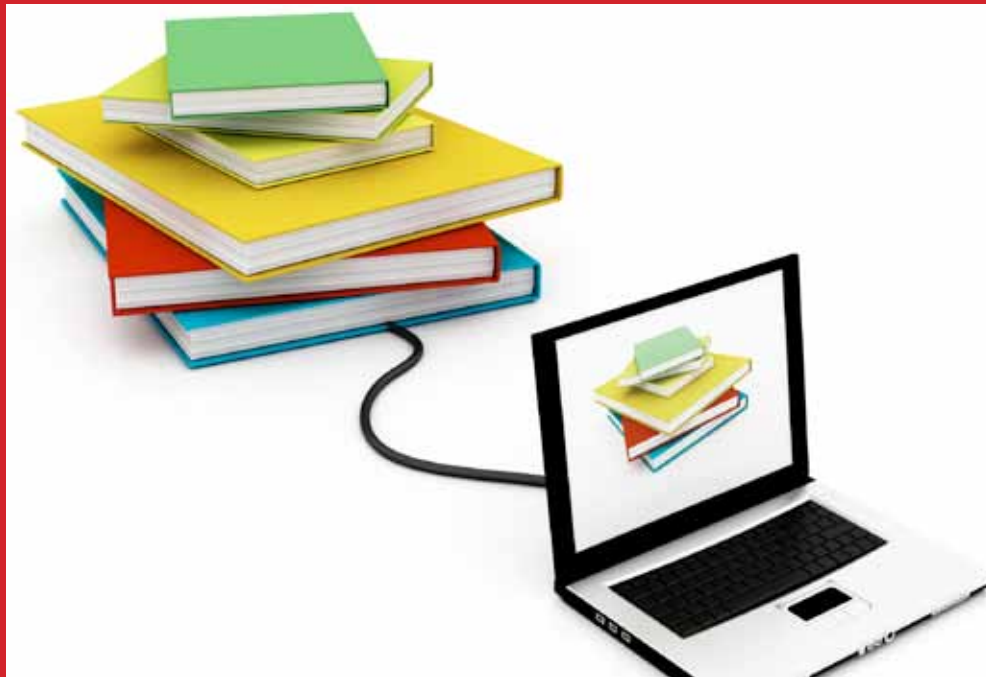


# E-Learning within the Building and Construction Industry and Allied Trades



## **David Scannell**

Skills Victoria International TAFE Fellowship

Fellowship funded by Skills Victoria, Department of Innovation,  
Industry and Regional Development, Victorian Government





International  
Specialised  
Skills  
Institute

**ISS Institute**  
Level 1  
189 Faraday Street  
Carlton Vic  
AUSTRALIA 3053

**T** 03 9347 4583  
**F** 03 9348 1474  
**E** [info@issinstitute.org.au](mailto:info@issinstitute.org.au)  
**W** [www.issinstitute.org.au](http://www.issinstitute.org.au)

---

Published by International Specialised Skills Institute, Melbourne

Extract published on [www.issinstitute.org.au](http://www.issinstitute.org.au)

© Copyright ISS Institute September 2012

This publication is copyright. No part may be reproduced by any process except in accordance with the provisions of the Copyright Act 1968.

Whilst this report has been accepted by ISS Institute, ISS Institute cannot provide expert peer review of the report, and except as may be required by law no responsibility can be accepted by ISS Institute for the content of the report or any links therein, or omissions, typographical, print or photographic errors, or inaccuracies that may occur after publication or otherwise. ISS Institute do not accept responsibility for the consequences of any action taken or omitted to be taken by any person as a consequence of anything contained in, or omitted from, this report.

# Executive Summary

---

What have former president Bill Clinton, actor John Lithgow and inventor of the Segway, Dean Kamen, all have in common? They are all passionate about learning and were all keynote speakers at the Learning 2011 Conference in Orlando, Florida attended by International Specialised Skills Institute (ISSI) Fellow David Scannell. The key messages about learning from each of these people were echoed by all conference presenters and others visited by Scannell during the Fellowship and are presented in this report. In particular three words stand out – collaboration, engagement and innovation. As is presented in this report they are vital to the success of any learning program.

The Skills Victoria International TAFE Fellowship awarded to Scannell enabled him to travel to the United States of America (USA) and Canada to attend conferences and visit colleges and organisations reputed to be offering best practice flexible delivery and assessment strategies appropriate for trade training. Scannell visited eight organisations and attended 50 sessions at three e-learning conferences. A number of organisations that provide online learning software and development services also demonstrated their products at these conferences. These demonstrations provided an opportunity for Scannell to review some of the tools currently being used to develop e-learning and m-learning in the USA, Canada and other parts of the world.

As presented in this report, the Fellowship enabled Scannell to focus on options for flexible delivery and assessment using e-learning and m-learning strategies and tools. Scannell also identified professional development requirements appropriate for all teachers, not only trade teachers, and the strategic imperatives that must be supported by senior managers to enable the implementation of innovative delivery and assessment strategies in a coordinated manner across organisations.

The outcomes from the Fellowship presented in this report can assist trade teachers, and others, to work in a rapidly changing vocational education and training (VET) environment impacted more and more by technological change. Outcomes will also assist trade teachers to overcome what Embi (2007)<sup>1</sup> refers to as *computer anxiety* which is a condition indicated by the reluctance of some individuals to work with technology. In some extreme cases this anxiety might lead to a phobia and influence behaviour to avoid technology at all costs. Many tradespersons, including trade teachers, still feel uncomfortable using technology that is often viewed as not being a tool directly related to performing the hands on aspects of their daily work.

The Fellowship was based on the premise that most people are willing to learn something however the way learning is delivered and assessed is often counter productive and does not achieve the desired outcomes. Presenters at the conference sessions attended by Scannell all agreed that whether learning is on the job, online or in the classroom, learners must be actively involved in the learning process. Most learners need to see some relevance in what they are being taught.

This view of learning has been around for a long time. For example, Winston Churchill is quoted as saying; “I am always ready to learn although I do not always like being taught”.<sup>2</sup> This statement by Churchill is particularly true of building and construction trade apprentices and many of their teachers who, because of the very practical and hands on nature of their work, like to get in and ‘just do it’. They work in a world of compliance underpinned by building codes, standards, plans and specifications all developed to direct the tradesperson to achieve a particular outcome. There is often little room for flexibility, creativity or innovative thinking in an environment where tradespeople are generally following plans and specifications developed by others, such as architects, building designers and engineers. This has always been the way of work in the building and construction industry and the associated culture follows the tradesperson when they change careers to become teachers.

As a requirement of being a trade teacher in the Australian VET sector, the Australian Skills Quality Authority (ASQA) standards for training providers require teachers to have the practical competencies at least to the level they are teaching. This means that trade teachers will have worked in, and been influenced by, the traditional ‘hands on’ building and construction workplace environment.

## Executive Summary

---

Therefore, when it comes to their professional development these teachers are generally willing to learn. They most likely also do not like to be taught in the traditional face-to-face, 'chalk and talk' classroom environment. It is ironic that many of these teachers still deliver training to their apprentices in the outdated way they endured, and disliked, when they were undertaking their apprenticeship training.

In their report, *E-learning within the building and construction and allied trades* for the Australian Flexible Learning Framework, Thompson and Lamshed (2006)<sup>3</sup> stated that there was a degree of teacher resistance to moving towards the adoption of e-learning in trade training. They believe this was due to the perception of irrelevance of e-learning to trade teaching, teachers' views on the non-acceptance of new modes by learners and access issues. Some teachers also had concerns about stepping outside their existing comfort zone by having to change their approach and style of teaching and the necessity to learn new skills.

Thompson and Lamshed found most e-learning in the trades was conducted in a classroom and not at a distance. Although this basic blended approach is a step in the right direction, elements of the past may still exist with the teachers maintaining control of what, when, where and how learning is taking place. This leads to a situation where students have little control over their own learning and is something contrary to adult learning principles.

