more free rein rather than managed. Of course there needs to be some constraints but they are more likely to know what they are anyway. They are not likely to be causing financial hardship for their institute or giving them a bad name. They know how it works. They are professional people. Why can’t they be given freedom?

Background
Digital storytelling was unsuccessful in its application for a New Practices in Flexible Learning Project in 2004, yet has progressed through other sources of funding and support to become a successful e-learning innovation. This interview with Carole McCulloch tracks the journey of digital storytelling since her first exposure to it as a Flexible Learning Leader in 2002.

Carole has been employed as a teacher, coordinator, instructional designer, leader and project manager at Swinburne, Wodonga and Goulburn Ovens Institutes of TAFE in Victoria and was a senior Project Officer for TAFE Frontiers for three years from 2003–2005.

Carole’s expertise and knowledge in the digital storytelling pedagogy developed as a result of her participation as a Flexible Learning Leader in 2002 and her employment with TAFE Frontiers. The Digital Storytelling Network was established by Carole in 2005 as one of the first Framework E-learning Networks.

Carole has been an active participant and project leader in several Framework initiatives including LearnScope, Flexible Learning Leaders (leader in 2002), NET*Working conferences, and forum moderator for the Australian Flexible Learning...
Community (2003–2005). She has been the coach/mentor for the facilitators of the current E-learning Networks for 2006. Carole has also been a community leader in the E-learning Creative Community Partnerships Project (2005–2006) and fulfilled the role of Support Project officer for the Victorian LearnScope managers (2005–2006). She has contributed to The Knowledge Tree e-journal (2005) and to three major research initiatives funded by the Framework in 2006: Social Software for Learning Research Project; an E-portfolio Study for the VET system, commissioned by the E-Standards for Training Project of the Framework; and the Applied Research Project on embedding innovative practice in e-learning.

Carole now runs her own consultancy which enables her to work as a virtual worker for many educational and industry organisations across Australia. In her consultancy role Carole is now focused on the provision of leadership and mentoring roles for the emerging groups of e-leaders in Victorian RTOs. Carole’s work includes coaching and mentoring for LearnScope team leaders and managers; Framework E-learning Networks facilitators; Knowledge Bank Network facilitators and providing individual support and workshops for community-based learning centres across Victoria.

Introduction

To prepare for this interview, Carole was asked to map her digital storytelling journey and to identify key enablers that facilitated the development of her expertise. This was the focus of the interview. Carole’s digital storytelling journey started in 2003.

**BBC Wales** – Site of first digital storytelling conference and the birthplace of the Welsh digital storytelling programs.
TAFE Frontiers – (1999–2005). A professional development, learning materials development, and support organisation for RTOs and Community Education Centres across Victoria. The strategic model for TAFE Frontiers was based on building capability; applying research; developing learning materials and distributing knowledge based know-how, under the guidance of Sheila Fitzgerald, Executive Director.

ACMI – Australian Centre for the Moving Image, Melbourne. ACMI provides digital storytelling workshops for public and private groups, archiving their stories in the Memory Grid, a popular exhibition at this centre located in Federation Square.

Digital Storytelling Network – a community of practice for digital storytelling practitioners across Australia. With a membership of over 200, it operates as a communication hub for Framework and EdNA groups.

Digitales WIKI – this wiki was created, established and maintained by Robyn Jay as an easy to use learning environment for practitioners new to digital storytelling.

Harnessing Rural Skills – a successful E-learning Creative Community Partnership formed in 2006 between Wodonga TAFE, Hume ACFE, and the adult learning centres in five towns of north-east Victoria to introduce a digital storytelling program intended to capture the stories of ‘People, Place and Pastimes’ in the skills shortage areas of those precincts.

Transcript of interview with Carole McCulloch (30 September 2006)

Marie: When did digital storytelling (DST) start for you?

Carole: In 2002, that’s when it all started to make sense for me. That is when I realised I wanted to continue with digital storytelling. It was a by-product of my Flexible Learning Leaders focus. Remember I was focused on mentoring networks. That was something I’ve pushed along as well, but it wasn’t as strong a passion as DST was.

An opportunity arose for me to apply for the job at TAFE Frontiers. That was the catalyst for me. That was midway through 2003, I needed a new perspective and a pathway to achieve my other passion. I saw an opportunity to use the DST methodology for developing ICT skills in reluctant learners and TAFE Frontiers gave it to me. It was not the only reason I joined them of course; I was employed to foster a new Community of Practice called ‘The Source’ using open source ware sponsored through TAFE VC [TAFE Virtual Campus].

Marie: Do you think passion was the driver?

Carole: Absolutely. If I didn’t have that passion, I wouldn’t be doing what I am doing now. I would be doing what some of my colleagues keep telling me to do: ‘Take it easy! Relax! Retire!’

These were well intended pieces of advice from others. I want to rewire as you say. And this gives me the ability to do it. And because of my ageing family, DST gives me the ability to capture our own living history before it is gone.

Marie: So it has a personal meaning?

Carole: Absolutely. I have created many stories for my grandchildren and for my sisters – my own history. One of the first stories that I did was my own history. And I
was persuaded to do that when we did our training at the Australian Centre for the Moving Image (ACMI)\(^{30}\) in Melbourne. This took place in the beginning of 2004 when TAFE Frontiers funded our program – an alternative strategy that Sheila Fitzgerald had put in place. At the time Sheila got behind it and wanted to give me the wings to fly with it, so we talked it over and decided to come up with a lesser amount of money to fund the project, but nevertheless get it off the ground. She could see its potential and I think one of the reasons I like working with her so much is that she had an open door policy and an interest in innovation was always there. So she certainly has been a mentor for me.

Marie: You refer to her as a mentor, but is she also a champion?

Carole: Definitely. Sheila empowers you. I remember a statement that Sheila made when I first began working there at TAFE Frontiers was ‘Carole, I expect you to just do what we hired you to do. You don’t have to come and ask me permission.’ I was so used to having to do that inside TAFE – May I? May I? May I? At TAFE Frontiers it was I can! I will!

Marie: And what happened when you had that power?

Carole: I could plan! That’s my best thing – I could plan and know that I could actually fulfil it. It was a great feeling. So that was a really great feeling. So we planned it so I would include those people like Robyn Jay, Josie Rose, Glenda McPherson and Mary Schooneveldt along with Andrea Coghlan. We were then a little group. There were eight of us who were funded and Janet [McMillan] was one of those. And we all did the Australian Centre for the Moving Image (ACMI) course. I had found out about them probably through Robyn I think, who had seen their advertisement. And that was the beginning of 2004, so we took up the February option with the others.

Marie: Who were the eight?

Carole: We had Robyn, Janet, Josie, Glenda, Mary, Andrea, Louisa and myself. When we did the course another gentleman who was doing it off his own bat was Roy from the seafood industry. He went on to become our industry link in the TAFE Frontiers DST project. His story about the seafood industry – Worldskills 2004 is still an inspiration to others.

Marie: Ahh! OK …

Carole: Because one of the things that we wanted to do (and Sheila was keen on it) was to bring in the industry aspect of it and by the time we got started we didn’t have that industry connection. So we thought ‘It will happen’. Well it did happen – through Roy. He was doing the course and was such a dynamic guy. So we then bought him in to do more of the storytelling with the specific seafood industry perspective. So we were able to use some of the funding to be able to support him to do that.

From there we were able to come back together again from the course which was alright. We wanted to diffuse it and give it out to everyone. And just to let you know that at ACMI they have a full blown purpose built Macintosh laboratory with everything needed for digital storytelling – including a whisper booth for recording voice, so it was wonderful. And they were using the high end Adobe® Premiere®, and although we learned how to use it, we thought ‘No, this is too difficult for most teachers’ we wanted something simpler. So that was our task. Out of our next meeting we came together to debrief, we said we wanted to find the best, easiest, cheapest method. And so it was Robyn’s idea to go with MovieMaker [Windows®].

\(^{30}\) <http://www.acmi.net.au/>
So we did. And then my connections with Wodonga TAFE came into fruition. There was a great chap, who is no longer with them, but his name is Mark Chaston and he had found [Windows®] Photo Story. The very first instance of it – [Windows®] Photo Story 1. And he was running with that and doing one hour lunch time tutorials for his e-learning – he was the e-learning Manager at Wodonga TAFE.

**Marie: And you still had connections with Wodonga TAFE?**

**Carole:** Oh yes, always did. So once we found [Windows®] Photo Story and I told Robyn about it, Whoa! that took off big time. And then [Windows®] Photo Story 2 came on the scene. Well we had the whole scene wrapped up we thought – it was easy, it was free and it did all the things that we wanted people to learn.

**Marie: Which was what?**

**Carole:** To be able to tell their story – their personal story, and to teach others so that it could become a teaching tool in itself. So that’s when we decided that DST was a methodology. And we learned from our days at ACMI how to run workshops, so each of us then went off and ran our workshops. Robyn did a lot of workshops in NSW. My next tasks were in Victoria, so I did a lot of workshops there. Oh! I know who the other person was – Andrea Coghlan, from South Western Port. She was another one. I think I have left someone out, but I will come back to it. And Andrea did a lot of great work with Mary who worked together as a team and they have now gone off in different aspects and so it keeps growing. And Robyn has done the same and has had many a trip over to the West and up to the Pilbara and into Queensland. She is very well thought of in this particular role. She has a particular style about her that people like, is very community minded and empowering in her approach to living histories using DST. I learned a great deal from her.

**Marie: What is that style?**

**Carole:** It’s calm, it’s purposeful, it’s passionate and she embraces the methodology and always turns it around to fit the person. Do you know the story of how the Grandmother story came about? This lady wanted to tell the story of her grandmother, but didn’t have any photos, so it was Robyn who suggested that she use some pictures and drawings and this woman was very good at drawing. And she drew the pictures and learnt how to scan them in. It’s all that kind of learning as a by-product of what they were setting out to do. It was like the ladies from Bonegilla who took photographs of their pots and pans – showing them how to do that.

**Marie: So the big catalyst for you was going to TAFE Frontiers. What other catalysts have enabled you to move a bit more forward?**

**Carole:** Since then, there are quite a number of things. In 2005, it [TAFE Frontiers] was getting funding for the DST Network itself. It was a discussion with Janet and Robyn and Josie about ‘This could be one of those networks couldn’t it? Of course it can!’ So we applied and of course we got it. A lot of it came down to me because it was a method of income earning for me, so it wasn’t a shared project fund. And that was just the way it had to be at the time and that enabled me to put the amount of time into it and to start from scratch. And I think there is something like 300 members who are actually in there on occasion, but that is only the tip of the iceberg. The network not only reaches the VET community; it has gone wider than that and I’ll come to that in a minute. In 2005 as we were building the network, we were exploring again how to enthuse other people to give things for free. Just put all the resources up there like Robyn’s [Windows®] Movie Maker manual and then enable them to share their stories. We were a bit hampered initially because of the five megabyte (mb) upload. Now that it is 10 mb, EdNA has taken care of that issue for us. So we were looking for ways around the difficulties. Always seeking solutions …
Marie: And never giving up …

Carole: Never giving up – no. Because we all had a shared vision I think, about its power and its potential. I remember Janet when we showed her one of the stories at one of our South Australian workshops at 2005 – and she was in tears. And I knew then – and I thought that this was just a nice friendly little movie – that the personal story affects everyone in different ways. That was a nice buzz coming over to you guys in South Australia. I think that was one of the first times I was testing out my skills for a group of people who were not Victorians.

Marie: What’s it like to move out of your local patch?

Carole: I like it very much. If you had asked me that over 20 years ago you would have had a completely different answer. Maturity helps that along. Being in the same school for many years and not wanting to move out of it was part of it. Once I’d moved beyond the boundaries of Victoria it was easy to see the potential of it nationally and internationally. So being part of that network with the online events was another big jump forward to share the DST learning. And that was when I first did some online delivery and I worked with Queensland Emergency Services last year and they built all their skills from that.

Marie: Online?

Carole: Yes, we used Elluminate [Live!®].

Marie: And how is that as far as a training environment?

Carole: It’s absolutely the best. I use it many, many times now in different facets of my consultancy services to teach, mentor, guide and coach with. It is my best tool. One that comes after that is probably [Microsoft®] PowerPoint® because it goes hand-in-hand with how you put your stuff up there as content. Being able to share my applications is my way forward. Once I know how to that, I can teach them online in a new and engaging way.

Marie: Do you need to continue to build your skills to teach them to others?

Carole: Yes, because I remember in that same year Goulburn Ovens called me back to do a workshop with them and they didn’t have [Microsoft®] Windows XP so I had to find another product that would do the job. That was how I found [Microsoft®] PowerPoint® Producer. Now this piece of learning and exploring is an interesting one that has taken me back to Wodonga. So at the end of 2005, Mark Chaston called me in to do what they call ‘Experts in Action’ at Wodonga. And what the guys were doing there was taking raw video footage in the workplace that they were involved with – one was a baker and one was a butcher. And they learned how to use a digital camera and how to bring it back and download their videos to PCs. We had to get a special card for this one PC in their Project Factory – a space within the Library and Information Resource Network space at Wodonga TAFE. And then I stepped in to show them how to bring pieces of their video into [Windows®] MovieMaker and to surround that with instructional design to place within a web page. This is where the PowerPoint [Windows®] for Producer software comes in – it enables the user to ‘webinise’ their digital movies. And the whole product was then to be placed on a CD-ROM so it was then taken back to their workplaces. So the baker was from Baker’s Delight and the teacher from the butchery was from the Tallangatta abattoirs. So I got very used to looking at dead things! The slaughtering process – and you become immune to it after a while, but I much preferred looking at how to bake bread.

31 <https://sas.elluminate.com>
Marie: What made DST so workable in an abattoir situation?
Carole: Well the Manager of the abattoir saw it as an immediate way of embedding the learning for the new slaughterers on the floor in a way that suited their work pattern. They could take a CD-ROM home for example. They are very skilled and organised in what they do. I have never seen it happen before, but there is a stage for everything, there is a specialist for everything. And for one person to move through that training, it takes a bit of time. And sure, it will still take time, but seeing it in context in a CD-ROM format and understanding it and asking questions about it, and to reflect and to study it, is their way of using the movies. And so it was the first time I had actually evolved the DST methodology into an instructional design perspective.

Marie: How important is that instruction?
Carole: For them it was very important and empowering, because they did all the work themselves. One of things behind that is they did not want to use the Multimedia Centre.

Marie: They seek alternatives?
Carole: So people work around it to find another solution. And they want to be able to do it themselves.

Marie: How important it that?
Carole: Well for them it was at the top of their list.

Marie: Why do you think that is?
Carole: For the two guys in particular, I think because of their learning style and their independence, it was probably an easy thing for Mark Chaston to do for me to come in because he knows that it would work. He knew my skills in DST and he and I had worked together many times in workshops so he knew how I relate to people.

Marie: How important is that – relationships?
Carole: It's number two on my list.

Marie: What is number one?
Carole: I think probably the motivation would have to be number one, because you can overcome a lot of things if that is there. Relationship building is the next one.

Marie: Motivation means having a passion and an intent?
Carole: Yes. There's nothing worse than trying to enthuse someone who is only there because someone told them to come.

Marie: That motivation – is it from providing better learning for students, or is it playing with a new technology, or is it a mixed bag?
Carole: A mixed bag. Now in the case of the butcher and the baker, they both saw a commercial dollar because this was an innovative piece of learning by which they could capture those markets for Wodonga TAFE so that was important. But they both saw an alternative way of instructing and engaging with their learners.

