

# Innovation through action learning

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This paper describes an organisational approach that is being undertaken by a vocational educational institution to engage teachers in the use of emerging technologies to enable them to implement innovative ways of teaching and learning that are more flexible and accessible for learners. The approach incorporates large scale innovative professional development opportunities for vocational teachers involving action learning project teams exploring the potential benefits of emerging technologies and trialling the use of these technologies with learners. The outcomes will impact on organisation wide decisions about the future direction of collaborative learning environments and technologies to support teaching and learning. These projects are part of a state-wide TAFE NSW dynamic research teaching and learning community, continuously collecting practitioners' ideas, experiences and information then sharing, organising and evaluating them. Using action research methodology the projects focus on what the teachers' experience, the outcomes for learners and the technical challenges embraced. This approach aims to collect meaningful applications of learning strategies using technologies that are effective, sustainable and scaleable.

Keywords: emerging technologies, teaching and learning strategies, teachers' learning, learning communities, collaborative learning, social software, Web 2.0, action learning, action research

## Introduction

Each new wave of technological innovation promises to revolutionise education. Currently we are hearing about the potential of multimedia and elearning to transform the way we teach and learn (Meijas, 2005). It's relatively easy to incorporate new technologies into the learning process if the goal is to merely replicate the traditional ways of doing things without significantly impacting on existing teaching practice. The exciting challenge is to employ technology to enable learning in ways that could not be done using traditional methods. This paper reports on a work in progress where teachers are being engaged not only in learning how to use various mobile devices and social computing tools but also reflecting on and discussing learning theories and pedagogies. This will inform development of action strategies to implement innovative change in their teaching practice. This action research project is highlighting that the real challenge is to create new teaching and learning paradigms based on the possibilities afforded by these new tools rather than focussing on how to operate them.

The project utilises an action research methodology, which is a well-established practice-based approach to developing educational practice and theory and is closely connected with the 'reflective practitioner' tradition (Schon, 1983). This approach is used in combination with an action learning approach to the exploration of emerging technology trends and tools, where a group of teachers come together regularly to help each other to learn from their experience (Dick, 1997). This approach is enabling the project teams to be actively involved in learning and research. This will facilitate understanding, which then informs action in changing teaching practice, which will then in turn lead to further learning and research – a cyclical approach of learning, research and evaluation.

## Emerging trends and the implications for VTE educators

According to the recently published *2006 Horizon Report* (New Media Consortium, 2006) there are a number of key trends currently emerging in the use of technologies in education. The two key trends that the project teams are addressing are: "Dynamic knowledge creation and social computing tools and processes are becoming more widespread and accepted" and "mobile and personal technology is increasingly being viewed as a delivery platform for services of all kinds" (New Media Consortium, 2005, 3).

Mobile phones, PDAs, MP3 players, wikis and blogs all have the potential to offer new ways of contacting, teaching and assessing learners' progress. The extent to which the new technologies make a significant impact on teaching and learning delivery is predicated on how well the teacher understands the technology, its uses and the suitability of content to be delivered using these methods. Along with action learning and research methodologies, comprehensive evaluations of time spent, the cost of investing this time and an appreciation of how else the content can be taught will be undertaken to ensure sustainability.

With the development of networks and international collaborative associations there has been an increase in the opportunity for research and development, especially in the field of m-learning. To date only a small proportion of educators have had an opportunity to implement m-learning in mainstream educational delivery. Keegan (2005), at Mlearn 2005, noted that "it is now time for mobile learning to emerge from its project status and enter into mainstream education and training".

It is critical that teachers and managers, especially within traditional learning delivery areas, understand that technology is here to assist, and be part of, a range of flexible delivery options. Good teaching practice is creative, it motivates, excites and inspires. The adaptation of society's well used and attractive technologies to an appropriate learning context has huge potential for the learning practitioner's kit of creative practice. We do need to always consider the learner's needs and access to the technologies, but not make that a limitation to the options available.

### **The approach 'a paradigm shift'**

TAFE NSW Western Sydney Institute (WSI) has developed an approach that allows teachers to not only explore new technologies and pilot these with students but also encourages them to re-think the teaching and learning processes and their practice. The teachers involved in these trials will use various mobile devices and social software tools to engage learners.

While there is a recognised digital divide between an ageing VTE teaching force and students, it is critical that teachers be supported and encouraged to re-evaluate their teaching practice to include new technologies that will engage the Net g learners of today. The action learning teams in this initiative will undertake projects that encourage the participants (teachers) to critically reflect and question the pedagogical principles currently being used in vocational training and education.

According to Siemens, significant trends in learning are important for educators to reflect on and engage with. Siemens states that "Connectivism provides insight into learning skills and tasks needed for learners to flourish in a digital era" (Siemens, 2005).

How does a large vocational institution engage teachers in reflecting on new learning theories that embrace the incorporation of emerging technologies to support learning? This project has adopted a range of strategies to ensure a strategic approach to supporting and engaging teachers in innovative approaches to their teaching practice.