In contrast to the above approach to delivery, the British Columbian EPPRENTICE program model, which is discussed in this report, learners receive the majority of their technical (theoretical) training online and on-the-job. There is minimal time spent in the traditional face-to-face classroom environment. The majority of time on campus is devoted to practical skill acquisition and assessment. The benefits of adopting this model for Australian training providers is therefore obvious in that programs will include greater levels of student motivation, engagement and retention.

Recognising the need for flexibility in delivery and assessment, *VET Products for the 21st Century*, final report 2009<sup>4</sup> by the National Quality Council/Council of Australian Governments Joint Steering Committee stated:

"The VET system is therefore a key mechanism for delivering the nation's productivity, workforce participation and social inclusion objectives. If the VET sector is to meet national participation and productivity targets and ensure that it maintains its strong reputation of making a difference to the lives of those who struggle to learn or work, then training products and services must be sufficiently flexible to cater for learners whose life experiences, capacities, motivations, resources and need for particular educational and other supports are incredibly diverse and complex".

As in Canada, flexible delivery that includes e-learning and m-learning is a key requirement for learners in the Australian VET sector. Delivering online learning enables participants to actively interact with the content, other learners and facilitators. Simonson et al (2006)<sup>5</sup> refer to the adult learning principles developed by educationalist Knowles, who believes that active learner participation must be encouraged to ensure the desired learning outcomes. This approach recognises that for learning to be most effective, it requires the engagement of as many senses as possible (seeing, hearing, touching, smelling, tasting) and is not only limited to seeing. Online learning technologies are supporting these beliefs by providing tools that can enable learners to be actively engaged in real-world experiences. Scannell observed examples of real-time interactions, simulations and social networking such as Facebook, Twitter, Blogs and Wikis. It must be remembered however, that no matter how good the technology, unless the end users have considerable input into the learning program design the outcomes will not be positive.

## Executive Summary

---

A key message from the Innovation and Business Skills Australia (IBSA) Environmental Scan (2012)<sup>6</sup> is that:

"the development of digital technologies will provide expanding opportunities for those ready and skilled to embrace and exploit new products, services and ways of doing business. Impediments such as insufficient digital literacy are likely, however, to hold some back".

According to IBSA, the National Broadband Network (NBN) will provide access to high-speed broadband services offering new and improved opportunities for working off-site. This is called 'teleworking' and will enable instructional designers and content developers to work at home to suit their particular lifestyle requirements. Teachers will also be able to conduct classes comprising learners in multiple locations from one central terminal. The learning strategies and technology Scannell observed during the Fellowship and presented in this report, confirm making this distance learning approach feasible for Australian VET today.

The outcomes of the Fellowship discussed by Scannell in this report confirm that teachers are now working in a rapidly changing learning environment dominated by ever changing technology. The world is now the classroom and if implemented correctly, collaborative, engaging and innovative e-learning strategies that focus on the pedagogy, and not just the technology, will cater for the needs of a vast range of learners, including those like Churchill who like to learn but do not like being taught.

# Table of Contents

---

|            |   |
|------------|---|
| <b>i</b>   | <b>Abbreviations/Acronyms</b>   |
| <b>iii</b> | <b>Definitions</b>  |
| <b>1</b>   | <b>Acknowledgements</b>   |
| 1          | Awarding Body – International Specialised Skills Institute (ISS Institute)      |
| 2          | Fellowship Sponsor  |
| 2          | Supporters  |
| 2          | Employer Support  |
| 2          | Organisations Impacted by the Fellowship  |
| <b>3</b>   | <b>About the Fellow</b>   |
| 3          | Name  |
| 3          | Employment  |
| 3          | Qualifications  |
| 3          | Membership/s  |
| 4          | Brief Biography   |
| <b>5</b>   | <b>Aims of the Fellowship Program</b>   |
| 5          | Benefits to the VET Sector  |
| <b>7</b>   | <b>The Australian Context</b>   |
| 7          | A Need for Change   |
| 7          | E-learning Within the Trades  |
| 8          | Management Support  |
| 8          | Motivation  |
| 8          | Importance of Technology in Trade Training                                      |
| 9          | Benefits of Proposed Fellowship   |
| 9          | SWOT Analysis   |
| <b>13</b>  | <b>Identifying the Skills Deficiencies</b>                                      |
| <b>15</b>  | <b>The International Experience</b>   |
| 15         | Destination: Industry Training Authority - Vancouver, Canada                    |
| 16         | Destination: BCcampus – Vancouver, Canada                                       |
| 17         | Destination: Vancouver Community College – Vancouver, Canada                    |
| 18         | Destination: UA Piping Industry College of British Columbia – Vancouver, Canada |
| 18         | Destination: Camosun College – Victoria, Canada                                 |
| 19         | Destination: Ontario College of Trades – Toronto, Canada                        |
| 20         | Destination: Ministry of Training Colleges and Universities – Toronto, Canada   |
| 21         | Destination: E-Learn 2011 – Honolulu, USA                                       |
| 30         | Destination: DevLearn 2011 – Las Vegas, USA                                     |
| 36         | Destination: Learning 2011 – Orlando, USA                                       |
| 46         | Concluding Remarks  |

## Table of Contents

---

|           |  |
|-----------|--|
| <b>47</b> | <b>Knowledge Transfer: Applying the Outcomes</b>     |
| 47        | Benefits of Proposed Fellowship                      |
| 47        | Knowledge Transfer                                   |
| 48        | Sharing Skills and Knowledge With Other Stakeholders |
| <b>49</b> | <b>Recommendations</b>                               |
| 50        | Strategic Skills                                     |
| 51        | Curriculum Design Skills                             |
| 52        | Content Creation Skills                              |
| 53        | Facilitation Skills                                  |
| <b>57</b> | <b>References</b>                                    |
| 57        | Endnotes   |
| 58        | Reference List                                       |
| <b>61</b> | <b>Attachments</b>                                   |
| 61        | Attachment 1: E-Learn 2011 Conference Abstracts      |
| 69        | Attachment 2: DevLearn 2011 Conference Abstracts     |
| 73        | Attachment 3: Learning 2011 Conference Abstracts     |

## Abbreviations/Acronyms

---

|      |   |
|------|---|
| AQF  | Australian Qualifications Framework                 |
| AQTF | Australian Quality Training Framework               |
| ARED | Application for Rapid E-learning Development        |
| ASQA | Australian Skills Quality Authority                 |
| CBC  | Competency Based Completion                         |
| CMM  | Curriculum Maintenance Manager                      |
| IBSA | Innovation and Business Skills Australia            |
| ICT  | Information and Communication Technologies          |
| ISSI | International Specialised Skills Institute          |
| LLN  | Language, Literacy and Numeracy                     |
| LMS  | Learning Management System                          |
| NBN  | National Broadband Network                          |
| RTO  | Registered Training Organisation                    |
| TAFE | Technical and Further Education                     |
| VLS  | Virtual Learning System                             |
| VRQA | Victorian Registration and Qualifications Authority |

# Definitions

---

## **Accreditation**

Formal recognition by a state or national accrediting body. The accreditation process ensures courses meet nationally recognised standards.

## **Baby boomer**

Name applied to individuals born in the post World-War II period of the years between 1946 and 1964.

## **Blended Learning**

A mix (blend) of different learning environments such as traditional face-to-face classroom delivery with self-paced, online and/or mobile learning.

## **Computer anxiety**

The emotional fear, apprehension, and phobia felt by individuals when working with computers.

## **Connectivism**

Learning theory for the digital age that supports learners as they move into informal, networked, technology-enabled learning environments. Connectivism learning frameworks reflect the needs associated with the underlying social environments of today's society.

## **Curriculum Maintenance Manager**

Victorian government funded role to provide operational advice to public and private training providers on the implementation of Training Packages and Crown copyright curricula.

## **Cloud computing**

Environment providing shared computing infrastructure and data storage services. The user has access to required information when they require it, however, they have little control over its location.