Marie: It was a business opportunity?
Carole: Yes.

Marie: How important is that?
Carole: Extremely. That was a big driver – business.
Marie: So when you talk about DST as a business activity, is that about sustainability? New markets? What is the business about?

Carole: It is about sustainability, but it is also about job satisfaction for the guys themselves, because that was a continuing thing. They would then build another one – we only built a small part of it. They would go on to build other parts of the curriculum, so for them that was ‘Hey! I am going to be an instructional designer. I can move out of where I am unhappy.’

So that was an interesting side step for me and it took the DST perspective into another realm that I hadn’t quite thought of myself, but could then see the potential and I could then use the story to enthuse others.

Marie: So you leveraged off it?

Carole: Yes.

Marie: So where has it travelled? If you take the picture of it now from where it started, if you were to map it, what would the map look like?

Carole: It would be like a mindmap and it would have multiple levels. It would look like – do you remember that game called Connect. It was like playing Checkers on different levels. So in my mind I’ve got this vision of a mindmap, but there’s layers of it on top of one another and they are joined vertically as well as horizontally. Because it is now stretching itself into different aspects of education – the primary, the secondary. You see some of those Knowledge Bank Networks (a Victorian initiative), and I am the mentor for them and several of those secondary schools are focused on digital stories. So the whole aspect of DST has travelled into different levels of education.

Marie: So is mentoring part of the DST skill set?

Carole: Yes

Marie: So you have DST skills, instructional design skills, the networking, the mentoring, what other things come into it? The funding opportunity?

Carole: Yes, certainly. And I guess the ability to use a variety of communication tools. And a willingness to pick up on all those that work for you – all the Web 2.0 tools that I researched have come in very handy lately.

Marie: Has that accelerated what you can do?

Carole: Yes, it has. Just in the last few months, it has really broadened it out and extended it. It is exciting too. I’m like the boys, I like to play with the toys and find new things. It’s good.

Marie: So if you were looking back at what this research project is about which is embedding innovative practice, so that it becomes more common practice, what are some of the enablers that you have identified?

Carole: Can I take a slight detour on that because the enablers for DST took another leap forward when it was accepted as a creative report. As soon as we said you may send in your report as a story, and it was accepted not only at state level, but at national level – for LearnScope – that is where it took-off big time. So now, when we are saying to the leaders, they would see its ability and new projects for the next year would spring up – and guess what, they were focused on DST.

Marie: So that was another catalyst?

Carole: Yes, absolutely

Marie: So digital storytelling itself was an enabler?
Innovate and integrate: Embedding innovative practices

**Carole:** Yes. Because then it had become accepted as a credible activity and method of reporting.

**Marie:** So how long did it take to get to that stage?

**Carole:** Well I guess from 2003–2005. A couple of years. During that time I had a couple of different experiences and stepped in as the LearnScope manager at an institute. And that taught me a few things because I was only there for a day as well as trying to do a management job. It doesn’t work. But that was the parameter I could give them and that is what they took up – so what I found was that my relationship with the Victorian LearnScope managers grew because I was one of them.

**Marie:** How do you see yourself now? What is your identity?

**Carole:** Right now I see it as coach and mentor. More of an enabler than a practitioner I guess, but I do like to do the practitioner job too, otherwise I can’t understand the changes people are asking me to help them with.

**Marie:** Do you think you have credibility with the practitioner group?

**Carole:** Yes

**Marie:** What about with a management group?

**Carole:** That is a nebulous thing because I am outside of organisations now. How important the relationships are and if you don’t have that with the management then the credibility is zilch.

**Marie:** How do you build that?

**Carole:** Steadily and with guts. No longer do I step back and say, ‘I can’t say that to him, he’s important.’ As I age I think ‘They owe me a little respect too thank you very much’. And I have enough experience to speak with confidence about the things I know.

**Marie:** Is that to do with speaking in your own voice with your own authority? Regardless of positional power?

**Carole:** Yes. I think the best experience for me with that was TAFE Frontiers because I was mixing it with more of the managerial side of things. And then given the role as the support person for the LearnScope managers in Victoria was another thing that helped that too. I learn from each person that I relate to.

**Marie:** If you were designing an enabling strategy to embed innovative practice from your experienced with DST, what key messages would you give to other stakeholders?

**Carole:** There’s many and the first one that springs into my mind is my motto ‘Lead, Follow and get out of the way’.

**Marie:** Lead, follow and get out of the way.

**Carole:** This is a quote from a writer of mentoring, and I think it holds true for me in many different ways. The true essence of a mentor. You do lead people, you then need to follow them and when they are really flying get out of their way. The other message is appreciate what they have done and do it in many different ways. Other key messages would be that because DST is so powerful, you need to allow that to be absorbed by the person in an individual way. I learned from my time at ACMI. I wanted to do an instructional story in my learning phase and I was persuaded to change it to a personal one, because my tutor said it was important that in learning about this new software you do a personal story – and she was right. That is another piece of advice that I would pass on too – that is has to be individualised always. The other message would be to continue to push the envelope. That’s a hard one as
many people are afraid to as they might lose their job, or they might be just told no or be given extra work to do, but if you are able to use a story to convince someone of its worth. Another message I’d give them is don’t go in with a business plan written on paper, go in and tell them a story. I learned about that from Stephen Denning. When I was in TAFE Frontiers, we had a workshop which I organised with him – many VET and higher education practitioners attended that one – I consider this one of the major achievements of my time at TAFE Frontiers.

Marie: If you were to do a network map yourself, what would it look like?

Carole: I actually have a piece of software to do that – to map. It’s called Inspiration®. It would look like a circular map in four quadrants. On the right hand side we are dealing with tools for communication. Some are real time and some are anytime. An on the left hand side you have got your networking stuff that branches out and overlaps and you never quite – there’s layers to it like chaos. It’s like the node system.

Marie: Looking at the progress of your network. What are some of the barriers you have identified.

Carole: The barriers are those that teachers often bring up – no time to play, not having [Microsoft® Windows®] XP. There’s always financial barriers. There were infrastructure barriers like contracts. My mission is to have digital storytelling on the road. I see us going all around the world. I have a model for that called Story Corps. They do not do moving visuals they just do audios. They pick up stories of people from the town in America.

Marie: Where do you see DST going as an educational tool?

Carole: This is what we are doing in the E-learning Creative Community Partnerships. We want it to be a sustainable program that allows people to come in to learn about computing or ICT in general, through a DST network and it is working. That was how Robyn and I first saw it.

Marie: Is what you are saying is that DST is becoming the tool not the product?

Carole: Yes. People come in to learn about computing because they want to download their photos and they want to build their photo album into a story so they have to learn a bit more about software. It’s ICT learning by stealth!

Marie: Let’s move onto mindset, that word innovation and embedding it as common practice, have you got any opinions about that?

Carole: I know what it means, but I suspect that many practitioners in TAFE don’t.

Marie: What do you think it means?

Carole: For me, innovation is looking at a new way of doing something that you have always done. It’s not an invention. It’s an innovative way of doing a task or building something or a new look at something. To me, that’s the way flexible delivery was striking me – what we need to do is think differently.

Marie: What does it take to think differently?

Carole: An openness, lack of fear, positive outlook and you need to be comfortable in your own skin and you need to be in a good place. How can you expect someone who is depressed, etc to think differently?

Marie: What do think about the reputation that innovators have?

Carole: I can tell you of a lot of Flexible Learning Leaders who have been shelved. They are a threat.
Marie: To whom?
Carole: Their managers. They learn to think outside the box and now are a threat because they do things differently and maybe that is going to be detrimental to my control over them (this is a manager talking). It’s all about control. You’ve got to have a match. There are always going to be blockers – the Peter Principle – to raise themselves up and push themselves forward. They can be so detrimental.

Marie: One of the things that is coming out about innovators is that they can get too far removed from reality and that they don't actually contribute to meaning at the coalface. Do you have an opinion about that?

Carole: I’ve seen that happen so many times. It’s like a LearnScope project. We are just playing here and it’s not real because when I come back to the office or into the classroom, I’ve got to go backwards. And that happens so many times because you have got to deal with the day-to-day. You’ve got to work with the constraints – and this is what I hear mostly from people in the trades. It’s not just them really. You know the ones who really amaze me the most in their inability to move with e-learning are the business and management people.

Marie: How could innovators be managed more effectively?

Carole: They need to be given more free rein rather than managed. Of course there needs to be some constraints but they are more likely to know what they are anyway. They are not likely to be causing financial hardship for their institute or giving them a bad name. They know how it works. They are professional people. Why can’t they be given freedom.

Marie: Why did you get out of TAFE?

Carole: I made a lot of friends and a big network. I had a lot of experience that was real, I understood the restraints when talking to other people. If I had never been there, how could I understand what they are suffering at times.

Marie: The question was, why did I get you get out?

Carole: I was looking for somewhere I could continue to grow. If I stayed within TAFE, I would be stultified. TAFE Frontiers opportunity enabled me to do that and once that went, I realised I could do it on my own – having the guts to move forward on your own. But I have worked for myself before. When I first came out of secondary college I thought I could just swing over to TAFE immediately.

Marie: Now that you are outside the TAFE sector, are you still actively contributing to TAFE?

Carole: Oh yes – all the time because all the people that I mentor – the LearnScope managers – are all inside TAFE. So yes, I do contribute back to TAFE.

Marie: Differently?

Carole: Better and differently.

Marie: In what ways better and differently?

Carole: My contributions are now focused on what is better for that person and the institute rather than ‘how is this going to effect me?’ because it doesn’t effect me. And they are different because of the way in which I can now do it. I don’t have to be inside the institute I can now be outside.

Marie: Are there benefits for a TAFE institute to work with someone who used to be inside but are now out of it?

Carole: Yes. A classic example of that is what I learnt from my research in my Flexible Learning Leadership [Leaders] for mentoring, a model where they invited...
their recently retired managers back in as mentors and continue to do that. It’s a specific method for ensuring that you don’t let your knowledge walk out the door.

They are constantly being bossed around by their coordinators and their managers and it’s driven by the dollar and the bums on seats aspect of their job. They are in a teaching mode, their whole day is structured by the timetable. That’s why I wanted to become an instructional designer – I could organise my day differently.

**Marie:** What’s it like working in an institute as a practitioner?

**Carole:** Your time is not your own and you are therefore not enabled to take the time to learn or to think things differently. You fall into a pattern. How often do you hear people say ‘Oh yes, we tried that and it didn’t work’. They fall back to that pattern of thinking.

**Marie:** Perhaps one of the messages coming out of the research is that the biggest new practice is new practice in flexible thinking.

**Carole:** Now there’s a new practice! How do you embed flexible thinking? And there’s some simple tools that I’ve learnt that are often not used because people just don’t know how to do it. Like when something happens and you react to it, why do some people react in a certain way and others in another way. It’s the repetitive drama that they fall back on.
**PART B: Rogers’ five innovation attributes: their relevance to digital storytelling practices in Australian education and training**

Innovations are perceived by individuals as having greater relative advantage, compatibility, trialability, observability, and less complexity will be adopted more rapidly than other innovations (Rogers 1995).

**Overview**

Rogers’ five innovation attributes are used as a framework to identify the key factors that may facilitate the adoption, diffusion and embedding of DST. It highlights that this framework is a useful tool for focusing on key factors associated with the successful embedding of an innovative practice.

1. **Relative advantage**

<table>
<thead>
<tr>
<th>Relative advantage</th>
<th>Key question: Is the innovative practice a better way to deliver than other methodologies you have used or are using? What is its greatest advantage?</th>
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<tbody>
<tr>
<td>The degree to which an innovative practice is superior to the idea/methodology it supersedes.</td>
<td>Consider things like:</td>
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<tr>
<td>The degree to which it surpasses or complements current practice</td>
<td>• usefulness in accomplishing education and training goals</td>
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<td>DST engages with learners</td>
<td>• quality of learning outcomes enabled by the innovative practice</td>
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<td>• innovative</td>
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<tr>
<td>• empowering</td>
<td>• added convenience for the teacher/trainer</td>
</tr>
<tr>
<td>• capturing</td>
<td>• social prestige within peer group</td>
</tr>
<tr>
<td>• valued.</td>
<td>• feedback from the user group about the credibility of the innovative practice and satisfaction with it.</td>
</tr>
<tr>
<td>DST has universal appeal</td>
<td>DST, the art of combining digital images and video with voice narration and music, provides an innovative methodology to engage with learners: succeeding over and above other methodologies due to its universal appeal and immediate engagement with learners. The global DST movement is proving time and time again the benefits of empowering the learners at a different level of their learning capacity, to engage in a process of storytelling that wraps context around their learning journeys. There is something intrinsically valued about the use of personal narrative, voice, photos, videos and music, to explore learning that is meaningful to the storyteller and the audience.</td>
</tr>
<tr>
<td></td>
<td>The process of developing a story which enables the learner to play a pivotal role in its creation digs</td>
</tr>
</tbody>
</table>
Innovate and integrate: Embedding innovative practices

• personal meaning
• multi modal
• multi purpose
• evidence artefacts.

DST builds confidence
• learners become designers
• teachers become enablers.

DST is used as a versatile tool for
• construction
• instruction
• reflection.

DST adds value and advantages to current practices
• powerful
• meaningful
• shareable.

What are learners saying about DST?

deep into the personal appeal of the methodology. Learners are intrigued with the simplicity of using
digital images and digital voice to paint a moving picture that tracks their own learning experiences
and has the potential to motivate and enlighten its audience. DST has appeal to groups and their
leaders to document their professional development progress and to create a record of achievements
as an archive to inspire others. Teachers can use the DST process for the creation of learning objects,
assessment pieces and motivational movies. Learners can use DST to reflect, capture and document
their own achievements and submit as evidence or collect and collate in their e-portfolios.

Storytellers find the learning of the process simple and enjoyable and are usually delighted with the
fact that the software in use is absolutely free. They can learn the process of creating a digital story in
a relatively short space of time, and will therefore be encouraged that they can do it for themselves
outside of the training room. They become the designers of their learning pathways and have more
say in how they will provide evidence of competence. Teachers can blend the DST methodology into
their training programs with ease and use their stories to deliver content, explore concepts, document
process or provide case studies. DST practitioners are encouraged by the success of the process to
repeat the practice again and again.

There is now such a growing acceptance of digital storytelling in Australia as a learning tool, a
reporting tool, a presentation tool and as a personal artefact in e-portfolios, that teachers and learners
alike readily accept the concept of incorporating it into their own practices. Learners and teachers see
their peers using the methodology and see immediate potential for their own use. Digital stories are
now freely shared in a variety of repositories for viewing on the Web, and usually invoke a greater
passionate commentary that is unlike those usually given for text-based learning materials.

The finished digital story reaches into the personality and the fundamental truths about the individual
that surpasses other forms of learning. This innovative practice is a powerful and meaningful process
enabling the creator and the viewer to see its potential for the individual in so many different ways.
Upon viewing a moving digital story that portrays the learner in a holistic manner the viewer
immediately has a greater understanding of the way that person is learning or developing. This is why
there is a growing acceptance of a digital story as a valid measuring tool of competence in a variety of
educational settings.