### **Organisational strategy with action teams**

The Learning Technologies Unit staff are working with a range of teachers that are connected state-wide through initiatives like LearnScope and TAFE NSW Online. LearnScope is a national professional development project that helps participants learn to use flexible delivery approaches such as elearning in vocational education. The TAFE NSW LearnScope project team has been investigating how the skills and knowledge gained through their professional development projects are subsequently applied in ways that benefit clients. TAFE NSW Online is a comprehensive state wide project aimed at ensuring TAFE teachers have the support and expertise required to increase flexible delivery options to students and industry clients. One of the sub-projects within this initiative focuses on action learning teams exploring and evaluating new and emerging learning technologies.

Each action learning project team within WSI is a 'node in the network', with the network stretching across TAFE NSW. This networked community of vocational teachers are experiencing, through action learning, what it is like to use collaborative social software and web 2.0 tools in teaching and learning. The challenge in previous projects has been how to disseminate findings and outcomes to ensure wider

uptake and interest across the organisation. Web 2.0 services or the Read Write Web is a form of collaborative reporting and communication that can assist this process. The project teams are encouraged to make use of a wide range of innovative approaches to capture and share team learning rather than use traditional reporting mechanisms that have the potential to sit unread on desks.

**Table 1: Action learning project teams for Western Sydney Institute**

<b>Project team</b>	<b>Professional development focus</b>	<b>Status of project and range of emerging technologies</b>
Blog2Blog ConnectTVETy	Up skill VTE teachers technical skills in the functions and features of Web 2.0 for delivering VTE HSC courses for schools.	Having been exposed to a range of educational technologies and social software applications. Team members are now developing the appropriate uses of these technologies into their TVET programs and trialling with their students.
LiFE Learning in the Field	Develop skills to use technology effectively in the field. Exploring the benefits of these technologies for the outdoor environment.	Using digital recording devices to collect evidence-based assessments in the field, such as images, audio, video using PDA's, MP3's and 3G phones.
Audiodynamism	Develop digital recording skills to create and retrieve audio material using a wide range of current web 2.0 tools for student assessments in conjunction with social software applications.	Developing learning activities that incorporate podcasts and blogs to their specialised field of practice. Having investigated the features and functions of MP3, Audacity, Podomatic, Audioblogger, Odeo and other Web 2.0 services to connect with their learners.
IT Richmond	Up skilling teachers in the use of web based technologies to demonstrate competencies with students remotely.	Creating audio lectures for MP3 players, providing online work based learning environments for the delivery of a practical level 3 qualification. Implementing evidence based assessments methods using digital recording devices.
Walk through country	Develop skills in the usage and capabilities of mobile handsets, to demonstrate new ways to facilitate and promote student learning and engagement	General vocational education teachers are exploring the potential benefits for evidence based assessment in the workplace. Using 3G mobile phones for capturing evidence via blue tooth, moblogging and videoblogging.
C&J Nirimba	Exposing teachers working with apprentices on site with suitable mobile technology devices to record evidence of students learning using both voice and images.	Conducting site visits with suitable technology i.e. PDA's and MP3's to record voice and images that are currently collected and assembled on eportfolios to be retrieved later as evidence.

### **Qualitative method for reporting**

The qualitative methodology for collecting evidence from project teams incorporates web based communities/networks involving the following applications:

- blogs to reflect on professional development and outcomes
- podcast interviews and conversations reflecting teachers learning
- collaborative online discussions between teams using Wikis
- progress reports using online postcards
- showcasing and sharing project outcomes to institute and state-wide groups
- online surveys
- webcast tools e.g. Breeze to document live workshop sessions for sharing across teams.

### **Wider engagement**

Making connections with WSI staff to share and leverage off what the WSI and TAFE NSW wide teams discover through their projects is critical to the longevity of incorporating emerging technologies in innovative teaching practice for the institute. The strategies being used to do this include those shown in Table 2.

**Table 2: Strategies to incorporate wider engagement**

<b>Intranet space</b>	<b>Online newsletter for all WSI staff</b>	<b>Share point team site</b>	<b>Professional development</b>
A comprehensive up-to-date site that contains learning resource links as well as showcasing innovative strategies developed by WSI teachers as well as national and international examples.	Published each term online incorporating articles updating staff on current online support systems, progress reports on technology trials, feature article of an innovative teacher or team of teachers presented as a podcast and links to current up-to-date relevant articles and case studies.	The use of Share Point application to create collaborative team sites easily accessed through the WSI staff intranet for all project teams involved in the emerging technology trials. Representation on state wide groups for example the flexible learning coordinators group which is actively sharing information and resources, and TAFE Online steering committee.	Workshops conducted that include practical technical skills as well as discussion on learning theories, bringing in external experts where appropriate.

## Conclusion

This paper reports on a work in progress where teachers are being engaged not only in learning how to use various mobile devices and social computing tools but also reflecting on and discussing emerging learning theories and pedagogies. Some of the strategies mentioned above provide the foundation for wider uptake beyond the individual project teams.

New technologies have the potential to facilitate innovation in teaching and learning practice. This will only be sustainable and scaleable if a holistic and strategic view is adopted.

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