## **Design**

Design is problem setting and problem solving. Design is a fundamental economic and business tool. It is embedded in every aspect of commerce and industry and adds high value to any service or product—in business, government, education and training, and the community in general.<sup>7</sup>

## **E-learning**

The electronic transfer of skills and knowledge via networked or non-networked information and communication systems. Facilitated in or out of the classroom, e-learning may involve internet-based or computer-based learning and provide a virtual classroom environment. Content can include a range of media and can be delivered in self-paced or instructor/moderated modes.

## **Facebook**

Social networking website enabling communication and sharing of information between registered users.

## **Generation Y**

Also called the 'Millennial Generation' this group is characterised by an increased use of digital media and technologies.

## **Generation Z**

This generation has had a lifelong connection with communication technologies and the use of the Internet.

## Definitions

---

### Industry Skills Councils

Address training issues and provide advice to government about training priorities and the vocational education and training needs of a particular industry. ISC's develop, manage and distribute nationally recognised Training Packages and associated training and assessment materials.

### Innovation

Creating and meeting new needs with new technical and design styles. (New realities of lifestyle).<sup>8</sup>

### Learning organisation

This is the term applied to organisations that are in a state of continuous transformation through the ongoing facilitation of learning by personnel within the organisation.

### M-learning

Mobile learning involves the use of portable technology such as mobile phones and tablets to deliver e-learning.

### Moodle

Software used to develop online courses.

### Skill deficiency

A skill deficiency is where a demand for labour has not been recognised and training is unavailable in Australian education institutions. This arises where skills are acquired on-the-job, gleaned from published material or from working and/or studying overseas.<sup>9</sup>

There may be individuals or individual firms that have these capabilities. However, individuals in the main do not share their capabilities, but rather keep the intellectual property to themselves. Over time these individuals retire and pass away. Firms likewise come and go.

### Skills Victoria

Victorian government's state training authority – renamed to Higher Education and Skills Group in 2012.

### Sustainability

The ISS Institute follows the United Nations for Non-Governmental Organisations' definition on sustainability: "*Sustainable Development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs*".<sup>10</sup>

### Teleworking

Flexible work arrangement allowing people to work remotely from the central place of work.

### Training Packages

Sets of nationally endorsed standards and qualifications specifying the skills and knowledge people need to perform effectively in their job.

# Acknowledgements

---

David Scannell would like to thank the following individuals and organisations who gave generously of their time and their expertise to assist, advise and guide him throughout the Fellowship program.

## Awarding Body – International Specialised Skills Institute (ISS Institute)

The International Specialised Skills Institute Inc is an independent, national organisation that for over two decades has worked with Australian governments, industry and education institutions to enable individuals to gain enhanced skills and experience in traditional trades, professions and leading-edge technologies.

At the heart of the ISS Institute are our Fellows. Under the **Overseas Applied Research Fellowship Program** the Fellows travel overseas. Upon their return, they are required to pass on what they have learnt by:

1. Preparing a detailed report for distribution to government departments, industry and educational institutions.
2. Recommending improvements to accredited educational courses.
3. Delivering training activities including workshops, conferences and forums.

Over 200 Australians have received Fellowships, across many industry sectors. In addition, recognised experts from overseas conduct training activities and events. To date, 22 leaders in their field have shared their expertise in Australia.

According to Skills Australia's 'Australian Workforce Futures: A National Workforce Development Strategy 2010':

Australia requires a highly skilled population to maintain and improve our economic position in the face of increasing global competition, and to have the skills to adapt to the introduction of new technology and rapid change.

International and Australian research indicates we need a deeper level of skills than currently exists in the Australian labour market to lift productivity. We need a workforce in which more people have skills, but also multiple and higher level skills and qualifications. Deepening skills across all occupations is crucial to achieving long-term productivity growth. It also reflects the recent trend for jobs to become more complex and the consequent increased demand for higher level skills. This trend is projected to continue regardless of whether we experience strong or weak economic growth in the future. Future environmental challenges will also create demand for more sustainability related skills across a range of industries and occupations.<sup>11</sup>

In this context, the ISS Institute works with Fellows, industry and government to identify specific skills in Australia that require enhancing, where accredited courses are not available through Australian higher education institutions or other Registered Training Organisations. The Fellows' overseas experience sees them broadening and deepening their own professional practice, which they then share with their peers, industry and government upon their return. This is the focus of the ISS Institute's work.

For further information on our Fellows and our work see <http://www.issinstitute.org.au>.

### Patron in Chief

Lady Primrose Potter AC

### Patrons

Mr James MacKenzie  
Mr Tony Schiavello

### Founder/Board Member

Sir James Gobbo AC, CVO

### Chairman

Mr Mark Bennetts

### Board Members

Mr John Baker  
Ms Julie Belle  
Ms Sue Christophers

Mr Franco Fiorentini  
Mr Jack O'Connell AO  
Mr David Wittner AM



## Acknowledgements

---

### Fellowship Sponsor

The Victorian Government, Skills Victoria is responsible for the administration and coordination of programs for the provision of training and further education, adult community education and employment services in Victoria and is a valued sponsor of the ISS Institute. Scannell would like to thank them for providing funding support for this Fellowship.

### Supporters

Letters of Support for this Fellowship have been received from the following organisations:

- John McNally - CEO, Building Industry Consultative Council Industry Advisory Body (BICCIAB)
- Joan Whelan – Construction and Property Services Industry Skills Council (CPSISC)
- Alexandra Mannell – Master Plumbers and Mechanical Services Association of Australia (MPMSAA).

### Employer Support

Holmesglen Institute of TAFE has generously supported this Fellowship by providing time, additional financial support and mentoring for the Fellow (David Scannell).

### Organisations Impacted by the Fellowship

The following is a list of the major stakeholders that will benefit from the outcomes from this Fellowship:

- Skills Victoria (now named Higher education and Skills Group)
- Building and construction trade teachers from TAFE and private providers
- Building and construction industry bodies and associations such as
  - Master Plumbers and Mechanical Services Association of Australia (MPMSAA)
  - Master Builders Australia and state associations
  - Housing Industry Association Ltd
  - TAFE Development Centre (TDC)
  - Building Industry Consultative Council Industry Advisory Body (BICCIAB)
  - Construction and Property Services Industry Skills Council (CPSISC)
- Victorian Curriculum and Assessment Authority (VCAA)
- Secondary schools delivering VET in Schools programs.

# About the Fellow

---

**Name:** David Scannell

### Employment

Scannell is currently Curriculum Services Manager (CSM) in the Learning Innovation and Development (LID) unit at Holmesglen and is responsible for managing curriculum development and related projects for government and industry clients. Scannell works with internal and external clients to identify curriculum development needs and develop appropriate courses and support resources. The Fellow is also an Accreditation Advisor for the Victorian Registration and Qualifications Authority (VRQA) and reviews course accreditation submissions to ensure they meet VRQA and Australian Skills Quality Authority (ASQA) accreditation standards.

Scannell's work in VET has involved extensive research and development of best practice delivery and assessment processes and supporting resources. Scannell has experience as a project manager and instructional designer of online and print based resources and has a strong interest in identifying future trends associated with the VET sector, in particular innovative e-learning delivery and assessment strategies for trade apprentices and their teachers.

### Qualifications

Education:

- Advanced Certificate in Information Technology, Outer Eastern TAFE, 1994
- Graduate Certificate in Flexible Delivery, Swinburne University of Technology, 2000
- Certificate IV in Workplace Training and Assessment, Holmesglen Institute of TAFE, 2003
- Certificate IV in Training and Assessment, Holmesglen Institute of TAFE, 2006
- Master of Professional Education and Training (Flexible, Online and Distant Education), Deakin University, 2010.