Case study scenario 1: an alternative assessment tool

Jade is a keen art student who enjoys painting in water colours. She has a learning disability and has
always found it difficult to concentrate on written work in school. She recently learned how to use her
digital camera and to upload her digital images to her laptop. Jade now has an impressive collection
of high quality images of her artwork. Part of her final assessment for her studies requires her to
explore and explain in words her artistic style and choice of design and colour. Usually her teacher
asks for a 1,000 word essay for this assessment, but this time Jade's teacher suggests an alternative method for her – creating a digital story. Jade is given a day to learn the software and to complete a draft of her story with images and narration for submission. The finished story is created within the day and submitted to her teacher, who is able to view it on her computer and make an assessment of Jade's work both visually and aurally. Jade adds her digital story to her e-portfolio to track her progress in her studies.

What experiences would you like to share?

I’ve had some tremendously rewarding teaching experiences this year when working with disengaged and at risk youth as well as chronically ill and long-term unemployed adults. The rewards have on occasion been humbling and inspiring.

Tony Marsh, teacher in the ‘Harnessing Rural Skills’ project 2006
2. Compatibility

<table>
<thead>
<tr>
<th>Compatibility</th>
<th>Key question: How compatible is the innovative practice with the way you currently deliver training? Does it challenge or complement what you already do? What are the implications for this?</th>
</tr>
</thead>
<tbody>
<tr>
<td>The degree to which the innovative practice is consistent with existing values and past experiences and needs of potential adopters.</td>
<td>Consider things like:</td>
</tr>
<tr>
<td>DST is a social networking tool:</td>
<td>• individual goals, needs</td>
</tr>
<tr>
<td>• process is equal to product.</td>
<td>• work group goals</td>
</tr>
<tr>
<td>DST activities create connectedness:</td>
<td>• experiences with the technology</td>
</tr>
<tr>
<td>• works well in collaborative learning</td>
<td>• technology infrastructure and support</td>
</tr>
<tr>
<td>• enables incremental complementary practice.</td>
<td>• organisation goals and culture</td>
</tr>
<tr>
<td></td>
<td>• the agreement between traditional teaching patterns and the work patterns required by the innovation.</td>
</tr>
</tbody>
</table>

Current delivery of training in flexible modes (including e-learning) incorporates and assumes certain ICT skills for the learners and indeed for the teachers. The development of ICT skills is enhanced by the use of digital storytelling methodology in the DST training model. Teachers are now expected to make frequent use of electronic communication strategies in their delivery, including the use of a range of social networking tools. DST is one of these social networking tools in favour now. It is the social networking aspect that is complementary to delivery and learning. Teachers are seeing the potential of digital storytelling in many facets of their delivery. The DST model enables them to value the process, innovatively, as well as the product of the learning achieved by their learners.

There is a strong need for connectedness between the teacher and learners and among the learners themselves. This is usually manifested in face-to-face classroom scenarios with a range of face-to-face activities that are designed to socialise, build trust and enhance learning. The teacher who enables a collaborative atmosphere in the traditional classroom will be most likely to embrace an innovative practice to achieve such connectedness in both traditional and virtual classrooms. A practice that stimulates individual thought and personal reflection enables the learner to ‘make sense’ of the learning within their own context and learning style. DST is one such practice. It complements what we do in the learning environment and provides an engaging challenge for the learner to express themselves in a format that allows them to achieve individual and group goals. Learners can collaborate on the development of a digital story as a process of team building, team sharing and team reflection. Teachers can see the development of their collaboration in draft submissions of their...
Innovate and integrate: Embedding innovative practices

**DST can be embedded incrementally:**
- learning objects
- collaborative exercises
- evidence of competence
- good news stories.

**DST programs are easily accessible:**
- aids transition
- enables ease of embedding.

**DST is an accepted creative reporting tool:**
- multimedia approach enables creativity
- marketing for different environments.

Storyboard, draft narrative and observe the activities engaged in by the group to complement their learning. All of this can be done online as well as in a traditional classroom, adding versatility to the methodology.

DST methodology is compatible with existing practices and appeals to the creativity and individuality of the learner. Teachers can take small incremental steps along the way to incorporate the DST methodology into their practices. For example, they may wish to use digital stories as learning objects to demonstrate procedure or to illustrate theory. The digital stories themselves are easy to create and take little time for the teacher to construct. They usually require some careful planning and the use of high quality digital images, but these tasks are well within the capacity of all teachers. Learners can choose DST in their learning practices as easily achievable evidence of competence, in a one-off situation or as a repeat process across different disciplines. DST can be used as the focal point in online collaboration between different groups across different campuses and across RTOs. Several Victorian LearnScope projects used DST in 2006 to document their *Good News Stories.*

Often the development of learning materials requires high technical and multimedia skills and therefore a long time to complete. They often are too costly for most teachers to consider for their practices and they therefore seek out other methods of creating their materials. Microsoft® PowerPoint slides have long been a favourite tool amongst teachers and most teachers find the transition from these types of presentations to digital story creation an easy step. The teachers enjoy a measure of autonomy in the use of tools that are provided free as a part of a suite of programs available on their network. Those who are using Microsoft® Windows® XP already have access to programs such as Microsoft® Movie Maker 1; and others who wish to use something even easier can download Windows® Photo Story to their computers free of charge.

Teachers want to use the DST methodology for innovative reporting practices – they enjoy the development of a ‘story’ with visual imagery, music and narration. Teachers say that they would rather develop a three minute story than write a 1,000 word report. Project managers say time and time again, how they enjoy viewing a digital story to get an overview of the achievements of a project, in a much shorter space of time than reading the 1,000 word report. DST has now become accepted as a creative report writing tool in such nationally funded projects as LearnScope. Reporting has now moved from text-based to multimedia presentations.

Variations of these stories have now been adopted as the preferred method of creating media bulletins to disseminate the successes of nationally funded projects. Case studies as digital stories have been used to great advantage in such Framework products as:
- Designing e-learning
DST has its own network:
- examples and support readily available.

What are teachers saying about digital storytelling in TAFE?
- versatile
- multipurpose
- adaptable
- no age barriers
- pre-vocational
- vocational
- project oriented.

Different Voices, Different Spaces

Stories are often constructed during educational conferences to provide an overview of the impact of its interactions and networking opportunities.

The Digital Storytelling Network was established in 2005 as one of the innovative Networks of the Australian Flexible Learning Framework Project and has its home on the edna site sponsored by education.au. The network provides a space for uploading, sharing, distributing and discussing a wealth of support materials for the DST practitioner. This network is now self-supporting and represents the growth of agreement and endorsement of DST in Australian VET.

**Case study scenario 2: versatility and multi-purpose adaptations**

Teachers at the William Angliss Institute of TAFE have been exploring the use of digital stories as a method of producing learning objects for viewing on PDAs. Their hospitality and event management students have also been able to design their own stories to demonstrate their competence in such areas as baking and food service. Teachers have also been able to use digital stories to report back to the organisation on the success of such innovations in the classroom and to create motivational marketing stories to use on their websites. The stories themselves are adaptable for use as podcasts and can be stored on PDAs, the web, USB devices, CD-ROMs, and DVDs. Stories can be embedded in PowerPoint® slide shows; in websites; and used in a stand-alone manner. Stories can be used as teaching tools, assessments, reports, e-portfolio artefacts, marketing devices or advertising material. They can be used in a range of courseware at various levels: from pre-vocational, such as the Victorian Certificate of Applied Learning (VCAL), to vocational such as Certificate I in Information Technology. Digital photography, digital voice capture and digital imagery tasks are now included in the new Certificate of General Education for Adults (CGEA).

**Case study scenario 3: adaptable to other contexts**

Whole project models have been based on the DST methodology with huge success in engaging reluctant and disadvantaged learners. One such project in Victoria has implemented DST and social networking tools to provide a six-month trial of a program in e-learning. The ‘Harnessing Rural Skills’ project has explored the use of DST with disengaged learners to explore and document their stories about skills shortages in their communities. Other projects from the Framework funded projects about E-learning Creative Community Partnerships have also used DST as a focal point for their participants. Their stories can be seen on the Framework website under ‘Projects’.
<table>
<thead>
<tr>
<th>Why has DST been popular with your groups?</th>
<th>It’s easy to use and includes all media. It costs nothing to have on their computers. They love the music backgrounds, the fact that it’s easy to speak over, the transitions. Especially the zooming and panning of pictures that give it movement. It’s so easy!</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Linda Craig-Sneyders, Gippstafe, Victoria.</td>
</tr>
</tbody>
</table>
### Complexity

<table>
<thead>
<tr>
<th>Complexity: The degree to which the innovative practice is perceived as difficult to understand and use.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DST is easy to learn.</td>
</tr>
<tr>
<td>DST is easy to access.</td>
</tr>
<tr>
<td>DST is easily integrated into existing practice.</td>
</tr>
<tr>
<td>DST is easy to use:</td>
</tr>
<tr>
<td>- minimal instruction required</td>
</tr>
<tr>
<td>- intuitive to use.</td>
</tr>
<tr>
<td>DST enables progress in development of skills:</td>
</tr>
<tr>
<td>- from basic to sophisticated</td>
</tr>
<tr>
<td>- adding layers of complexity.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Key question: How difficult is the innovative practice for you to understand and use? What would help you understand the product and use it more effectively? Consider things like:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- How easy is it to learn?</td>
</tr>
<tr>
<td>- How easy is it to use?</td>
</tr>
<tr>
<td>- How easy is it to integrate into existing practice?</td>
</tr>
</tbody>
</table>

The innovative practice of DST is very easy to learn, understand and implement. During the years of research that the team of DST practitioners in Australia have been investigating and promoting the methodology, a number of free and easy to use products have been identified and implemented in programs around Australia. The DST practitioners (early adopters) undertook training in the more expensive and more complex DST software such as Adobe® Premiere®. Although they were happy to use that software for their own training they were reluctant to use it for their delivery of DST workshops.

Many of the workshop participants would not be able to afford the more expensive software, nor the time to learn a more complex one. Therefore, the practitioners set out to research and model the use of such software as these free products from Microsoft®: Photo Story 3 and Movie Maker 2. They have their equivalents in the Mac® world as iMovie®. They felt that such software would enable a quick overview of the process and be easy to learn for users. They were right.

The software requires the user to input digital voice, digital images and video, place them in a timeline sequence, prepare transitions between images, place special effects on images, add narrations and import music. The steps are clearly laid out in as a step-by-step, point and click method. The learning process is intuitive and engaging with students (young and old). The language and imagery used in the instructional design of digital story software is easy to understand and can be understood by learners of different cultures and different background.

Learners and teachers are able to integrate the use of DST into many facets of their practices.
<table>
<thead>
<tr>
<th>What are teachers saying about DST in secondary schools?</th>
<th>Case study scenario 4: engaging young learners</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opportunities for:</td>
<td>In the <em>Step Up</em> program for selected Year 9 and 10 students from Melbourne and surrounding suburbs, groups of young people engaged in digital storytelling to reflect on what they learned in a week-long residential leadership program. These 14–16 year olds were able to articulate their feelings, their learning and their impressions of what it means to be a leader, through the use of digital images, voice and music. They each had a take-away product that summed up their experiences as a story, viewable by their friends, teachers and family. I was particularly impressed with the growth of trust, collaboration, team work and leadership that was portrayed in their finished stories. The impact of this on the teachers was profound – they now see the potential for the digital storytelling methodology in all aspects of their teaching in schools.</td>
</tr>
<tr>
<td>• VCAL learners</td>
<td>In some secondary schools, students are creating their own digital stories as evidence of their progress. For example, a group of young students in a regional location are using their digital stories to demonstrate their progress in such studies as VCAL.</td>
</tr>
<tr>
<td>• disengaged learners</td>
<td></td>
</tr>
<tr>
<td>• generation Y learners</td>
<td></td>
</tr>
<tr>
<td>• preparatory for TAFE</td>
<td></td>
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<tr>
<td>• potential VET learners are already embedding this skill.</td>
<td></td>
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</tbody>
</table>

What are the learners saying about DST in TAFE?
- easy to demonstrate competence.

What are the teachers saying about DST in primary schools?
- easy to motivate reluctant learners.

Case study scenario 5: assessing young apprentices
In one campus of TAFE SA, building and construction apprentices are asked to submit assignment material in the form of digital stories to demonstrate competence. For example, a group of young apprentices have prepared a series of two minute stories to demonstrate their research, usage and safety aspects of special electrical tools used in the trade. Learners are now able to include these digital story artefacts in their personal e-portfolios and enable their distribution to potential employers as demonstration of their competence in the trade.

Case study scenario 6: embedding practice for even younger students
At Mt Waverley Primary school in suburban Melbourne, students from Year 3 to Year 6 have all learned how to use [Windows®] Photo Story 3 to create their own digital stories. This initiative was supported by two teachers, one of whom is the IT administrator for that school, over a six month period in 2006. Each student graduating from Year 6 will have their stories to take away on CD-ROMs as part of their graduation ceremony. The DST methodology has now been embedded in the practices for all teachers (Year 3 and up) to create sets of e-portfolios for their students. Students now have been able to capture their achievements, their assignments and their reflections in digital story format stored on the school’s database – they have the beginnings of an ‘e-portfolio for all’ model – a model endorsed by many schools in the *European Eportfolio strategy*. 
| Why has DST been popular with your groups? | Students enjoy it because they have control over their learning. They like music and colour and its speed. Have not had a student say they don’t want to do it. Allows students to present humour, something a lecturer does not see a lot of. I find students are happy to teach others what they have learnt about the program. |
4. **Trialability**

<table>
<thead>
<tr>
<th>Trialability:</th>
<th>DST uses readily available tools:</th>
</tr>
</thead>
<tbody>
<tr>
<td>The degree to which the innovative practice may be experimented with on a limited basis before it is rolled out as a product.</td>
<td>personal computers</td>
</tr>
<tr>
<td></td>
<td>headphones and microphones</td>
</tr>
<tr>
<td></td>
<td>digital cameras.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DST follows traditional models:</th>
<th>DST consists of seven essential elements and fundamental constants that enable:</th>
</tr>
</thead>
<tbody>
<tr>
<td>based on well trialled and documented design models.</td>
<td>continuity</td>
</tr>
<tr>
<td></td>
<td>flexibility</td>
</tr>
<tr>
<td></td>
<td>adaptability</td>
</tr>
<tr>
<td></td>
<td>meaning</td>
</tr>
<tr>
<td></td>
<td>emotion.</td>
</tr>
</tbody>
</table>

**Key question:** What opportunities have you had to trial the innovative practice in a range of contexts? How have these trialling opportunities influenced you in deciding whether to use it or not on a larger scale?

Consider things like:

- support to experiment in teaching context
- level of effort needed to set up and use in teaching context.

The practitioners of DST all advocate the use of a set of basic tools that are now readily accessible in most training environments. Training is done on PCs or laptops; owned by the training institution or brought in by participants. Each participant needs to have access to free software such as Microsoft® Photo Story, Microsoft® Movie Maker, Audacity™, Windows Media® Player or comparable software. Digital cameras are now more widely accessible within institutes of TAFE and in some cases have been purchased as tools for community centres. There is also a range of headphones and microphones available.

Since 2003, trials of the DST workshops, based on the Berkeley (USA) method, have been conducted in all states of Australia. These workshops have been delivered in schools, TAFE settings, community centres, universities, conferences and as part of professional development events of all kinds. The Berkeley method ensures that the participants are well prepared to share their stories in a story circle and to learn how to incorporate the seven essential elements of a digital story:

1. point (of view)
2. dramatic question
3. emotional content
4. gift of the voice
5. pacing
6. economy
7. power of the soundtrack.

These seven elements are explained in the *Digital Storytelling Cookbook and Travelling Companion* for DST written by Joe Lambert, one of the American leaders of the global DST movement. The role of
DST has a wide range of learning materials and support for a broad range of implementation

- Digital Storytelling Network
- Digitales Wiki
- BBC Wales
- European Institute for E-learning (EIfEL)
- Australian Centre for the Moving Image (ACMI).

DST is accepted in the Australian context as a network

DST workshop facilitators is to coach the storyteller through any of the roadblocks they may have. The story coaching approach is a successful and rewarding method of enabling the storyteller to achieve a story that resonates for the author. The many emotional outcomes of such successful storytelling are what encourage the story coaches to repeat the method over and over again.

Over the last few years Australian DST practitioners have developed a wide range of learning tools, workshops resources and sample movies. These are freely shared over the internet in various repositories, forums, and wikis and in the Digital Storytelling Network. Teachers can request support and materials from a wide range of practitioners across Australia, UK and USA. Workshop facilitators for DST workshops are now available for hire in many professional development activities. The most popular DST activities in the last two years have been in the LearnScope projects; both as individual and group endeavours. ACMI has provided a series of workshops in DST for the last three years.

The trialability of DST is enhanced by access to a team of enthusiasts with a wide range of expertise in Australia and in other international communities.

The Digital Storytelling Network was first established in 2004 as a concept by a group of core DST practitioners. This Network became an edna group in 2005 as one of the first group of E-learning Networks funded by the Framework, now maintained by Carole McCulloch and frequented by over 200 members. Visit the site at [http://www.groups.edna.edu.au/course/view.php?id=107](http://www.groups.edna.edu.au/course/view.php?id=107)

The Digitales Wiki was set up in 2005 by Robyn Jay, LearnScope Manager, NSW as an easy access point for new DST participants and workshop leaders. Visit the site at: [http://digitales.wikispaces.com/](http://digitales.wikispaces.com/)

The site [http://www.bbc.co.uk/wales/digitalstorytelling/](http://www.bbc.co.uk/wales/digitalstorytelling/) at BBC Wales is for the digital stories of the Welsh communities and is held in high esteem by practitioners all over the world. BBC Wales was the host for the first DST international conference in Cardiff, Wales, 2003.

The Eifel Eportfolio group run conferences each year to explore the progress towards their aim for e-portfolios for all by 2010. They endorse the implementation of digital stories as artefacts in e-portfolios and are endorsing a workshop on ‘Adding voice to e-portfolios through podcasts and digital stories’ in Melbourne in 2007.

There are some complexities to deal with in preparing to run workshops in DST and several workshop facilitators have offered their advice on the best ways to do this. For instance, it is best to ensure that the computer lab in which the workshop is to be conducted has the required free software already loaded and ready to use. Teachers are less reliant on IT support in obtaining the free software, but may required support in networks that restrict unauthorised installations. IT needs should be clearly identified and distributed prior to any workshops to ensure essential IT components and support.
Each participant needs to have a set of headphones and a microphone, and a set of digital images to use. Scanners are advised for scanning from original photos and conversion to digital images and access to quiet areas for recording of narrations. All of this can be achieved with careful planning, and some organisations now have such equipment set up as standard. The room needs to be equipped with an overhead data-show projector with speakers for the playing of sample movies and the showcasing of finished stories from the participants. There are some special purpose-built facilities that can be booked for use in DST workshops. A good example of that is ACMI and Lab 3000 – the incubator belonging to RMIT in Melbourne.

In some community settings, sets of laptops with required software and hardware can be booked for use at the workshop venue. Some community centres are now providing the use of digital cameras as standard facilities they offer to their community members. All of this has developed over the last few years as the DST phenomenon has caught on.

In some organisations short one-hour lunchtime workshops on DST have been utilised to introduce teachers to the innovative practice. These short sharp sessions prove to the teachers the ease by which they can learn and use DST methodology in their flexible delivery, in a short space of time. In other DST projects, there has been a carefully planned and delivered series of Train the Trainer workshops.

In 2006 we were ready to introduce the model of learning by the DST methodology to community groups to test out the concept of engagement with ICT as a pathway to readiness for e-learning. The project case study highlighted below describes how this has been such a successful approach, that more and more community groups are now embedding the model into their delivery and funded projects.

**Case study scenario 7: identifying and documenting skills shortages**

In the Harnessing Rural Skills project five groups of learners in rural and remote regional areas of North East Victoria have been inspired and enthused about lifelong and life-based learning opportunities. They have engaged in the pursuit of accreditation in *Certificate I in Information Technology* using a program that focuses them on ‘people, place and pastimes’. This program asked them to create a digital story to tell a wide audience about some skill shortage employment opportunities in the region. They learned basic ICT skills in the process and had a ‘story’ to share at the end of the process. For these learners, the enjoyment was in the discovery and experiential learning that DST enabled them to do. Each one showed such pride in their stories, the culmination of their studies, that this in itself was an inspiration to others. Their local communities now see the potential for such digital stories to enhance their ability to market their particular attributes; reflect on
progress by capturing local history; and develop pride of citizenship by displaying local highlights. Students in schools are now adopting this methodology to enhance their career paths – researching and interviewing local community members and industry personnel – displaying stories of workplaces and pastimes.

| Basically, we need to know who and how many people came, and if what we did as far as partnerships, marketing and research into needs and cohort groups was effective | We 'sold' the concept around what they would learn and the benefit to them. Originally we had 32 interested: 28 enrolled with 20 successfully completing the Certificate I course. Two withdrew before finally committing, one withdrew after first weeks due to illness, three obtained work and did not complete all units, two stopped coming and have not been able to be reached. Community is beginning to hear about what we are doing. |
5. Observability

<table>
<thead>
<tr>
<th>Observability:</th>
<th>Key question: Does the innovative practice immediately solve or fix a training problem? What have you observed about the impact of its use?</th>
</tr>
</thead>
<tbody>
<tr>
<td>The degree to which the results of using the innovative practice may be visible to others and solve their problems.</td>
<td>• the visibility of the innovative practice in action</td>
</tr>
<tr>
<td>DST engages with reluctant learners.</td>
<td>• exposure to examples of how the innovative practice is being used in other contexts</td>
</tr>
<tr>
<td>DST is accepted by Indigenous learners.</td>
<td>• easy to understand – how the innovative practice could be used in your context</td>
</tr>
<tr>
<td>DST provides solutions to challenging training situations.</td>
<td>• the degree to which you can see the results of the innovative practice.</td>
</tr>
<tr>
<td>DST inspires new audiences:</td>
<td></td>
</tr>
<tr>
<td>• has appeal to new viewers.</td>
<td>DST immediately engages with learners and thereby solves one of the most challenging of issues – that of enthusing reluctant learners. Some learners with disabilities have been able to create digital stories – a major achievement for them and another solution to a difficult issue of catering for learning disabilities.</td>
</tr>
<tr>
<td>DST is a meaningful part of a personal learning journey:</td>
<td></td>
</tr>
<tr>
<td>• learners find a new voice</td>
<td>The use of DST in Indigenous cultures has been most successful and has been used to advantage in many Indigenous communities across Australia. Indigenous learners find that they have a ‘voice’ in digital story format.</td>
</tr>
<tr>
<td>• learners express learning in a new medium.</td>
<td>DST workshops have inspired learners time and time again by the potential they see for implementing in their own context. One young mother was able to step up the support program for her autistic son by using digital images of him performing a variety of personal care tasks and blending them with her voice to instruct and support his need for repetitive learning.</td>
</tr>
<tr>
<td></td>
<td>Over the three years of the DST experiences by practitioners, we have observed huge growth in the acceptance of the methodology and the Digital Storytelling Network now has over 200 members, nationwide. Whenever a digital story is shown, as part of a presentation or reporting activity, the audience always sees the potential in yet another scenario. One of the best ways to observe the power of DST is to see how it engages an audience at a conference where the story has been compiled from pictures of themselves.</td>
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<tr>
<td></td>
<td>Consider the sudden enthusiasm to take up computer learning because a learner can see how to make use of their collection of personal photos for family stories. Is this learning ICT skill by stealth, or is it a willingness to engage in learning that is meaningful on a personal level. Observing the learning process of creating a digital story has the most powerful effect on learners who can find a new voice, tell their personal story, capture some family history or create a learning object. It is an easy and enjoyable task, quickly and immediately useable.</td>
</tr>
</tbody>
</table>
What are the learners in communities saying about DST?

- DST can assist the transition from the personal to the vocational
- motivates and shifts skill development to a new level
- enables the transition to new roles
- builds local expertise for skills transfer
- empowers
- strengthens
- inspires.

Case study scenario 8: an enabler for business marketing
Ruby is an Indigenous artist who wishes to excel in a business venture to sell her paintings. She joins a community-based workshop focusing on DST so that she can tell her story through her art. Ruby completes one of her canvases and talks about its progress as the narrative in her story, and at the end of the program shares her story of the painting to her fellow participants. Ruby’s confidence grows even more when the story is viewed by local council and small business supporters. She has now moved ahead with her business and uses her stories as marketing tools for her work.

Case study scenario 9: success has a flow on effect
James is a young student with Asperger’s syndrome. He joined a community workshop to create a story about the job he aspires to in the future. His dad is the local real estate agent and is a keen photographer. James’ story focuses on the need to ‘clean up your house’ before putting in up for sale. His research and photos of local houses enables James to put together his story with words and suitable music to tell an instructional story with style. James’ mother Annette, also has a mild form of Asperger’s syndrome, she accompanied James in the workshop and learned for herself how to master the use of a digital camera to capture her own art work. Her story has given her confidence to go on and use more photography as a basis for her paintings – something that she relied on her husband to do for her. Now she feels empowered to do her own photography and is planning to show her son James’ story in the front window of the real estate agent’s shop.

Case study scenario 10: experience changes roles
Wendy wanted to celebrate the upcoming significant birthday for her daughter-in-law by creating a digital story that captured the development of this young woman from infant to adult. Wendy’s story was created from scanned images of treasured family photos, acquired from the young woman’s own mother, and was built into a moving story with a soundtrack to suit the musical preferences of her daughter-in-law. ‘Digging the dancing queen’ by ABBA, was seen and heard in a different perspective as we viewed the first showcasing of this story. Wendy is now so inspired by the ease of the process – something she never thought she could do – that she wants to be a mentor in a similar project in the new year.

How effective were the DST activities in the course?
Effective activities – DST continues to be a highly effective strategy especially with adults. Successful creation of stories led to increased levels of confidence in working with technology. One participant who was heavily reliant on a ‘tech savvy’ next door neighbour for support with using her computer, told me that at the end of the course that she felt much more independent in her computer usage, and now knew way more than her neighbour on storytelling and movie making technologies.
6. Other

<table>
<thead>
<tr>
<th>Any other comments.</th>
<th>Please provide any other input that would assist the project team to develop an implementation strategy aimed to maximise the uptake of The innovative practice as a cultural awareness resource.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DST embodies the art of storytelling.</td>
<td>The ancient art of storytelling has been proven to be the best form of knowledge sharing over centuries and within all cultures. It is the method of the people to pass on truths, beliefs and ideologies in perpetuity. The digital form of storytelling has now emerged as one of the best methods of sharing and retaining organisational knowledge as well as individual knowledge. Storytelling transcends all barriers and surpasses all differences, digging deep into cultural philosophies and reaching the very centre of our beings – it engages with the heart.</td>
</tr>
<tr>
<td>DST can be an artefact in an e-portfolio.</td>
<td>The innovative practice of DST must be preserved and encouraged to celebrate difference, achievement and success. It needs to be brought into the lives of learners and potential learners; into the practices of teachers and into acceptance by managers. DST has huge potential for enthusing and engaging with reluctant learners and learners in all fields and will soon be seen as an accepted artefact in the e-folios of teachers and learners alike.</td>
</tr>
<tr>
<td>DST international significance:</td>
<td>We need to have a nation-wide strategy for capturing and preserving the life-based learning achievements of all individuals – much the same as the European model. It would be helpful to wrap the DST methodology in a strategy of e-portfolio advocacy. This is the model that was chosen in Wales and has now permeated all areas of education and community life – DST is accepted as a way of life. The European Institute for eLearning (EiCEL) promotes a model of e-portfolios for all – this is their goal for 2010. This is part of their eStrategies for Empowering Individuals – a European Study on ePortfolio and Europass Readiness which can be viewed at <a href="http://www.eife-i.org/activities/campaigns/ePreadiness">http://www.eife-i.org/activities/campaigns/ePreadiness</a></td>
</tr>
<tr>
<td>DST is a strength-based approach for capability development.</td>
<td>DST provides a key element in the strength-based approach for capability development in VET. It encourages and enables people to tell their own stories of development, achievement, grief, knowledge and connectedness. It is part of:</td>
</tr>
<tr>
<td></td>
<td>● an honest attempt to capture the full breadth of our humanity and apply it to our working life – Life Based Learning p. 8</td>
</tr>
<tr>
<td></td>
<td>● socio-technical systems – integrate information and communication technologies into socio-</td>
</tr>
</tbody>
</table>
Innovate and integrate: Embedding innovative practices

<table>
<thead>
<tr>
<th>How well did the activities meet the needs of the participants?</th>
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<tbody>
<tr>
<td>Meeting needs: I think the main need that was met was increased confidence in interacting with technology and independent learning using e-learning strategies. Participants who created stories were immensely proud of what they achieved and this fulfilled the need for greater confidence in their skills. For most participants interacting with Study Zone was their first e-learning experience. They were excited to see their work available and to be able to view the work of other participants in the project.</td>
</tr>
</tbody>
</table>

**Technical systems** – *Life Based Learning* p. 9

- the virtue of wisdom that enables us to thrive and is accepted by every culture across the world (Seligman and Steen 2005) – *Life Based Learning* p. 29
- wisdom leadership, where wisdom is more than the sum of our knowledge, intelligence, experience and innovative thinking (Miller and Miller 2006) and enables the individual to bring out their ‘spirituality’ from within to explore a personal journey that has meaning for others – *Life Based Learning* p. 37

Staron, Jasinski and Weatherly (2006) *Life Based Learning*
Part C: Digital storytelling implementation plan: stages in the adoption process

<table>
<thead>
<tr>
<th>The innovative practice:</th>
<th>Digital storytelling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name:</td>
<td>Carole McCulloch</td>
</tr>
<tr>
<td>Organisation:</td>
<td>Macro Dimensions</td>
</tr>
<tr>
<td>Position:</td>
<td>e-learning consultant</td>
</tr>
<tr>
<td>Email:</td>
<td><a href="mailto:carole60@bigpond.net.au">carole60@bigpond.net.au</a></td>
</tr>
<tr>
<td>Phone:</td>
<td>0260 208337</td>
</tr>
<tr>
<td>Date:</td>
<td>26 February 2007</td>
</tr>
</tbody>
</table>

Stages in the adoption process

This template, based on Rogers’ (1995) five stages in the adoption and diffusion process, has proven to be a relevant and useable framework to explore issues surrounding the implementation of digital storytelling.