Individual units, short courses, workshops and other training programs:

- Internal Auditor – Swinburne University of Technology, 1998
- Internal Auditor Refresher – Holmesglen Institute, 2000
- Instructional Design – NETg International Training Centre, Ireland, 2000
- National Workshop on Professional Heritage Conservation Skills and Training - Heritage Office, NSW Department of Planning, 2007
- Master Builders Association Red Card Safety Training - Holmesglen Institute of TAFE, 2008
- Design Masterclass (Professor Arturo Dell'Acqua) – International Specialised Skills Institute (ISSI), 2009
- Time and Workload Stress Management – Holmesglen Institute of TAFE, 2010
- Accreditation Advisor - Victorian Registration and Qualifications Authority (VRQA), 2010 (Triennial appointment extended by 12 months).

### Membership/s

- Quality in Education and Training (QuiET) network – Committee member.

### Brief Biography

David Scannell started his teaching career in 1993 as a sessional teacher while working for a developer of project management and accounting software for the building and construction industry. His background as a project manager in the architectural joinery industry supported this new role. Scannell moved into full time teaching of IT subjects and writing of delivery and assessment resources and course curriculum. Between 1993 and 2000 the Fellow worked for Swinburne, Box Hill and Chisholm TAFE institutes. In the Curriculum Unit at Swinburne, Scannell provided personnel with advice relating to approved curriculum frameworks, policies, procedures, instructional design methodologies, national Training Packages, learning resources and assessment materials. Scannell facilitated on and off campus, including community venues. This delivery required extensive use of online learning systems and included managing the online assessment of Kosovar refugees who were undertaking training at various military barracks following their temporary relocation in Australia.

In 2000 Scannell accepted a position at Holmesglen Institute of TAFE as a Senior Project Officer in what is now the Fellow's current department. Work involved undertaking a range of resource development projects including instructional design of Australian Flexible Learning Framework toolboxes and other online resources for a range of government and private industry clients.

During 2000, Scannell travelled to Ireland to undertake training at the NETg International Training Centre in Limerick. The course covered instructional design methodologies and the use of the NETg developer tool. The skills and knowledge obtained supported the Fellow's work including customising and developing online resources for a range of NETg clients. Scannell also delivered instructional design training to NETg clients who were developing their own online learning resources.

In 2006 the Fellow and his department manager undertook a two-week study tour to France, Italy and the United Kingdom to research qualifications and standards of excellence for heritage tradespersons and to develop links with overseas heritage trade training organisations for possible teacher exchange with schools and industry.

Scannell draws on his extensive experience in industry and VET to support the strategic objectives of the Victorian Government and Holmesglen by providing advice to institute staff and other stakeholders to ensure they maintain currency of information and a cohesive approach to delivery and assessment.

# Aims of the Fellowship Program

---

The main aim of the proposed Fellowship was to identify examples of best practice in flexible delivery by investigating options for embedding e-learning and other innovative delivery and assessment strategies into building and construction trade training at both the strategic and operational levels.

Outcomes from the research will support the aims of the Victorian Government's Skills for Victoria Ministerial statement (2008)<sup>12</sup> *Securing Jobs for Your Future* that enable a more flexible and focused training system. The outcomes will also enable RTOs' to respond more effectively to the needs of individuals and businesses.

The research was proposed to identify appropriate uses of current and emerging technology, particularly mobile technology, in training and assessment within the building and construction industry, although outcomes will benefit other industries as well. Research outcomes were to document the benefits, efficiencies and effectiveness associated with the use of e-learning and m-learning in trade training and the relationships to other forms of ICT. Wide belief is that the use of a range of ICT captures the imagination of learners and makes the process of learning enjoyable and interactive for a large number of learners who:

- Have shorter attention spans
- Are resistant to lectures
- Prefer action
- Have a low threshold for print sources
- Are more comfortable sharing information.

The outcomes were aimed at informing VET sector organisations about how to develop delivery and assessment strategies and activities utilising a range of m-learning and e-learning options, such as iPads, iPods and multi-media functions of mobile technologies.

A second aim was to compare current Australian e-learning practices against international models identified during the Fellowship research. The outcomes would highlight any skill deficiencies that need to be addressed, or bring forward examples of best practice that could be marketed or showcased to the rest of the world.

### Benefits to the VET Sector

Although the outcomes of this Fellowship address the immediate needs of plumbing and carpentry apprentices, other trades will also benefit because it is expected that all teachers will be able to develop innovative and engaging programs based on the models and examples presented. It is expected that outcomes will also benefit cross industry stakeholders.

The key benefits to the VET sector are:

- Identification of delivery and assessment strategies that make the learning environment more accessible, stimulating, relevant and engaging for all generations of learners
- Development of strategies that will support the introduction of Competency Based Completions (CBC) and associated compliance issues specified in the new Skills Victoria (2010)<sup>13</sup>, TAFE Delivery Guidelines
- Reduction in waiting lists for apprentices wishing to start their formal training at a Registered Training Organisation (RTO). Currently this can be weeks or months in some programs
- Providing a method of supporting those apprentices with language, literacy and numeracy (LLN) issues prior to commencement of trade skills training
- Provide learning content for apprentices prior to commencing formal RTO based training. Content may include but not be limited to: OHS, sustainable work practices, career advancement, quality, legislation and environmental standards compliance

## Aims of the Fellowship Program

---

- Fostering improved mentoring and coaching relationships between teachers and apprentices
- Encouraging collaborative learning between apprentices from the same and other trades
- Adopting a student centred approach to assessment
- Provision of guidance for teachers and assessors on how they can best use the technology in on-site and off-site assessment activities and provide specific examples related to specific trades such as plumbing and carpentry
- Identifying opportunities for educational resource developers in Australia to promote their skills, knowledge and products globally
- Supporting implementation of Competency Based Completion into trade training.

# The Australian Context

---

Scannell undertook this Fellowship to conduct research into best practice delivery and assessment strategies, including options for e-learning, for the training of building and construction trade apprentices and the professional development of trade teachers. Scannell envisioned that Fellowship outcomes would address two key issues associated with trade training:

### (1) Apprenticeship Waiting Lists

In January 2009 Skills Victoria published a report developed for them by Peter Kellock from the Asquith Group (2009).<sup>14</sup> The report, *Plumbing and Carpentry Enrolments: A Report to Skills Victoria*, was commissioned to assess the status and cause of waiting lists to enrol plumbing and carpentry apprentices in metropolitan TAFE Institutes. The report noted that all metropolitan institutes have experienced waiting lists for the previous three or four years. The research found that there are waiting lists for apprenticeship training in plumbing and carpentry at TAFE institutes across the metropolitan area, and that the extent of the wait is reasonably consistent both in quantity and duration. The average waiting list peaks in the second half of the year at between 60 – 90 apprentices, and the waiting time to commence training can be up to eight or nine months. Across all Victorian metropolitan TAFE institutes, it can be conservatively estimated that approximately 500 apprentices are on a waiting list to commence training in plumbing at any point in time from June onwards.

Kellock reported that the core of the problem appeared to be that current facilities are simply unable to accommodate the level of demand. He stated that the use of flexible delivery through technology and other means could help to ease congestion within the current facilities. It appeared that while several institutes are on the cusp of beginning to either explore or implement some limited use of more flexible means of delivery, others remain convinced that plumbing, as a regulated industry, is likely to be too conservative to readily adopt these approaches.

The majority of people interviewed by Kellock believed that the development of on-line options had potential, and some sought the support of Skills Victoria to develop the resources and support with professional development. While students would still need to be case managed and attend practical classes, they could viably undertake some parts of their training on-line.

Three key recommendations by Kellock are discussed in the Recommendations section of this report.

### (2) Competency Based Completions (CBC)

Another initiative impacting on VET today is the introduction of Competency Based Completions (CBC) across a number of trade areas. Under this system apprentices can have their training contract signed off when they have demonstrated that they have met the competency standard requirements. There is no longer a need to complete a specified time of training. The introduction of CBC has meant that teachers must adopt a new and innovative approach to delivery and assessment which must become more flexible and client focussed.