The implementation plan suggested below will be used in a newly funded project in 2007 to provide some guidelines for the continuation to embed the innovative practice of DST into community life-based learning and community building opportunities.
## Stages in the adoption process

<table>
<thead>
<tr>
<th>Stages in the adoption process</th>
<th>Key question</th>
<th>Suggestions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Awareness</td>
<td>What marketing strategies would be effective in raising the awareness of the innovative practice?</td>
<td>Upload the suite of stories already created to an online repository, that fulfils a function of an online community hall. Enabling the viewing, harvesting and commenting facilities for those interested. Collate and package resources for the delivery of DST workshops on a CD with print-based resources included. Include the URL of the story Community Hall in all brochures, flyers or invitations to be sent out for marketing purposes. Such marketing devices could feature specific individual stories each month. Include testimonials of local learners and facilitators of their experiences with digital storytelling in media releases and local paper articles. Include DST workshops in the professional development models within organisations and have them championed by e-leaders, CEOs, program managers and other funding bodies, eg Australian Government agencies. Contact media organisations for their endorsement and possible sponsorship. Communicate on a regular basis about the embedding of practices among the many DST practitioners in Australia.</td>
</tr>
</tbody>
</table>
|                               |              | • localise and collaborate with communities on best marketing strategies  
|                               |              | • build on existing marketing opportunities in the community  
|                               |              | • create new marketing approaches to engage with new learners  
|                               |              | • leverage from existing knowledge in the community through local forums and awareness raising events  
<p>|                               |              | • distribute information newsletters to the TAFE and ACE facilitators through the Australian Flexible Learning Framework Coordinators. |</p>
<table>
<thead>
<tr>
<th>Stages in the adoption process</th>
<th>Key question</th>
<th>Suggestions</th>
</tr>
</thead>
</table>
| 2. Interest                   | **What will raise the interest of key stakeholders in using the innovative practice?**  
  - enhance potential enrolments through motivational stories  
  - enhance potential uptake by teachers as learning and assessment tools  
  - diversify to enable ease of access by stakeholders  
  - distribute more case study materials for potential DST users. | Value and highlight the personal achievements of the digital storytellers across a wide variety of disciplines, environments and purpose, through distribution channels such as intranets, networks and the internet.  
Get them talking about the impact of DST in the popular blogs and wikis currently in vogue.  
Capture the impact of the personal story on viewers through individual podcasts as comments and feedback facilities.  
Let the stories speak for themselves.  
Continue to include DST in forum discussions at a national level.  
Encourage teachers to undertake some short, concise training as a DST facilitator.  
Encourage learners to undertake some workshop learning to explore stories as personal artefacts in their e-portfolios |
Innovate and integrate: Embedding innovative practices

<table>
<thead>
<tr>
<th>Stages in the adoption process</th>
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<th>Suggestions</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Evaluation</td>
<td>From your own experience in trialling the innovative practice, how do you envision using it?</td>
<td>We, the community leaders of Harnessing Rural Skills, will present a model of awareness raising and skills development activities in regional areas of Victoria using a Mobile Story lab approach. This will enable users to come to a mobile lab to learn the art of digital storytelling in their own communities. This will also facilitate the training of more digital storytelling facilitators across Victoria. (This is a popular request for projects like LearnScope and the Elearning Grant in Victoria.) Enable guest speakers to talk about their experiences in DST using podcasts and guest appearances through events hosted by the Framework’s E-learning Networks community. Advocate the use of DST as a learning model in professional development projects such as the Framework’s LearnScope, Industry Engagement, and Indigenous Engagement Projects; and Elearning Grant in Victoria. Distribute papers and notices to local agencies delivering VCAL, Local Learning and Employment Networks and youth projects to raise awareness of the use of a DST model and distribute free copies of materials as a DST kit. Enable new users of DST to do it for themselves – ensure that there are plenty of resources freely available. Obtain and distribute articles of interest about the embedding of DST practices in primary and secondary schools.</td>
</tr>
</tbody>
</table>

*create more opportunities for skill development as DST practitioners in regional locations affected by drought and bush fire threats*
*encourage and endorse wider distribution of testimonials*
*develop a DST kit of resources for ease of implementation*
*upgrade and maintain the Digital Storytelling Network*
*encourage the Knowledge Bank Networks to endorse DST in secondary and primary schools.*

Innovate and integrate: Embedding innovative practices

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>4. Decision</td>
<td>What factors could influence you to:</td>
<td>Participation in a local DST workshop will enhance the relevant awareness raising for potential adopters.</td>
</tr>
<tr>
<td></td>
<td>• not use the innovative practice</td>
<td>New DST facilitators need to experience the delivery of a workshop in their own community first and then consider what modifications are required. They need to gain support from the IT services to implement the required software and enlist the support of DST champions in their own environment to embed the practice.</td>
</tr>
<tr>
<td></td>
<td>• modify its use</td>
<td>Continue to use the Digital Storytelling Network as a central support strategy and discussion place.</td>
</tr>
<tr>
<td></td>
<td>• continue to use it?</td>
<td>Ensure that laptops, digital cameras and support for uploading and optimising images are provided in every department for teachers and learners.</td>
</tr>
<tr>
<td></td>
<td>• consider the context of the implementation to ensure relevance</td>
<td>Advocate the use of digital story wikis and blogs among new users of the methodology.</td>
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<td></td>
<td>• encourage the adaptation of the DST models to suit new purposes</td>
<td>Value and highlight the adaptations and contributions to the Digital Storytelling Network with frequent and regular ‘story’ events</td>
</tr>
<tr>
<td></td>
<td>• look for new ways to advance the concept of storytelling in the wider community.</td>
<td>Collect, collate and distribute the case studies already in existence among the DST practitioners in Australia.</td>
</tr>
<tr>
<td>Stages in the adoption process</td>
<td>Key question</td>
<td>Suggestions</td>
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<td>-------------------------------</td>
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<tr>
<td>5. Adoption</td>
<td><strong>What factors would influence adding the innovative practice as a core resource in your education and training repertoire?</strong>&lt;br&gt;• Individuals are more likely to use the DST on a full-scale basis once they’ve experienced success in small incremental steps.&lt;br&gt;• Identify and document the various ways in which digital skills are becoming part of existing and new courses.</td>
<td>The organisation needs to accept and endorse the model of delivery using DST as a major component. The individuals themselves will spread the word and encourage others to tell their stories.&lt;br&gt;Ensure that good practice models in DST within organisations and communities continue to be spoken about in major national forums and media releases.&lt;br&gt;Get a CEO onside – involve them in the creation of a digital story that markets courseware, delivery programs, special courses or other segments of their organisation.&lt;br&gt;Support the scheduling of DST workshops within organisations, in capital cities and rural and remote regions.&lt;br&gt;Sponsor targeted workshops and events in DST&lt;br&gt;Showcase the success stories of DST in primary and secondary education and participate with tertiary education and local community groups in such events as Digital Storytelling Conferences, social software implementation conferences, e-portfolio conferences and m-learning conferencing across the world.</td>
</tr>
</tbody>
</table>
### Stages in the adoption process

<table>
<thead>
<tr>
<th>Key question</th>
<th>Suggestions</th>
</tr>
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<tbody>
<tr>
<td><strong>6. Any other comments.</strong>  Are there any other questions that need to be asked?  Where does DST fit within the curriculum?  How does DST fit with the e-portfolio movement?  How do you implement digital stories into teaching and learning materials?  How do we support the implementation of DST?</td>
<td>Components of DST are now appearing in educational programs as tasks involving the use of digital cameras, digital imaging software and capturing digital voice.  DST artefacts are now featuring as acceptable artefacts in learner’s e-portfolios. International bodies are endorsing the concept of e-portfolios for all by 2010. E-portfolio strategies are important discussion and implementation issues for all educational institutions.  DST engages with a wide range of learners, use it to motivate, captivate and energise thinking about the issues of life-based learning. Use digital story case studies in Industry Engagement and/or Indigenous Engagement Projects.  Install and maintain facilities and relevant software needed for delivering DST workshops. Where possible ensure that IT support personnel fully approve the program and can be on hand to troubleshoot for teachers.</td>
</tr>
</tbody>
</table>
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Innovate and integrate: Embedding innovative practices


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Innovate and integrate: Embedding innovative practices


Section 15: Appendices

Appendix 1: Ripples survey questions

Overview

We are conducting a study to determine the factors that enable or impede the implementation of innovative practices in e-learning in vocational education and training (VET) in Australia.

Implementation is taking a new practice beyond a project stage and embedding it as a 'routine' practice. Our goals are to identify the key factors that make an organisation 'innovation ready and innovation friendly'. This will inform decision makers in regard to models, considerations and potential impacts of embedding innovative practices.

This questionnaire has 46 questions. The questions relate to the factors that you think are important in implementing new practices in e-learning. Your responses are completely anonymous. No information that can be used to identify you or your organisation will be collected.

If you have questions or comments about this questionnaire or the study in general, please contact:

Daniel Surry
University of South Alabama (USA)
dsurry@usouthal.edu

Marie Jasinski
Design Planet
mariejas@designplanet.com.au

Resources

The next few questions relate to ‘Resources’. By resources, we mean the financial resources (money) needed to develop and use innovative practices in e-learning.

1. How would you rate the availability of financial resources for implementing e-learning in your organisation?
   High, Above Average, Average, Below Average, Low, Don’t Know/Unsure

2. How would you rate the allocation of financial resources in your organisation to the area of new/innovative e-learning initiatives?
   Much more than adequate, more than adequate, adequate, less than adequate, much less than adequate, don’t know/not sure.

3. Do you think the financial resources of your organisation act as a barrier or an enabler to the use of innovative practices in e-learning? (A barrier makes innovative practices in e-learning harder, an enabler makes innovative practices in e-learning easier)
   Major Barrier 2, 3, Neutral, 4, 5, Major Enabler

4. Overall, how would you rate the importance of financial resources (money) to the successful use of an innovation?
Innovate and integrate: Embedding innovative practices

**Infrastructure**

The next few questions relate to ‘Infrastructure’. By infrastructure, we mean the technological capabilities of your organisation. This includes communication system, networks, hardware, software, administrative and production facilities.

5. **How would you rate the quality of the technology infrastructure of your organisation?**
   - High, Above Average, Average, Below Average, Low, Don’t Know/Unsure

6. **How would you rate the infrastructure specifically related to the e-learning?**
   - Much more than adequate, more than adequate, adequate, less than adequate, much less than adequate, don’t know/not sure.

7. **Do you think the infrastructure of your organisation acts as a barrier or an enabler to the use of innovative practices in e-learning?** (A barrier makes innovative practices in e-learning harder, an enabler makes innovative practices in e-learning easier)
   - Major Barrier 2, 3, Neutral, 4, 5, Major Enabler

8. **Overall, how would you rate the importance of infrastructure to the successful use of an innovation?**
   - Extremely important, 6, 5, Moderate Importance, 3, 2, Not Important

**People**

The next few questions relate to the concept of ‘People’. By this, we mean the social and human elements of your organisation. This includes the goals, skills, talents, backgrounds, beliefs, opinions and feelings of the people who make up your organisation as well as those of your customers and clients.

9. **To what extent do you think the leaders of your organisation consider your opinions, ideas, and beliefs when making decisions?**
   - High, Above Average, Average, Below Average, Low, Don’t Know/Unsure

10. **How would you rate the amount of shared decision making in your organisation specifically related to the area e-learning methodologies?**
    - Much more than adequate, more than adequate, adequate, less than adequate, much less than adequate, don’t know/not sure.

11. **Do you think that the culture of your organisation, specifically shared decision making and communication, acts as a barrier or an enabler to the use of innovative practices in online learning?** (A barrier makes innovative practices in e-learning harder, an enabler makes innovative practices in e-learning easier)
    - Major Barrier 2, 3, Neutral, 4, 5, Major Enabler

12. **Overall, how would you rate the importance of shared decision making and participation to the successful use of an e-learning innovation?**
    - Extremely important, 6, 5, Moderate Importance, 3, 2, Not Important
Innovate and integrate: Embedding innovative practices

**Policies**

The next few questions relate to the concept of 'Policies'. By this, we mean the written and unwritten rules, practices, traditions, and regulations that govern your organisation's day-to-day operations.

13. **To what extent do you think the policies of your organisation are fair, up to date, documented, and well known by all employees, customers, and clients?** In other words, what is your overall satisfaction with your organisation's rules and regulations?
   - High, Above Average, Average, Below Average, Low, Don't Know/Unsure

14. **Compared to other organisations, would you describe the policies of your organisation as rigid and difficult to change or fluid and easy to change?**
   - Extremely rigid and difficult to change, Somewhat rigid and difficult to change, Probably about average, Somewhat fluid and easy to change, extremely fluid and easy to change, Don't know, not sure.

15. **How would you rate the policies of your organisation specifically related to the area of new practices in e-learning?**
   - Extremely Appropriate – in need of no changes, Somewhat Appropriate – in need of only a few minor changes, Appropriate – not bad, but could use some changes, Not Appropriate – in need of many changes, Extremely Not Appropriate – in need of a complete overhaul, Don't know / Not Sure,

16. **Do you think that the policies of your organisation act as a barrier or an enabler to the use of innovative practices in e-learning?** (A barrier makes innovative practices in e-learning harder, an enabler makes innovative practices in e-learning easier)
   - Major Barrier 2, 3, Neutral, 4, 5, Major Enabler

17. **Overall, how would you rate the importance of appropriate policies to the successful use of an e-learning innovation?**
   - Extremely important, 6, 5, Moderate Importance, 3, 2, Not Important

**Learning**

The next few questions relate to the concept of 'Learning'. By this, we mean the learning outcomes of a training or educational program. This also refers to a focus on the learner's overall experience within a training or educational program.

18. **To what extent do you think the leaders of your organisation consider the educational needs of learners when making decisions?**
   - High, Above Average, Average, Below Average, Not Sure/Don't Know

19. **How would you rate the commitment of your organisation to provide a high quality e-learning experience to your learners?**
   - Very Strong Commitment, Strong Commitment, Average, Weal Commitment, Very Weal Commitment, Don't Know/Not Sure

20. **Do you think that your organisation's commitment to learning outcomes acts as a barrier or an enabler to the use of innovative practices in e-learning?** (A barrier makes innovative practices in e-learning harder, an enabler makes innovative practices in e-learning easier)
   - Major Barrier 2, 3, Neutral, 4, 5, Major Enabler
21. Overall, how would you rate the importance of commitment to learning outcomes to the successful use of an innovation?
   Extremely important, 6, 5, Moderate Importance, 3, 2, Not Important

**Evaluation**

The next few questions relate to ‘Evaluation’. By this, we mean an assessment of student goals, technology, technology plans, and the costs and benefits associated with a new e-learning program.

22. To what extent does your organisation conduct evaluations of learner achievement, technology effectiveness, technology alternatives, impact of technology integration, and costs and benefit?
   High, Above Average, Average, Below Average, Low, Don’t Know/Unsure

23. How would you rate the quality and quantity of evaluations specifically related to e-learning?
   Much more than adequate, more than adequate, adequate, less than adequate, much less than adequate, don’t know/not sure.

24. Do you think that the quality and quantity of evaluations in your organisation acts as a barrier or an enabler to the use of innovative practices in e-learning? (A barrier makes innovative practices in e-learning harder, an enabler makes innovative practices in e-learning easier)
   Major Barrier 2, 3, Neutral, 4, 5, Major Enabler

25. Overall, how would you rate the importance of evaluation to the successful use of an innovation?
   Extremely important, 6, 5, Moderate Importance, 3, 2, Not Important

**Support**

The next few questions relate to ‘Support’. Support has four components: Training, Technical Support, Pedagogical Support, and Administrative Leadership.

26. To what extent does your organisation provide the support necessary for you to implement new e-learning practices effectively?
   High, Above Average, Average, Below Average, Low, Don’t Know/Unsure

27. TRAINING refers to all the formal and informal support you received related to implementing a new e-learning practice.

   TECHNICAL SUPPORT refers to the ongoing support you (and your learners) have when hardware, software, or network problems arise.

   PEDAGOGICAL SUPPORT refers to the assistance you receive related to applying innovative teaching approaches to an online environment.

   ADMINISTRATIVE LEADERSHIP refers to the commitment your managers/supervisors have to helping you do an effective job.

   How would you rate the support you receive in each of these areas?
   Very strong, Strong, Average, Weak, Very Weak, Don’t Know/Not sure
28. Do you think that the overall support system of your organisation acts as a barrier or an enabler to the use of innovative practices in e-learning? (A barrier makes innovative practices in e-learning harder, an enabler makes innovative practices in e-learning easier)
   Major Barrier 2, 3, Neutral, 4, 5, Major Enabler

29. Overall, how would you rate the importance of support to the successful use of an innovation?
   Extremely important, 6, 5, Moderate Importance, 3, 2, Not Important

**Demographic data**

30. What is your state/territory?
   Location – state/territory
   ACT, NSW, NT, QLD, SA, TAS, VIC, WA

31. What is your Provider Type
   TAFE, ACE, Private RTO, Schools, Other

32. Are you of Aboriginal or Torres Strait Islander origin?
   No, Yes, Aboriginal, Yes, Torres Strait Islander, Yes, both Aboriginal and Torres Strait Islander

33. What is your gender?
   Male, Female

34. Which of the following best describes your primary work location?
   Metropolitan, Regional or rural area

35. What is your age?
   Less than 25, 25-34, 35-44, 45-54, 55 or more

36. What is Your primary role?
   Executive Manager, Manager – direct support to teaching program, Practitioner – Teacher, Trainer, Lecturer, Support – PD/OD Manager, Coordinator, Developer – Instructional designer, resource development, Other (please specify)

37. Which of the following best describes your main field of VET teaching? (Please choose only one option).
   Support Role – e-learning facilitator, developer, coordinator
   Agriculture, Animal and Primary Industries
   Architecture, Building and Planning
   Art, Design, Music and Entertainment
   Business, Administration and Sales
   Chemicals, Plastics, Rubber, etc.
   Computing and Information Services
   Education
   Engineering and Technical
   Food Processing
Furniture and Wood Products
Health and Community Services
Hospitality and Tourism
Law, Security and Defence
Literature and Social Sciences
Metal, Electrical and Automotive
Natural Sciences and Mathematics
Printing and Paper
Textiles, Clothing and Footwear
Transport and Storage

**Innovation**

38. Innovativeness is defined as being open to change and willing to adopt innovative tools and practices. In general, would you say you are more innovative or less innovative than the average person?

Much more innovative, somewhat more innovative, about average, somewhat less innovative, Much less innovative

39. Thinking specifically about the e-learning courses you are responsible for, to what extent do you think those courses use innovative practices and techniques?

Very High Extent, High, Average, Low, Very Low Extent, Don’t Know/Not sure

40. Thinking about your organisation as a whole, in general would you say your organisation is an ‘innovative’ organisation?

Extremely innovative, Somewhat Innovative, Average, Somewhat not Innovative, Extremely not Innovative

41. To what extent do you think your organisation as a whole uses innovative practices and techniques in e-learning?

Very High Extent, High, Average, Low, Very Low Extent, Don’t Know/Not Sure

42. In your opinion, what are the two biggest barriers that prevent people from using innovative practices in e-learning?

43. In your opinion, what are the two biggest enablers that make it easier for people to use innovative practices in e-learning?

44. If you were in charge of fostering the use of innovative practices in e-learning, and you had unlimited resources, how would you do it?

45. Is there anything else you’d like to tell us?
46. We may be interested in contacting some of the respondents to this questionnaire to ask follow up questions and find out more information. If you agree to be contacted, please include your email address in the space provided. Including your email address could mean your identity will be known to us and your responses will no longer be anonymous. Please do not include your email address if you do not want to be contacted or if you wish to remain anonymous.
Appendix 2: Enablers for embedding innovative e-learning

This is a synthesis of the enablers for fostering innovative e-learning identified by approximately 300 VET contributors to this project. It is an amalgam of open ended questions from the RIPPLES survey, the input from case studies, feedback to the Framework, the collaborative work on the research wiki and input from interviews.

The enablers are structured around the seven components of the RIPPLES model and represent the types of support required to embed innovative e-learning practice.

1. **RESOURCES**

   The financial resources needed to develop and use innovative practices in e-learning.

1.1 **Sources of funding**

   1.1.1 Hard money

   - Commit recurrent funding to resource innovation growth and sustainability.
   - Ensure a percentage of funding is targeted for innovation in performance agreements.

   1.1.2 Soft money

   - Access a range of external funding that sustains the innovative practice and matches the goals of the organisation. Look for opportunities from:
     - Framework initiatives
     - Reframing the Future
     - commercial activities
     - commonwealth grants
     - state/territory allocations.

1.2 **Costs**

   - Pay casual staff to participate in professional development opportunities.
   - Plan for hardware and software upgrades and determine who is responsible for funding different levels of upgrades so process is clear.
   - Provide backfill for educators and support professionals to build their capabilities.
   - Use open source tools to keep costs down.
   - Invest in an innovation and e-learning unit to drive the innovation.
2. INFRASTRUCTURE

The technological capabilities of your organisation. This includes communication system, networks, hardware, software, administrative and production facilities.

2.1 Teaching technology – technology used in learning delivery

2.1.1 Technology infrastructure

- robust baseline infrastructure – fast, reliable and efficient
- state-of-the-art technology equipment
- a variety of server options to allow for security concerns and experimental space for innovation
- wireless campus including classrooms
- ISP with broadband access at home
- after hours access to technical support especially for sessional teachers.

2.1.2 Improved administrative systems

- Improved administrative and compliance systems so that staff can focus on delivery and innovation.

2.1.3 Preparation space

- An e-learning technology hub for cross-fertilisation of ideas and access to all technology tools and resources

2.1.4 Teaching space

- access to computer suites
- all classrooms have computers, DVDS and internet access
- technology that meets special needs.

2.1.5 Provide essential tools

- PDAs
- laptops
- mobile phones
- Web 2.0 tools.

2.2 Production technology – technology to develop resources

2.2.1 Baseline technology toolkit

- Each teacher has a laptop with wireless connectivity, a PDA and MP3 player.
2.2.2 The essential suite of technology tools:
   • digital cameras
   • video recorders
   • audio recorders
   • headphones
   • free software
   • Web 2.0 tools.

2.2.3 Technology access
   • access to software and Web 2.0 tools
   • no restrictions of the use of the computer network
   • firewall resolutions.

2.2.4 Communication
   • Consult with educators regarding blocking decisions.

2.3 Communication technology – to communicate with learners
2.3.1 Access to Web 2.0 tools for communication.

2.4 Student technology – to access and participate
2.4.1 E-learning induction
   • More emphasis on informing and inducting learners about e-learning scope.

2.4.2 Ensure the fundamentals are in place
   • good student/computer ratio in every context
   • ensure and not assume computer literacy skills.

2.4.1 Increase access
   • computer pools open at weekends for better access
   • student access to tools like video and audio recorders so they can create and upload their own videos, podcasts and digital stories
   • exploit use of PDAs and mobile phones.
3. **PEOPLE**

   The social and human elements of your organisation. This includes the goals, skills, talents, backgrounds, beliefs, opinions and feelings of the people who make up your organisation as well as those of your customers and clients.

3.1 **Commitment to innovation**

   3.1 Nurture a culture of innovation and lifelong learning

   - encourage an ethos of lifelong learning
   - support innovations in all spheres of work not just e-learning
   - introduce incentives to encourage change
   - create a culture where innovation is explicitly valued, supported and rewarded.

   3.1.2 Articulate a vision for innovation

   - senior management demonstrate strong support for innovation
   - articulate a vision for e-learning innovation including total management commitment to a strategy
   - decide to be an innovation leader in the field not a follower
   - legitimise the role of innovators and innovations and give them authority.

   3.1.3 Resource the vision

   - commit the time, support and resources to enable the vision to be achieved
   - a will to innovate at a senior level.

   3.1.4 Model e-learning innovations in work practices

   - use virtual classrooms for meetings
   - use social software tools for communication
   - convert staff induction into an e-learning program.

   3.1.5 Shared decision making to increase participation

   - involve practitioners in technology decisions
   - listen and respond to needs
   - ensure voices of all educators are heard as needs may be different.
4. POLICIES
The written and unwritten rules, practices, traditions, and regulations that govern your organisation's day-to-day operations.

- An innovation policy to legitimise to embed innovation and the role of innovators into the corporate strategy.
- A consultation policy so all stakeholders are more involved in decision making about technology related issues.
- A recruitment policy to attract younger, more dynamic, creative people.

5. LEARNING
The learning outcomes of a training or educational program. This also refers to a focus on the learner’s overall experience within a training or educational program.

5.1 Return the focus to pedagogy
5.1.1 Research to increase impact

- Research the place of innovation and how it is incorporated into the corporate culture.
- Research trends and good practices and use this to establish a coherent e-learning innovation plan.
- Research innovative e-learning for different disciplines and learner groups to meet the needs of local contexts.
- Carry out continual research on the effectiveness of all types of learning so that the application of e-learning is made where it will have the best impact for students.
- Research the ‘Future Student’ profile and implement practices that would attract them.

5.1.2 Have a pedagogy focus

- Put learning and teaching above technology.
- Have robust guidelines for best use of e-learning in a blended learning design.
- Demonstrate good working models of technology integration not just individual objects and tools.
- Promote case studies, good practices and success stories of technology integration.
- Develop a sampler of discipline-specific exemplars which demonstrate different pedagogical approaches to innovative practice.
- Move from the generic to the specific – relate all exemplars to meeting a learning solution in a local context.
5.2  Consider client perspectives

5.2.1  Gather evidence of e-learning need in local contexts
- Consult learners more to find a direction that works for them.
- Survey students to find out what they would prefer and customise approaches to learning based on evidence.
- Provide evidence that learners want innovative e-learning.

5.2.2  Provide better induction to e-learning pedagogy
- Help clients understand how e-learning works and can be applied.
- Ensure learners have the adequate prerequisite skills to participate.
- Exploit younger students’ familiarity with emerging technologies.

5.2.3  Provide better incentives to participate in innovation initiatives
- Offer briefings and inductions on what to expect from e-learning.
- Support learning how to learn innovatively.
- Offer a complete service – enrol, pay, access resources, submit assignments and access results online.
- Provide a free unit to demonstrate flexibility and the quality offered by e-learning.
- Offer subsidies to all accredited training that has an e-learning component.

6.  EVALUATION
An assessment of student goals, technology, technology plans, and the costs and benefits associated with a new e-learning program.
- Put more effort into evaluation and feedback.
- Involve customers in the review of technology use and link to industry needs.
- Develop a system that supports rapid assembly of reasoned business cases for large scale implementation of new technologies after initial experimentation.

7.  SUPPORT
Support has four components: Training, Technical support, Pedagogical support, and Administrative leadership.

7.1  Training support
7.1.1  Provide the support of time
- Provide time to research, think about the possibilities, investigate, experiment, make mistakes, learn new things, develop understandings, develop quality e-learning resources, access training, share with colleagues, plan for integration, make the transition to new practices.
- Give people time to develop skills and courses and to share their achievements.
7.1.2 Provide support that is personalised, localised, just-in-time

- provide innovation and support centres within an organisation
- mentoring from experienced e-learning practitioners with a proven implementation record
- just-in-time, personalised and one-to-one support to implement real e-learning innovations in a local context
- a support network of willing, adventurous peers for collaborative learning
- nurture a safe and enabling environment
- foster a training culture that is learning rather than ‘e’ learning focused
- structured, progressive in-house training in use of e-technologies.

7.1.3 Increase awareness

- make sure people know what is available
- seek every opportunity to promote modelling of real, working examples
- have an extensive in-house marketing campaign.

7.1.4 Include casual staff

- consider the needs of casual staff – provide access from home and at times convenient for them
- provide structure for progressive training for casual staff
- find out people’s passions and support that. Start with what engages them.

7.1.5 Have a variety of strategies

- Move away from generic workshops to customised tasks so delivering is more effective.
- Have a local presence and provide one-on-one support so it can be managed locally.
- Have a personal e-learning experience with a pedagogically sound e-learning course.
- Have mentors for ‘newbies’.
- Have a residential intensive program so everyone lives it and breathes it for a week.
- Have intensive workshop on key themes so it is more than awareness raising.
- Have a formal education pathways – develop an award program on innovative e-learning.
- Have one-on-one mentors to help individuals adapt and adopt technology into their practices.
- Start small and simply and scaffold progress.
- Have champions at the local level.
• E-sabbaticals for a three month period.
• Greater level of collaborative practices – across disciplines, across functional areas, with industry.

7.1.6 Target training for IT support staff
• support IT staff to keep up with the times and understand how fast ICT is changing.

7.2 Technical support
• competent, interested and friendly support
• support for specific software
• just-in-time and personalised
• readily available and sound IT support from either experienced educators or ‘techies’
• technical support to ensure there is no significant downtime
• easy access to support from home
• minimal administrative or technical barriers to using the innovation.

7.3 Pedagogical support
7.3.1 Recognise the significance of personal qualities and attributes
• desire, willingness to participate, open mindedness and passion, motivation to engage
• challenging and supportive colleagues ready to change mindset
• understand risk is OK
• attitude and enthusiasm and initiative of staff (both individually and collectively)
• committed to pedagogy rather than outcomes
• enthusiastic staff and staff prepared to put in many hours at nights and on weekends.

7.3.2 Modelling by peers, mentors and local champions
• observing peers in the same age range using innovative e-learning practices
• team teach with experienced teachers who have expertise in delivering e-learning successfully
• encourage local champions who transfer their expertise in local contexts
• the commitment drive and resilience of the practitioners to be innovative
• implement small innovative practices with a mentor and with recognition for achievement.

7.3.3 Opinion leaders and champions
• champions from all sections who becomes organisational enablers who work at removing barriers
• employ an e-learning champion to be an enabler to support, coach and guide and drive the process
• bring innovators together regularly. Build networks
• empower innovators to become leaders
• have champion that work with international leaders and promote exchanges from different sectors
• employ learning coaches as internal linkers across disciplines
• have champion teams rather than individuals
• develop the role of opinion leaders who have credibility and respect of their colleagues and who inspire, mentor coach, encourage, coerce, network and demonstrate.

7.3.4 Sharing, collaborating and networking
• Recognise the value of networking opportunities, workshops, showcases and conferences.
• Bring isolated innovators together to engage in discussions about how to support the implementation process more effectively.
• Create an environment where teachers, managers and technical staff brainstorm possibilities for different contexts so everyone is working on the same page.
• Work across disciplinary teams to keep ideas fresh, to be exposed to and share other practices and avoid duplication of effort.
• Rotate practitioners through instructional designer positions to work with peers.
• Work in teacher/learner teams when developing proposals for new practices.

7.4 Administrative leadership
7.4.1 Target senior champions
• To ensure leadership from the top, have an annual ‘in-service’ for CEOs, Ministers, Boards of Management to promote the benefits of innovative practice so they understand and appreciate its contribution to economic growth and sustainability.
• Identify a senior advocate to drive the process and enable the innovation process.
• Ensure the champion is matched to the type of innovation so there is resonance.