### A Need for Change

Key to the success of any initiatives to reduce waiting lists and implement CBC in trade training is the implementation of different and innovative approaches to training delivery and assessment. To achieve this requires trade teachers, many of whom continue to apply traditional methods of teaching based on the way they learnt, to embrace new methodologies using a range of new and emerging technologies.

### E-learning Within the Trades

In a report, *E-learning within the building and construction and allied trades for the Australian Flexible Learning Framework*, Lin Thompson and Reece Lamshed (2006)<sup>15</sup> stated that there was a perception of teacher resistance to moving towards the adoption of e-learning in trade training.

This they believed was due to the perception of irrelevance to trade teaching, teachers' views on the non-acceptance of new modes by learners and access issues. Some teachers had practical concerns about having to change their teaching approach and learn new skills.

Embi (2007)<sup>16</sup> believes this reluctance by some teachers to change is due to 'computer anxiety', which is the emotional fear, apprehension and phobia felt by individuals toward interactions with computers or when they think about working with a computer.

As reported in the Australian Flexible Delivery Framework (2010)<sup>17</sup> *January – June 2011 Framework Business Plan*, the E-learning Benchmarking Survey in 2009 found that many VET clients it is no longer a question of 'if' their training involves e-learning, it is 'how' they use e-learning that matters. It was reported that 54% of VET students said that e-learning enhanced their ability to do their job and 65% anticipated that the e-learning in their course would improve their future employment outcomes.

The survey also found that regardless of size, sector or location, Australian employers universally agree that employees should be able to do some of their training in the workplace. This is seen as a way of ensuring training is directly relevant to the work they do and a more efficient and productive use of the employees' time.

### Management Support

A key comment in the Framework's report is that it was evident that to take e-learning from periphery to mainstream, management support and strategic planning are essential. In many cases, one or two teachers in a department were taking on the burden of driving an e-learning agenda, which is not sustainable in the longer term without institutional support. In other cases, the e-learning was driven strategically in a 'top-down' approach but this is only successful with the cooperation of teaching staff who need to be involved in the decision-making processes.

### Motivation

There were many motivations driving e-learning identified in the Framework's report such as the teachers' desire to engage, motivate and reach the student. Most teachers found that students are 'switched-on' to the technologies and are excited about new forms of learning enabled through their use.

Another key driver was the flexibility e-learning technologies offered within teaching programs, providing benefits on many fronts, including organisations being better able to meet industry training needs. Currently the State and Federal Government's CBC agenda will be well served by providing VET clients with a new and flexible approach to delivery and assessment in the building trades.

Thompson and Lamshed found most e-learning in the trades was conducted in a blended (classroom) environment. On a positive note, they also found that teachers embracing e-learning were using an 'impressive array' of e-learning tools which included open source tools available through the Internet.

### Importance of Technology in Trade Training

Lefoe, Olney and Harrington (2008)<sup>18</sup> in their paper *Enabling teaching, enabling learning: How does staff development fit the educational technology landscape?* state that anywhere, anytime communication technologies are in constant use by the tech savvy millennium generation but the affordances of these technologies are slow to be integrated in their educational environments.

Calcei (2009)<sup>19</sup> refers to a statement by the Queensland Training Ombudsman, Peter Ruhanen, who sees e-learning becoming integral to trades training, as many new apprentices, including recent school leavers, are accustomed to and expect to use technology for learning. As well as helping to provide flexible delivery of the theoretical components of trade apprenticeships, e-learning tools are also allowing teachers and trainers to remotely assess learners on the job using evidence gathered electronically.

Although Ruhanen advocates the benefits of e-learning for the trades, he also recognises that there are insufficient support resources available and calls for increased development of e-learning resources to keep pace with learner demand for flexible and engaging training.

There is no doubt e-learning will become a major part of the trade training environment, however, there are a number of problems that need to be overcome before it can be successfully implemented. These being:

- A shortage of available e-learning resources
- Lack of skills for the instructional design and development of e-learning resources
- Reluctance by some older trade teachers to embrace e-learning technology as a valid, alternate delivery and assessment tool.
- Lack of physical resources to support e-learning.

Based on this background information Scannell determined that there was an identified need to develop consistent but customisable vocational learning solutions that involves innovative and e-based strategies.

The Fellowship enabled Scannell to explore models of innovative practices associated with the development of delivery and assessment strategies and tools for the use of a range of e-learning and m-learning options in VET. Scannell also explored options for professional development appropriate for the trade teachers.

The research did not however, address the last bullet point above. The amount of physical resources allocated by an RTO is up to them and is based on their financial capability and strategic direction.

### Benefits of Proposed Fellowship

The Fellowship benefitted the Fellow's professional and personal development by providing additional skills and knowledge to extend his professional and personal understanding of ICT in teaching and learning. In particular the Fellowship enabled the Fellow to:

- Develop strategic plans to integrate new media into next generation blended learning solutions
- Explore the latest technologies to enable digital learning best practice in classroom and across all institute processes (mobile devices, iPods, blogs, digital tablets, multimedia, mobile and wireless technologies and robotics)
- Implement e-learning successfully as part of an overall organisational delivery and assessment strategy
- Design and develop curriculum to support the changing focus of VET learner needs
- Enhance existing instructional design skills to create e-content that is relevant, engaging and effective
- Enhance existing facilitation skills to support online collaboration as well as face-to-face learning
- Explore issues encountered by other training providers when delivering e-learning programs (eg Cyber bullying, LLN and motivation).

### SWOT analysis

The following SWOT analysis highlights the strengths, weaknesses, opportunities and threats associated with the identified skill deficiencies presented in this report.

#### Strengths

- Existing e-learning infrastructure in many VET sector organisations
- Supports Federal and State Government initiatives
- Provides the opportunity for individual learning programs

- Quality assurance through the Australian Skills Quality Authority (ASQA) standards
- Students enabled to work at their own pace
- Increase in flexible delivery options
- Access to proprietary software
- Many TAFEs have in-house content developers
- Resource sharing
- Cost advantages
- Apprentices can reduce the time to complete their apprenticeships
- Allows for easy monitoring of student work and immediate feedback
- More effective use of available time, facilities, and infrastructure
- Apply principles of adult learning
- E-Learning provides interactivity during training and assessment
- Teacher network group alliances
- Provides access to subject matter experts beyond the classroom
- Student work can be published to the public domain for others to review
- Provides variation in lessons and assessment tasks.

### Weaknesses

- Obsolete hardware and software in some RTOs
- Low level of IT and e-learning literacy of trade teachers
- Distribution of inappropriate content
- Potential for breaches associated with privacy and copyright
- Level of management support for e-learning
- Lack of strategic direction
- Lack of quality learning materials
- Focus of existing professional development programs is on traditional teaching practices
- Need to timetable for individual learners.

### Opportunities

- Engage trade teachers as subject matter experts to develop resources to support flexible delivery and assessment
- Increase the number of apprentices undertaking training
- Expansion into new areas of delivery and assessment
- Teachers can be more creative with their delivery and assessment practices and the creation of supporting resources
- Improve quality of training delivery and assessment
- Transfer of existing skills and knowledge into new areas
- Establish partnerships with other stakeholders.

### Threats

- Shift in strategic direction of the organisation and associated change
- Change of government policy
- Reduced demand
- Lack of financial support from the organisation
- Trade teachers not embracing change in teaching and learning practices
- Need for additional support services
- Possible increase in the rate of casualisation of the trade teachers.

# Identifying the Skills Deficiencies

---

The major skill deficiency addressed by the Fellowship was a lack of detailed knowledge regarding current international best practice associated with the learning theory of Connectivism. This is a learning theory for the digital age that supports learners as they move into informal, networked, technology-enabled learning environments.

Connectivist learning frameworks reflect the needs associated with the underlying social environments of today's society that are dominated by the demands of the digital generation.