7.4.2 Active support by line managers
• select and encourage forward thinking, forward looking and educationally focused
• commitment, drive and resilience to champion change
Innovate and integrate: Embedding innovative practices

- modelling and leading by example by active participation in innovative initiatives
- actively seeking funding to sustain innovative initiatives
- allocating time as part of the innovation process.
Appendix 3: Self-organised strategy for enabling innovators to thrive in VET

Background
This was a self-organising process where people who were recognised by their peers as ‘VET innovators’ were invited to contribute their knowledge, experience, insights and wisdom about the role of innovators in an e-learning context. They worked collaboratively in the research wiki (<http://designplanet.wikispaces.com/Innovators>) for approximately two weeks. While some knew each other, others had never met. Seventeen innovators were nominated and contributed to this document and 15 completed the Innovation Styles profile which is found in Appendix 4.

Many thanks to the following VET innovators for your inspiration and generosity:
Leonard Low, Robyn Jay, Alexander Hayes, Diana Khabbaz, Stephan Ridgway, Vivian Evans, Delia Bradshaw, Regan Harding, Carole McCulloch, Sue Waters, Michael Chalk, Louisa Ellum, Marcus Ragus, Michael Coghlan and Caryl Oliver and the others who preferred not to be named!

Apart from deleting graphics and lyrics that are copyright, this is an unedited version.

Marie Jasinski
December 2006.

Question 1: How would you describe an innovator?
There are different kinds
There are different kinds of innovator. They are the vision and ideas people who can see possibilities where others can’t, and are ahead of their time. An innovator is someone who can take new thoughts and new ways of working/operating to a breakthrough implementation point. It’s about taking creative, novel ideas to the next step – perhaps shifting/ moulding them against organisational structures and goals – bringing those ideas through to fruition.

Break-through and break-from innovators
I think there are two kinds of innovator: those who break-through, and those who break-from.

Break-through innovators work within the current systems – with the established paradigms – and find new ways to improve the operation of that system or paradigm, by ‘breaking through’ its problems. This is the most common variety of innovator; this kind of innovation is (usually) easier to think up, easier to explain, and easier to find support for, as it doesn't challenge or undermine the underlying principles of other participants in the system. The basis of power of a break-through innovator is knowledge; they are usually extremely knowledgeable or skilled in the system or an aspect of the system, and are therefore able to push the boundaries in that field.

Break through innovators
• have some vision of where they're going
• their progress is built on expertise and reputation
• their effect is evolutionary
• they work on overcoming problems in practice, to help people do what they do, better.
The break-from innovator challenges the system itself. Rather than working to get the most out of an old system – like making a better buggy whip, to drive the carriage faster – they often try to come up with a whole new way of doing something, say, a motor car. They try to come up with new and better models to explain established facts, and they may subvert or contradict established principles and practices. To those educated in the status quo, break-from innovators may seem uneducated; naive; or just plain wrong. For these reasons, break-from innovators face tough challenges, in formulating their concepts, in explaining their concepts, and in obtaining support for their ideas, from their less visionary superiors or peers: eg ‘I think there is a world market for maybe five computers’ (Thomas Watson Snr. Chairman of IBM 1943). Break-from innovators may or may not be particularly educated or skilled in the established system.

Break from innovators are rare.
- They are usually fuelled by exceptional creativity and vision.
- Their progress is built on persistence and persuasiveness.
- Their effect is revolutionary.
- They work on principles, to help people see things in new ways.
- Others don't always understand them – most people still wouldn't understand ‘Relativity’ 90 years after Einstein spelled it out.

Parachutes and planes
Just as the parachute was conceived before the invention of powered flight, I think innovators often make creative leaps before, or even without, the necessity to do so. They may or may not be the people to then fill in the gaps, or actualise their visions or concepts, but they will invariably inspire and motivate others around them to think about it …

Has great ideas that actually work
An innovator is someone who comes up with something that actually works! We all have great ideas after a few bottles of red and in the cold light of day they are often impractical or just plain ridiculous! An innovator will be the one who extracts something from those ideas and applies them in such a way that gives positive change or improvement. Innovation is rarely the big AH HA! moment – it is more often the incremental tweaking that ends up with significant change that no-one realised was actually happening but which everyone says afterwards ‘what a good idea’ or ‘how simple was that?’.

Open to change
I would describe an innovator as someone who is constantly open to or generating change – small or large and who is always asking that classic question ‘why?’.

Challenge the status quo
You never see a business card with ‘innovator’ under a name and that is because the minute you put the title there you create a totally unreasonable expectation. What I
do find though, is that over time others start to understand that change surrounds the innovator and they are never happy with the status quo without challenging it.

**Joy in learning and discovery**

The joy of being an innovator is in learning more about something, suggesting ways of improving or even just discovering that, for the moment, it is the best it can be! Until we look at it again!

**Relationship between organisational innovation and society as a whole**

In ‘A Nomad's Guide to Learning and Social Software’, in the October 2005 issue of *The Knowledge Tree: An e-Journal of learning Innovation*, Ulises Mejias writes:

'I would like to suggest that the issue is ... the way in which those who benefit from access to the technology are able to transform those benefits into benefits for the greater society, extending the value of social software beyond the privileged social spheres that have access to it ...

It is social software's potential for fomenting dialogue, forming solidarities, coordinating action, distributing information and increasing understanding that make it an important tool for those invested in social equality ...

My hope is that ..., we inculcate in each other a responsibility for converting the benefits of social software into benefits for a larger part of society. I don’t see how we can call it 'social' software' otherwise ...'

If we substitute 'innovation' for 'social software' in Ulises' article, I think we can extend the role and responsibilities of innovators beyond the organisation to the well-being of society as a whole.

**Question 2: What enables an innovator to thrive in a work environment?**

- play time
- legitimate recognition that in this time and in this space, they are making a significant contribution
- a champion, and open-minded colleagues
- a tough hide
- a clear vision
- space, time, trust and approval to try new things, to take risks and make mistakes, to reflect and connect
- positive feedback and recognition of role
- programs and mechanisms to champion and celebrate achievements
- opportunity and funding to engage other staff with innovative ideas etc
- lots of other innovators all around them or connections/networks with other innovators (even if not in their own workplace)
- enough balance within themselves to be able to both have visionary ideas and take practical steps
- good enough communication skills to be able to communicate both the vision / potential, and the practical strategies/direction
• good relationship and communication skills, to be able to focus on the
  environment and the outcomes, rather than the behaviour of any resistors
• plenty of flexibility in workplace (something like the google 'one day of time for
  your passion' credo)
• good backup and support – a whole department of like-minded people
• an understanding of, and respect for, the perspectives of different communities
• an ability to understand the similarities in different national and professional
  languages
• an institutional culture that measures forward looking values, not just backward
  looking ones
• a social culture which looks at strange concepts, silly ideas, and unusual
  behaviour and says, ‘thank goodness’.
• a strength-based approach to change – looking for what's working, and being
  encouraged to build on that. So energising and motivating! When you say ‘I've
  got this great idea’ and the response is ‘Go for it! How can we support you’.

Play time and think time

Definitely, play time. It takes time to come up with, and try out, new ideas. What
many people don't realise is that innovators make just as many, possibly more,
mistakes as anyone else. We just try things out a *lot* more, we experiment, we
tweak, we fix, and some things we simply discard. We may be guided by technical
expertise or clarity of vision, but often we simply compact a *lot* of experimentation
into a short amount of time to maintain our edge in the field. Other times, we need
time to just think – to draw sketches of ideas, to muse, to bounce ideas off
colleagues, peers and mentors, or to sort things out in our head.

Having some time without too many interruptions.... I find I can explore and test far
easier when working in an office away but on the other hand sometimes it is the
bouncing off others ideas that get the mind buzzing with ideas’... an online brainstorm
where ideas grow :-)

Support to explore

I thrive in my workplace because of supportive managers, who allow me to be
relatively self-directed in my investigation and application of new ideas. They see the
value in letting me pursue the avenues I feel have the most potential for enhancing
teaching and learning in my institute and elsewhere. I also have a very
understanding work team who are themselves exceptionally talented, and don't laugh
at me too much when I get into a creative mood and come up with all sorts of new
ideas for doing things better (well, ‘differently’); sometimes they even agree with
some of them!!! :)

Authority and responsibility to be innovative

Being allowed to ask the questions and being allowed to experiment with change.
Being an innovator is something within that is hard to suppress and no matter where
we sit within our work environment, if we are innovative we will be so. I am lucky that
I have a work environment that has given me both authority and responsibility to be
innovative so it has been easier for me to develop ideas.
Interestingly, no matter how much encouragement I offer, there are still some on my staff who resist change of any sort and who think that innovation is done by the Innovation Department somewhere else!

For me this is quite a difficult question to answer as I have never known what it is like not to be me and I have always challenged and changed things …

**Question 3: What barriers do innovators face in a work environment?**

- No well defined role or recognition for the role they have to challenge the status quo.
- Being seen as not contributing to the bottom line core business – lack of insight into what innovation is and how the process works.
- Bureaucratic structures and priorities.
- Lack of flexibility in the workplace eg for temporary role change, project focus.
- Fear of failure – wanting to impress ‘powers that be’.
- Funding cuts – innovation and PD go first.
- Repeated negativity and lack of positive feedback.
- Lack of support to move innovations to next step.
- Lack of management support – this can be financially and moral support/encouragement.
- Or management support that does not go all the way... left hanging.
- Conflicting priorities – non-alignment to organisational goals.
- Getting wrapped up in their own vision, and forgetting that other people don't always share their vision. Forgetting they have to ’sell’ the message. Forgetting they need to connect what could be, with what is.
- Taking on too much work, getting spread too thin.
- Insufficient negotiation skills, and lack of awareness of the political implications of change.

**Limited management vision**

The greatest problems I face are from short-sighted dogmatic, bureaucratic technical or financial managers, who can only see the little impediments, and not the big possibilities. They talk about security and money, and not about teaching and learning; they understand a business case for systems that support accounting or managing of staff, but not for systems that can give our students freedom, opportunity, and new horizons. They often don't understand education, but somehow manage an educational institution.

**Blockers**

I often wish when I brought up a new idea that people would say – ‘that's a great idea, let's work towards that together by tackling these issues,’ rather than ‘sounds good, but you can't do it because…'
Competition (perceptions of)

I've seen people who have the desire and skills to seek and implement change or movement, but sabotage themselves and their ideas through perceptions that they won't 'cut it' amongst others in the field. I've sometimes felt I'm back in the high-school classroom where students are too busy comparing their work to others' and measuring themselves into some kind of pecking order, when I'd rather feel that I'm in the primary school classroom – eagerly looking at what my peers have to show and tell, before excitedly sharing what I've brought in my shoe box. There isn't one prize … there aren't bell curves for vision and creative change … innovation isn't a finite resource.

A culture that does not embrace change

The greatest barrier has to be working in a culture that does not embrace change! Innovation as a concept must be a part of the overall corporate strategic plan for an organisation so that boards and committees understand that it is a formal process and that funds must be allocated to either the purchase of resources or the provision of time for staff to participate.

It is fine to come up with an innovation but if the overall corporate view is to not support its implementation then the opportunity is lost and a division is created between those who may have tried it and those who did not get the chance.

Systems not ready or prepared

An example: I introduced a system of mobile re-enrolment for students a couple of years ago where we went into the classroom and did the paperwork on the spot before we lost them for the holidays – it turned a 20% attrition into a 7% attrition for that semester. The idea was not pursued because others said it was too hard to take a credit card machine out of the information centre and use it elsewhere and they would have to have a security guard to be there to keep an eye on the cash and it involved too much paperwork in too many places … . Interestingly, with wireless now throughout the campus all these problems are no longer valid but it will take an even bigger effort to overcome the 'well we tried that but it was too hard' brigade!!

Failure intolerance

Working in a culture that does not allow for failure is also a barrier – we incorporate failure as a critical part of the learning we deliver to our students but do not allow the same rules to ourselves – why?

I think we have all had to overcome some amazing barriers to innovation in order to take steps forward and we will continue to do so – I had a very supportive director who left and the acting person was the opposite; I never realised quite how many barriers a single person could throw up in such a short space of time!

Management support that does not go all the way

Hmm, recently I showed my manager how I was using wikispaces with students both in the classroom and from a distance. My manager was excited by the potential. I was asked to set up and share at the next head teachers meeting a collaborative wikispace. Inspired I worked during my weekends leading up to the event setting up a shell for us to build onto in the session. My session ended up being on the last shift
of a two day meeting on Friday afternoon. Hmm, you can imagine with distances to travel everyone was keen to go home. Staff were excited by the idea but without further work and support all a waste of time really... It needed time and support for all to follow it through. I am left now either forgetting about the effort put in or to champion it so the resource grows as required... hmm but given no time to do it. (My manager was called away to an emergency so missed the session) So it is one thing to start an idea... but it needs support to follow it through to make innovation work.

This last entry makes me realise that all the time you're competing with people who are trying to just stay afloat, and manage the everyday burdens that swamp them constantly. You're competing with a whole range of other things that need to be done. Unless innovation is seen as a basic and primary objective for an organisation that needs to be relevant, there's no time for this 'extra' luxury.

**Question 4: What role should innovators have in implementing an innovation at the coalface? Should they have a role?**

They may not be good implementers

Innovators are not necessarily good implementers. They get bored with the detail. I think it would be a good idea to make sure they are paired up with someone (or a team) who understands what the innovation is about, but are more grounded in the realities of what it takes to make it happen at the coalface. You don't want to suck the inspiration out of them.

(Earlier up the page, somebody said that an innovator is a person who can implement astoundingly creative change – a balanced person with both vision and practical strength.)

• As part of a team – members with different roles but a common goal – yes!
• Implementing real trials and case studies, and capturing those.
• Inspiring, mentoring, coaching – depends on person of course.
• Seeking funding to implement – with help.
• Working with others to come up with ideas, brainstorming, envisioning the possibilities.

**Providing Inspiration**

Innovators have a part to play in inspiring others to try new things, and praising and recognising them for little steps. Often, the role of the innovator is a thankless one – the mission is to praise, and not seek to be praised; to inspire despite personal challenges; to make the outcome of a difficult process of investigation and experimentation seem like a simple and logical next step. As sailors, we return with bright treasures, but our task is to give it all away, and still find a supply of more.

**Adjust in response to feedback**

Somebody said if you want an innovation to work, start with the late adopters, the ones who resist. Work out why they are resisting, ease those fears, and re-develop your vision from their feedback (was it on this page?).
An orchestrator
I prefer to work with others in implementing ideas as there is rarely an innovation that involves only the skills I bring to the table! I believe that my strengths lie in seeing what might be possible, enthusing others with those ideas and drawing together the skills and characters to make things work – sort of glorified train driver!

Share the glory
I also believe absolutely in reflected glory. If all those around me feel that they have achieved something special and have ownership of what we are doing then I am the happiest person of all. If anyone exceeds their own expectations then we have really achieved something!

Mohammed?
Finding opportunities to demonstrate the positive externalities to others …bringing the mountain to Mohammed as it were. If institutions and the people within them are able to see benefits, then they are encouraged to invest more time, energy and money into embracing and implementing innovation.

Question 5: From your experience, what would be the ideal for maximising the talents of innovators to benefit both the innovator and the organisation?

• Space and freedom and understanding. Too much restraint is an innovation killer. This doesn't mean no accountability or responsibility. That is a given.
• A program funding and supporting champions of innovation. They are recognised for what they bring and do, and given all the resources needed to think, play, trial, evaluate
• Professional development and networking opportunities with other innovators
• A culture where risk taking and mistake making is welcomed and acceptable
• Giving everyone the opportunity to come up with new ideas and trial them. Everyone can be innovative, and most teachers are
• Managers that take time to listen to ideas, weigh them up with reality checks and then support them to succeed.