The skills required by training professionals to embrace Connectivism are highlighted by Clive Shepherd (2009)<sup>20</sup> in his paper *The e-learning skills gap*. These skills are what Shepherd believes are the four key skill areas in which every professional working in the e-learning field needs to be up-skilled to some degree. These skills being:

## **Strategic Skills**

These managerial skills are required by senior managers to develop and implement an e-learning strategy to transform the business into a learning organisation. Managers responsible for organisational change, including learning and development managers, together with other key stakeholders within an organisation, external consultants or some combination of these, may apply these strategic skills.

The skills include analysing strengths, weaknesses, opportunities and threats with regard to the use of e-learning in the organisation; establishing an overall strategy for the use of e-learning; establishing the technical infrastructure; overcoming any resistance among key stakeholders; marketing the e-learning strategy; and evaluating the effectiveness and efficiency of e-learning and blended learning programmes.

Although it is the teachers who implement the delivery and assessment strategies on a daily basis, they do so by following the policies and procedures developed to support the organisational vision and strategic direction. If senior managers see the benefits of a flexible approach to delivery and assessment they will support the program and the teachers. If they do not understand what flexible delivery and assessment is about then they won't be actively engaged in supporting it in their particular organisation. They will not become part of what Richard Karash (2011)<sup>21</sup> calls a learning organisation which is "one in which people at all levels, individuals and collectively, are continually increasing their capacity to produce results they really care about".

*Outcome:* Scannell investigated how organisations take a strategic approach to ensuring ongoing senior management support for the implementation of e-learning and also to obtain a greater understanding of models for managing curriculum design, development, implementation and review.

## **Curriculum Design Skills**

These skills apply to the design of any learning intervention, whether or not the decision is taken to include an e-learning element. However generic this process might be, these skills must be in place if e-learning is to be used appropriately. The skills include analysing the learning requirement; analysing target audience characteristics; analysing practical constraints and opportunities; selecting effective methods for each key stage or element in the intervention; and selecting learning media to efficiently deliver each of these methods.

*Outcome:* Scannell developed higher level skills and knowledge related to curriculum design, development and evaluation in outcomes-based learning environments requiring a flexible and innovative approach to delivery.

## **Content Creation Skills**

E-learning content can take many forms, including tutorials, simulations, games, assessments, videos, podcasts, troubleshooting guides and simple reference material. This content may constitute the full extent of the intervention or, more commonly, represent an element in a blended solution that may well include components that are not delivered online.

## Identifying the Skills Deficiencies

---

Learning and development professionals, e-learning specialists and subject experts may apply e-learning content creation skills with elements contributed by creative and technical specialists. The skills include project managing the process of content creation; designing the content; preparing the written and spoken elements; preparing interactions and test items; sourcing audio-visual assets; using authoring tools to build the content; and testing and refining the content.

**Outcome:** Obtain the skills and knowledge to be able to make more informed decisions about implementing a range of flexible delivery options including e-learning that is relevant and engaging for the target participants.

### Facilitation Skills

As e-learning evolves, it is likely to involve communication and collaboration between learners and facilitators, as it is e-content. These skills relate to the involvement of learning and development staff in the delivery of a learning intervention, with technology as an enabler. The skills include facilitating live online sessions using web conferencing tools or virtual worlds; setting up a learning intervention in a virtual learning environment (VLE) or learning management system (LMS); designing and facilitating online learning activities; and employing computer technology effectively in the classroom.

**Outcome:** Scannell identified strategies to facilitate e-learning and other flexible approaches to delivery and assessment that maximise engagement by learners who have a range of learning needs and learning styles.

The Fellowship has broadened and strengthened the Fellow's skills in these four key areas.

# The International Experience

---

This section presents the details of the conferences attended and organisations visited by Scannell in the United States of America (USA) and Canada, and a summary of the outcomes of each visit.

Initial Internet research and subsequent email contacts with organisations and colleges in Canada enabled Scannell to schedule the visits to meet Fellowship aims. The decision to visit the vocational colleges in Vancouver was based on this research and recommendations by the Industry Training Authority and BCcampus. These colleges are delivering the EPPRENTICE online program to apprentices in different trade areas and provided Scannell with the opportunity of reviewing an alternative to the traditional approach to trade training delivery and assessment.

The conferences were selected based on their recognition by the e-learning industry for attracting a wide range of international presenters and participants. The content of keynote addresses, workshops and sessions were identified by Scannell as being highly relevant to the purpose of the Fellowship.

## Destination: Industry Training Authority - Vancouver, Canada

### Contact

- Jeff Nugent – Chief Strategy Officer

### Objectives

The purpose of visiting the Industry Training Authority (ITA) was to gain an understanding of the vocational training system in British Columbia. This enabled Scannell to identify similarities and differences between the Canadian and Australian VET systems and provided an appropriate context for discussions with other organisations and colleges visited during the Fellowship.

The ITA is the provincial crown agency responsible for overseeing British Columbia's industry training and apprenticeship system. The ITA is responsible for:

- Overseeing the development of program standards as specified by industry and assessment procedures and tools
- Designating provincially recognised training providers and requirements for trainers
- Maintaining a registry of apprentices.

### Outcomes

A key reason for the visit was that the ITA is also responsible for the management of the Interprovincial Standards Red Seal Program, commonly called the 'Red Seal' program in Canada. The program is a partnership between the Canadian Government and the Provinces and Territories. The Red Seal program sets a standard of excellence, which enables qualified tradespeople to work across Canada without the need for further assessment of competence.

A national Occupation Analysis has been developed for each of the 52 trades covered by the program. Each analysis identifies the tasks performed in each trade and is used to underpin assessments. A range of support documents has also been developed to help employers and apprentices.

With Australia heading down the path of national licensing based on outcomes from Training Package units of competency, Scannell reviewed how a similar system is successfully operating in Canada.

It was stressed that the involvement of all stakeholders, including employers, is vital to the success of the program. In Australia, some employers are not always as actively involved as they could be in the development and implementation of an apprentice's training plan. The introduction of competency based completions in Australia now requires greater input from employers when developing training plans for their apprentices in consultation with the training provider.

### Destination: BCcampus – Vancouver, Canada

#### Contacts

- David Porter – Executive Director
- Lawrence Parisotto – Director, Collaborative Programs and Shared Services

#### Objectives

The purpose of this visit was to review the strategic and operational functions of BCcampus which is a publicly-funded organisation that works with post secondary institutions and other stakeholders to provide ICT services and leadership.

#### Outcomes

According to the BCcampus Strategic Plan 2011 – 2014 the three key Strategic Directions of the organisation are:

1. Provide agile, personalised access to educational information and services using a federated approach to connectivity across system institutions.
2. Reduce costs and create efficiencies using collaborative and shared service models.
3. Develop and share educational resources and expertise through the promotion of open and accessible networks.

BCcampus' three key goals are:

1. Create a secure and trusted data network among BC's post-secondary institutions for real-time student information transfer, with links to online learning resources and information provided by post-secondary system partners.
2. Foster and support the formation of collaborations and partnerships between institutions that leverage knowledge, reduce costs and generate benefits for students.
3. Provide educator support through online communities of practice, re-usable tools and resources, professional development strategies, technology training, and online program development.

The BCcampus is responsible for managing the implementation of the EPPRENTICE initiative, developed to provide a flexible method of delivery for the technical training component of apprenticeship training. Currently apprentices in three trades are completing their training under the initiative. These trades being:

- Welding
- Cookery
- Automotive.

The EPPRENTICE program was seen as a way to reduce the large number of people who had not completed their technical training (theory not delivered by employers) but had been laid-off without any recognition for what they had completed.

It was expected that the EPPRENTICE program would offer an alternative mode of delivery. This would increase access to training and improve success and completion rates which, like Australia, is an issue associated with apprenticeship training.

Funding for this initiative was recently stopped although the three colleges delivering training through the funding will continue delivery until the current agreement expires. No other colleges will be able to start new EPPRENTICE programs at this stage. It is not known if the program will be reintroduced in the future.

As in Australia, some Canadian employers are reluctant to release their apprentices to attend off-site training making online delivery a suitable alternative.

Issues associated with freedom of information and privacy was discussed as being an impact on e-learning and m-learning. It was highlighted that cloud-based services in the learning environment will create a large number of issues associated with the transfer and storage of learner details and records. This was an issue identified by many presenters at the conferences Scannell attended during the Fellowship trip.

### Destination: Vancouver Community College – Vancouver, Canada

#### Contact

- Jason Devisser - Associate Director of Business Innovation

#### Objectives

Vancouver Community College (VCC) was visited to review how it is delivering the EPPRENTICE program through funding administered by BCcampus. The visit was important in that the college is an example of what can be achieved through a coordinated approach to the application of strategic, curriculum design, content creation and facilitation skills when applied in a blended learning context.

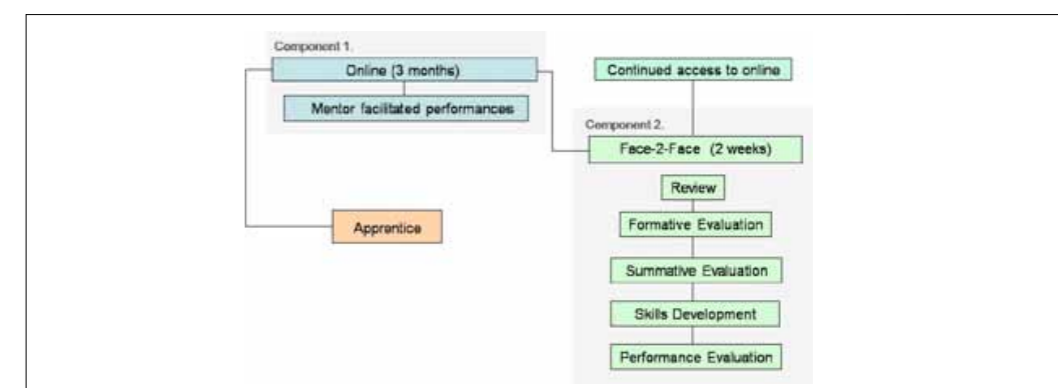
#### Outcomes

The EPPRENTICE program offers automotive apprentices a flexible mode of learning. In Component 1 of the program, apprentices are given access to online resources which they can access off-campus at a convenient time to suit their work and life needs. The program requires apprentices to undertake activities based on their workplace. These activities are performed under the guidance of a suitably qualified mentor.

The program is delivered using Moodle and it is mandatory for learners to contribute to discussions. Both the level of contribution and the quality of discussion content are graded.

During the second component, apprentices are required to attend the college to undertake a review of their learning from Component 1, undertake training in practical skills and then complete assessment tasks to determine competency.

The automotive service technician EPPRENTICE program comprises four, six or seven week training sessions over a four year period. The following chart shows the model used by VCC to deliver training in the Automotive Service Technician Apprenticeship program.



Source: Vancouver Community College – [www.vcc.ca/programs-courses/detail.cfm?div\\_id=&prog\\_id=153](http://www.vcc.ca/programs-courses/detail.cfm?div_id=&prog_id=153)



### Destination: UA Piping Industry College of British Columbia – Vancouver, Canada

#### Contact

- Shane Richardson - Development and Technology Coordinator

#### Objectives

The college is another good example of what can be achieved through a coordinated approach to the application of strategic, curriculum design, content creation and facilitation skills when applied in a blended learning context.

#### Outcomes

The UA Piping Industry College of British Columbia provides apprenticeship training in plumbing, welding, steam fitting and sprinkler fitting. The school is part of the Piping Industry Apprenticeship Board (PIAB). Although it is a union school, students do not need to be a union member to attend.

The school is currently undertaking a program to migrate to online delivery modes and is one of three currently delivering apprenticeship training as part of the ITA EPPRENTICE program supported by BCcampus.

The program covers the technical training component of Welder Level C and because of the nature of the trade makes extensive use of video. Apprentices access the online resources for a two month period then attend the school over a four month period. A new program is being developed which will include two weeks online then two weeks in the school. A four week online and four week at the school is also being considered.

The EPPRENTICE program offers a more flexible and shorter pathway to obtain the certification required by the trade and to satisfy the requirements of the Red Seal.

An issue which needed to be overcome was that instructors required extensive training to be able to facilitate online learning. They also needed to be convinced about the benefits of incorporating online discussions before they would include them as part of their delivery and assessment strategy. There is a similar situation in Australia where some teachers are not willing to embrace change to an alternative mode of delivery and assessment. The approach by PIAB shows that with appropriate management support and allocation of resources, a successful alternative method of training and assessment can be implemented.

### Destination: Camosun College – Victoria, Canada

#### Contacts

- Gilbert Noussitou - Chair Culinary Arts
- Geoff Murray – Carpentry Instructor and Chair of BC Carpentry Articulation

#### Objectives

It was recommended that Scannell visit Camosun College's Kemi Medu, a researcher from the Industry Training Authority (ITA).

As with the other two vocational colleges visited, Camosun College was visited to review how it is delivering the EPPRENTICE program. The college is also a good example of what can be achieved through a coordinated approach to the application of strategic, curriculum design, content creation and facilitation skills when applied in a blended learning context.

#### Outcomes

The college delivers to over 12,500 learners annually and delivers the EPPRENTICE program in its hospitality department. During discussions with Noussitou and Murray it was obvious that Camosun College aims to put learners first and strives to implement flexible options. This includes blended delivery with some activities delivered totally online.

There is a belief at Camosun that to be successful in the online learning environment learners must:

- Be active learners by taking responsibility for their own learning
- Be prepared to initiate and be involved in meaningful interaction with other learners and the instructor
- Be highly motivated and capable of both independent and collaborative study
- Be able to think critically about the vast amount of information available on the World Wide Web
- Have or be willing to develop strong organisational skills
- Be able to function well in a variety of learning modes and with a variety of learning materials.

*Source: Camosun College – [www.camosun.ca/de/success.html](http://www.camosun.ca/de/success.html)*

The above are common beliefs for many organisations delivering online programs, however Camosun are actively embracing them through the programs they deliver and the online support provided to students. Support is given to online learners in the form of guides and a series of video tutorials on how to use Desire2Learn (D2L), which is Camosun College's online management system. Each video is three to five minutes long and is an ideal length to keep learners engaged but long enough to convey the desired message.

The cookery students in the EPPRENTICE program have a high success rate which has been achieved through keeping them motivated and through support from their employers.

The online resources are structured in such a way that learners must complete, or click through, all pages before gaining access to quizzes. This presents new content or reinforces existing knowledge before undertaking the quiz.

Students with reading difficulties have access to text to speech software to help improve reading, comprehension and spelling.

Camosun College is a working example that trade training does not need to be limited to the traditional modes of learning to achieve desired outcomes.

### Destination: Ontario College of Trades – Toronto, Canada

#### Contact

- Brent Kearse – Director of Communications and Marketing

#### Objectives

Legislation was passed in 2009 that enabled the establishment of the Ontario College of Trades. The College is an independent, industry-driven body that has a regulatory function and was established to support industry stakeholders such as employers, apprentices, tradespersons and consumers and to promote industry participation. As with Scannell's visit to the ITA, this visit provided a comparison with the Australian VET system, in particular regulatory practices and associated issues.

## The International Experience

---

### Outcomes

Although not fully operational at the time of Scannell's visit, it is expected this will occur during 2012. The College has been implemented in phases since the legislation was passed.

The College operates through a Board of Governors, Divisional Boards and Trade Boards and has regulatory powers covering all approved trades in Ontario. The College:

- Aims to make the apprenticeship system more responsive to the evolving skills and training needs of employers and consumers
- Is responsible for a number of number of key functions including setting training and certification standards and issuing licenses and certificates
- Undertakes research to obtain industry intelligence to ensure all stakeholders are kept up to date and to inform policy development and implementation.