Resources
Innovators need resources to experiment and innovate – time, sometimes money, and the opportunity to build networks and synergies with other innovators, who act both as an inspiration for further innovation, as well as a support network when the task of innovating is a frustrating and thankless one. I think many innovators understand each other on these issues!

Rotation to exchange ideas
I think the effectiveness of innovators is also enhanced through constant rotation, by exposing staff to ideas from different people – exposing teachers at institutes to new ideas and new faces on a regular basis. Perhaps a quarterly meeting of innovators at a different city each time?
Recognition

There's no real recognition of innovators at the moment; while it's not my primary motivation for engaging in innovation, perhaps others might be encouraged by some kind of award for innovation – say, a nominated innovator from each state and territory, and one scholarship or grant to further innovation in their field awarded to the ‘VET Innovator of the Year’?

Regional Development Centres

This is one we'd love in the ACE sector, (where people can be even more isolated than in eg TAFE). Give a range of people opportunities to work together on a bigger scale, coming in from different organisations. Let them dream their dreams, and make real practical things, that would be useful for other teachers in the classroom. Sounds like the Hunter Valley innovation centre (unfortunately folded), or the Swinburne e-learning support department. Or the NSW LearnScope bunch this year.

Provide cross and multidisciplinary forums for exchange, experimentation and support

I don't think you can sit someone in an office and tell them to innovate … I believe that real innovation comes from understanding how something works, challenging that operation and having the knowledge/skill to apply changes based on practical application rather than theoretical ideas. In an ideal working world there would be a forum or means for people to discuss new ideas with colleagues inside and outside their own departments, explore those ideas without fear of ridicule and then be empowered to research/trial/experiment without fear of failure but with an opportunity to report back on success/failure/lessons learned. Time release, resources or a department with the ability to provide that support and then the support to take the outcomes and report them to Executive, Council, Board if appropriate.

Recognition of innovative activities and a research culture

Recognition of the activity as a part of a research culture would also encourage those who are less outgoing to actually pursue their ideas also.

Question 6: What else should this research be considering in regard to innovators and embedding innovative practice in e-learning?

Make better choices

I think there are huge conflicts and tensions at present within the Framework that both encourage and hinder innovation. For example, there are people making decisions that are not innovators, who do not understand current e-learning pedagogy etc. Some of the programs actually inhibit on the ground innovation by encouraging and funding out of date methodologies.

Understand the motives

Innovators are usually relatively resilient – they're used to taking risks and trying new things, and often failing or having their ideas challenged. A lot of the time, we progress fueled by half a sandwich and a big idea and not much more. Innovators are usually born (intrinsically motivated), not created (extrinsically motivated): those...
who are inspired to ‘innovate’ for glory or money soon run out of steam when they realise there really isn't any. :) 

A will to innovate at senior level
From my experience and talking to others who have done some great stuff, you do not see many innovators at senior levels in education institutions – I often find myself as the only person from management in forums and groups. Either people lose the will to make change as they progress through the ranks and take on more responsibility or they take on the corporate culture that stops seeing the people (students and teachers) and only sees the balance sheet.

Innovation as a corporate strategy
I think some research into the place of innovation in corporate strategy would be of interest and if it is mentioned then how is it implemented throughout the organisation. Is it a commitment to a culture of innovation or is it just lip service to something that people are expected to find time to do over and above their regular work. ‘And please don't come to me and tell me it didn't work'
Appendix 4: Innovation Styles Profile – peer-nominated innovators

E-learning Innovators
Embedding e-learning innovations applied research project
December 2006
Your Exploring Group Profile
Innovate and integrate: Embedding innovative practices

Team Results for e-learning innovators

Visioning

Modifying

Experimenting

Exploring
Your *Exploring*
Group Profile – *At a Glance*

Groups that have an overall profile of *Exploring* like to discover novel possibilities without the need for a long-term goal or a specific process: they *challenge* and *discover*. They are adventurous and enthusiastic in the face of uncertainty – challenging assumptions to open up the potential for dramatic breakthroughs.

**Finding and implementing innovative solutions**

Your group will quite naturally seek to:
- Generate ideas that would be expansive, adventurous, and rule-changing
- Seek novel, original breakthroughs

But watch out … your group may:
- Get off track, frequently flying off in new directions
- Take risks where you ‘leap before you look’

**Working well together**

You are likely to build and energize your teamwork by asking:
- ‘What would be a revolutionary way of organizing ourselves?’
- ‘How can we keep entertaining fresh, new, and exciting points of view?’

In addition… consider the value of asking:
- ‘What methods can we adopt from successful teams we’ve been on?’
- ‘How can we ensure that we value our history and past achievements?’

**Selecting the best ideas**

When evaluating creative options, your group will prefer to:
- Use *intuition* to determine the likelihood of an exciting breakthrough
- Be *broad* and divergent, continuing to bring up more and more new options

Without realizing it… your group may have a tendency to:
- Keep your options open too long, even after the time has come to decide
- Prefer ideas simply because they are more risky, exciting, or novel
### Tapping into personal and group values

Your group will be inclined to define its values by asking:

- ‘What would challenge us to grow in our values?’
- ‘How can we encourage each other to work freely in our own best way?’

On the other hand… your group may miss some key values by neglecting to ask:

- ‘What values have always been important to us?’
- ‘What values are evident in our day-to-day activities?’

### Managing stress

When the pressure is on, your group will tend to gain confidence and fortitude by:

- Enjoying the freedom offered by uncertainty
- Re-committing to having flexibility in how you respond to challenges

However… if you let stress accumulate, you may end up:

- Being resistant to needed discipline and planning

### Developing group versatility

Be sure to build into your teamwork the *structures* and *discipline* you need to be versatile:

- Leverage work that has already been done
- Keep a focus on results even while entertaining ‘speculative’ ideas
- Be open to ideas even if they seem too much like the status quo

## The Four Innovation Styles

**A Quick Overview**

Recognising the different ways we like to innovate is a key to working together successfully – in a group or in an organisation. We all have our own unique approach to meeting a creative challenge, using our own mixture of four Innovation Styles: *Visioning*, *Modifying*, *Exploring*, and *Experimenting*. To nurture a healthy group environment for innovation, each approach must be recognised, valued, and put to its best use… while practicing versatility among all four approaches.
### How do you approach the innovation process?

**Visioning**

- People who have Visioning profiles like to imagine an ideal future and let long-term goals be their guide – they envision and idealise.

**Modifying**

- People who have Modifying profiles like to refine and improve what has already been done – they refine and optimise.

**Exploring**

- People who have Exploring profiles like to question assumptions and discover novel possibilities – they challenge and discover.

**Experimenting**

- Those people who have Experimenting profiles like to test out various combinations of new ideas and learn from the results – they combine and test.

### What stimulates your innovative thinking?

- Visioning and Exploring styles primarily use intuition, insights, and image.

- Experimenting and Modifying styles primarily use facts, details, and analysis.

- Exploring and Experimenting styles are more broad, perceptive, and learning-oriented.
Your Exploring / Experimenting Team Profile – Instant Coach

Use this Instant Coach to identify quick leverage points that will give a boost to your team innovation, just where you need it most!

The Task: Developing Innovations that get adopted and embedded

The key task of your group – as seen by its members – is to be at the forefront of developing new e-learning products, services, and technologies for the education environment in any of the following four areas:

- Developing innovative products or technologies
- Using existing products/technology to improve teaching, learning, or assessment.
- Dealing with technology issues
- Developing new approaches to teaching (not necessarily based on technology)

Your group is most likely to initiate projects characterised either by being radically new and novel, or with distinct long-term value, as described in Table 1. Your group is likely to quickly become disinterested in projects that are ‘trusted enhancements’ of what educators already know and use.

Table 1. Relationship among levels of innovation, style/strategies, features, readiness, and adoption

<table>
<thead>
<tr>
<th>Level of Innovation (degrees of novelty)</th>
<th>Most incremental (Evolutionary; tried-and-tested)</th>
<th>Most radical (Revolutionary; new and unique)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovation Style/Strategy</td>
<td>Modifying</td>
<td>Visioning</td>
</tr>
<tr>
<td>Level of adopter change required</td>
<td>Small change</td>
<td>Small/medium change</td>
</tr>
<tr>
<td>Demand on other system changes</td>
<td>Little demand on other systems</td>
<td>Some demand on other systems</td>
</tr>
<tr>
<td>Institutional readiness</td>
<td>Can be low</td>
<td>Can be medium</td>
</tr>
<tr>
<td>Change to practice</td>
<td>Enhances/optimizes existing practice</td>
<td>Complements existing practice</td>
</tr>
<tr>
<td>Example</td>
<td>ARED rapid development tools</td>
<td>Digital storytelling Podcasts</td>
</tr>
</tbody>
</table>
A key challenge will be to have these innovations be aligned to the long-term needs of the education community who will adopt their projects (or not). A key issue involved in this alignment is shown in Table 2, the potential for ‘disconnect’ between the degrees of innovativeness (novelty/change) of an innovative project, and the degree of innovativeness preferred by potential adopters.

Table 2. How the level of innovation (novelty/change) of a project matches with the level needed by the potential individual adopter?

<table>
<thead>
<tr>
<th>Degrees of innovation (degrees of novelty/change)</th>
<th>DEPENDENTS: ‘We want projects that are…’</th>
<th>DEVELOPERS: ‘The project being developed is…’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incremental</td>
<td>Trusted enhancement</td>
<td>Ideal</td>
</tr>
<tr>
<td>Breakthrough</td>
<td>Practical, adaptable</td>
<td>Ok</td>
</tr>
<tr>
<td>Distinct, long-term value</td>
<td>Fair</td>
<td>Ok</td>
</tr>
<tr>
<td>Radically new, novel</td>
<td>Poor</td>
<td>Fair</td>
</tr>
</tbody>
</table>

Since your group is likely to focus on developing innovations that are either radically new and novel, or with distinct long-term value, many in the education community could possibly view your work as too ‘out there’ and not practical enough. Thus, your group could find itself facing a ‘chasm of relevance’ in your relationships with the stakeholders your wish to serve.

Achieving the group mission and goals

As discussed above, when your group thinks of ‘the system’ – whether that is how the marketplace works or how the organisation functions – you are likely to want to radically transform it. This will impact the kind of solutions you seek to meet your innovative challenges. The potential drawback is creating a mismatch between your ideas and what your clients (inside or outside your organisation) are actually looking for. While you are pursuing exciting, novel breakthroughs, perhaps the real need is to have your final results fit easily within current practices. That is where you will need to keep your attention on your ‘customer’ as you do your work, and find out what degree of change they are ready and eager to implement.

You are probably pretty good at looking out for ‘what’s next’ on the horizon, but watch out for changing perspectives and direction too often as you go. This is where the Modifying style can really shine; use this style to help your group focus on a detailed plan for short-term results. In addition, you can leverage the strengths of two secondary styles – Visioning and Experimenting – by using them to plan for long-term success while implementing a process for learning and improving over time. This will help your group develop versatility and bring out the best each person has to offer to achieve your goals.

Cultivating synergistic relationships

When it comes to working together, you will likely want a revolutionary way of organising yourselves and a lot of flexibility and spontaneity in doing your work. Is there a problem with that? Only if you don’t allow for steadiness and detail-orientation in developing new ideas. If you experience a lack of focus in your group for achieving tangible short-term objectives, look to bring Modifying style members into your group; they can help.

You may find that certain people in your group are quite opposite to each other in how they approach solving a challenge. Rather than seeing this as a problem, you can take advantage
of the diversity. One set of opposites to look out for in your group are those who envision ideas that are bold, far-reaching, and imaginative vs. those who experiment with ideas to make sure they are workable. To benefit from such differences, synergize them by practicing patience, recognising the limitations of using only one over the other, and ultimately ‘trying on’ the opposite to see the true value of what the other person(s) can give to your group.

Group values are what bring people together to work collaboratively towards mutually-important goals. To identify your group values, your tendency will be to ask, ‘What values prompt us to learn and expand in new ways?’ Be sure to add the starting points from the other three styles: ‘What values represent our highest ideals?’ ‘What values are evident in our day-to-day activities?’ ‘What values have proven to be the most reliable guides in different aspects of our work?’ From that full plate of choices, your group can focus in on the core values that will energise your commitment to work well together, as well as the perseverance it takes to succeed.

Leading an innovative group

While there is no specific, designated leader for this group, the leadership is likely to emerge organically and change as needs and circumstances merit. Leading an innovative group such as this has three significant tasks: ensuring group achievement to over-arching goals, empowering the talent, and strengthening group values. That means, first of all, to guide and facilitate how well the group practices its Innovation Style strengths and addresses its potential pitfalls, as outlined in the ‘At a Glance.’ In addition, here are a few other tips to consider.

When charged with new assignments, your group will likely want to take off by questioning core assumptions about how the assignment itself is defined. This is an important first impulse for heading towards breakthrough solutions. Secondarily, the group is likely to look at solutions based on a long-term vision and perhaps novel combinations of what already exists. Depending on the nature of the innovative projects this group undertakes, it may also be important – though the group as a whole could find it limiting and boring – to seek incremental refinements in what already exists.

What feeds innovative thinking is new knowledge and learning, and your group leadership can nurture the climate by introducing learning opportunities that give your group the chance to create new knowledge and develop totally new skills. At times, you may need to intentionally introduce learning that is also immediately practical and builds on current skills – recognising that this emphasis may not be as popular with the majority of group members.

Group values are the glue that holds a group together, especially when facing the adversity of a difficult goal. Whether the group is ‘leaderless’ or has strong ‘organic’ leadership at any moment, the group’s values can be strengthened by making sure that a dialogue on values is a frequent part of the life of the group: ‘What are they? What do they look like in practice? How well are we living up to them in our work and our decisions?’ There is likely to get a good response if the lead question is, ‘How can we encourage each other to work freely in their own best way?’ Be sure to also include a discussion of how your group can achieve excellence in all you do, be resourceful and relevant, and integrate everyone’s personal values into the way you work together. That will help to include all perspectives and round out the discussion.
Group/leadership dynamics

If at any moment in time the group leadership has *Exploring, Exploring-Experimenting, or Visioning-Exploring* as their Innovation Style profile, that can be both the good news and the bad news. On the plus side, since the *Exploring* style is both intuitive and learning-oriented, it can seem easy for a leader to develop strong rapport with those who favor *Visioning* (intuitive) or *Experimenting* (learning-oriented). But it will also take extra inner discipline to bring any needed balance to the group – something that could be difficult if there are pressures to achieve a challenging task. To help accomplish this balance, it will be important to give a special ear to those in the group who favor facts and analysis or who are more focused, especially the *Modifying* group members.

At times, it can be a stretching, ‘out of the box’ experience for members of this group to have leaders who bring an Innovation Style that *does not include Exploring* – especially if their profiles *do* include *Modifying*. In such cases, the leadership will be more focused and/or fact-oriented, which is opposite to the inclination of the group as a whole. While this contrast might naturally bring a needed sense of ‘current relevance’ to the group, it could also feel as if the leadership is going ‘against the grain’ of the group majority. To optimise group innovation in such a situation, it is important to cultivate within the group an overall attitude of ‘respecting differences,’ while developing personal versatility in all of the styles.
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Case studies

Case study 1: An organisation – getting down to business

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Teacher

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Jo Menzies  Librarian

The 67 GippsTAFE staff who completed the RIPPLES survey
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Survey respondents
To the 321 VET professionals who responded to the survey and for those who distributed it across VET networks
Innovate and integrate: Embedding innovative practices

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