It was explained to Scannell that a strong working relationship between employers, apprentices and training providers is vital to the success of the apprenticeship system. Also important is the level of support given to teachers to provide them with the skills required to achieve the desired quality outcomes. These are also issues for teachers, employers and apprentices in Victoria particularly since the introduction of Competency Based Completions (CBC) for apprenticeships. It is hoped the introduction of CBC will help address low completion rates which is also an issue in some trades in Canada.

### Destination: Ministry of Training Colleges and Universities – Toronto, Canada

#### Contacts

- Richard Evans - Program Coordination, Employment, Training and Apprenticeships
- Rita Spannbaauer - Senior Service Integration Advisor, Employment, Training and Apprenticeship
- Terry Hesketh - Program Development Officer, Strategic Policy and Programs
- Peter Solomon - Employment Program Consultant, Skills Development Foundation Skills
- Priscilla McKenzie - Employment Program Consultant, Skills Development - Foundation Skills
- Brian Gary - Policy Advisor, Strategic Policy and Programs
- James Gordon - Policy Advisor, Postsecondary Education, Postsecondary Accountability

#### Objectives

The Ministry of Training, Colleges and Universities is responsible for policy development and implementation associated with post-secondary education and skills training. It is also responsible for distribution of funding to colleges and universities. Private colleges are also registered through the Ministry.

The visit and discussions with Ministry staff was undertaken to identify similarities with the Australian VET system.

#### Outcomes

The Ministry operations are similar to Skills Victoria and the Victorian Registration and Qualifications Authority (VRQA). This enabled Scannell to put into context the information obtained from visits to other organisations and conferences during the Fellowship.

Discussion also included details of the Contact North distance education network established to provide learners in northern Ontario with access to colleges and universities through 94 centres. George Brown College is currently piloting a program for hearing impaired students.

## The International Experience

---

A common thread throughout all discussions with the Ministry representatives, and conference sessions Scannell attended, was issues about security, privacy and access associated with online programs. Appropriate funding was also identified by Scannell as an issue. Limited funding in the past has meant that online programs have been developed on a shoestring by a few dedicated people. This is also the case in Australian TAFE colleges in which individuals take on the role of e-learning developers within their department.

The number of students undertaking online learning is increasing. This is supported by Contact North research associate Dr Tony Bates (2010)<sup>22</sup> who states that enrolments in fully online courses in the USA have expanded by 21%, while campus-based enrolments expanded by only 2%. Based on anecdotal evidence, Dr Bates believes there are similar increases in Canada.

Tablets are now starting to play a greater part in e-learning and teachers will need professional development to enable them to maximise the benefits of using this form of technology. Teachers who have taught mainly in a face-to-face classroom environment will need to think innovatively to capitalise on the benefits of using emerging technologies. This includes the use of social media such as Facebook and Twitter.

The Contact North program is an example of how quality learning outcomes can be achieved through a properly funded and coordinated approach to the design and development of online and distance learning.

### Destination: E-Learn 2011 – Honolulu, USA

World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education

#### Contacts

- Refer to the individual presenter details in the Outcomes section.

#### Objectives

E-Learn 2011 is an international conference organised by the Association for the Advancement of Computing in Education (AACE) and co-sponsored by the International Journal on E-Learning. The annual conference provides an opportunity for a range of educationalists to present research papers on a range of e-learning topics appropriate to the corporate, government, healthcare, and higher education sectors.

During this conference Scannell facilitated a 'roundtable' discussion aimed at exploring issues associated with providing innovative approaches for flexible delivery to building and construction apprentices. Information obtained from participants during this activity was to be used to inform the development of this Fellowship report.

The scope of the conference included topics relating to e-learning and supporting technology appropriate to the following sectors:

- Corporate
- Government
- Health care
- Higher education
- Informal learning (communities, homes)
- K-12 education
- Libraries and museums
- Military
- Professional associations and non-profits.

The following information is based on outcomes from the conference sessions Scannell attended. The session abstracts are included in Attachment 1 and have been taken from the AACE E-Learn 2011 Conference Program.

### Outcomes

#### Barbara Means - SRI International, USA

##### Keynote Address

Key points from presentation:

- Technology has the capability to create immersive environments to recreate events
- There will eventually be a mandated requirement for incorporation of an online component in schools
- Studies have shown that blended learning is better than face-to-face. Research by the Florida Virtual School (FLVS) showed that blended learning in the Algebra and English subjects gave participants:
  - Better chances of passing
  - Higher grades
  - Higher grades on the State Achievement Test
- A high number of participants in the program had previously failed
- E-learning is personal and better prepared students for further lifelong learning. It also had the potential for cost saving in training delivery
- Private colleges are engaging in blended learning more than traditional colleges. Although based only on anecdotal evidence, Scannell believes this to be a similar situation in Australia
- Features of e-learning:
  - Flexible
  - Students can master own pace
  - Blurs the boundaries between formal and informal learning.
  - Individualised/personalised
  - More student-centred.

#### Barbara Grabowski - Penn State University, USA

##### Online Learner Competencies: Results of a Worldwide Validation Study

Key points from presentation:

- Grabowski commenced her presentation by discussing the definition of competency by the International Board of Standards for Training, Performance and Instruction (IBSTPI). IBSTPI defines competency as: “An integrated set of skills, knowledge and attitudes that enables one to effectively perform the activities of a given occupation or function to the standards expected in employment”  
*Source: [www.ibstpi.org/competencies.htm](http://www.ibstpi.org/competencies.htm)*
- This definition is not dissimilar to the definition applied to competencies in the Australian VET sector
- We are now working in a dramatically changing learning landscape driven by technology
- Online no different to traditional forms of learning ie some online learners succeed and some don't
- Just because learners succeed in the face-to-face environment does not mean they will succeed online
- Learners who are struggling online will need a high level of support to get through
- Learning skills are the same, however they are applied differently in an online environment.

#### Sew Mee Barton, Leanne Ngo and Andrew O'Loughlin - Deakin University, Melbourne Australia

##### Emerging Technologies for Using iPads for Managing and Marking Large Student Cohorts: Transition from Hardcopies to E-Copies Marking

Key points from presentation:

- The university has changed systems by replacing Blackboard with Desire2Learn
- Use specifically developed rubrics to aid the transition from paper based to e-based assessment
- Rubrics can be too prescriptive and give little flexibility in mark allocation
- Delays during class occurred when students were using their iPads to search for the required information
- Lecturers spent a lot of time showing students where to find the information rather than encouraging students to search for the information themselves
- Too much information was provided by lecturers instead of encouraging learners to search for the information themselves
- Using iPads can lead to time wasting because they can be addictive and encourage frivolous searching.

#### Yang Yang, Eva Heinrich and Elizabeth Kemp - Massey University, New Zealand

##### Supporting Assessment in E-Learning: Collecting Students' Work and Generating Analysis Data for Assessment and Feedback

Key points from presentation:

- Social aspects of learning are very important and must be considered when developing online programs
- Successful online collaboration is directly linked to assessment
- Key elements for assessing online discussion forums:
  - Participation
  - Interaction
  - Quality of Discourse
  - Rubrics to support grading
- Assessing individual forum contributions can be time consuming. It is also difficult to locate contributions from each learner
- There is a lack of statistical data
- There is no consolidation of student work to attach meaningful feedback.

#### Natasja Saranchuk and Heather Kanuka - University of Alberta, Canada

##### "Moving Online": Faculty Development

Key points from presentation:

- Important to establish an e-learning committee amongst the faculty
- Teachers were internally motivated to participate in the PD program because they did not receive support or funding from management
- Teachers attended in their own time
- Need to take care that not too much is crammed into programs.

### **Herb Mahelona and Amy Burvall - TechnoTroubadours and Teacherpreneurs**

#### General Session

Key points from presentation:

- Access examples from History for Music Lovers at the following YouTube address: <http://www.youtube.com/user/historyteachers>
- Text is static and does not have soul, we therefore are unable to interact with it
- A number of generations have been raised in an era of the “tyranny of the text”
- Current trend is a shift away from a text based culture
- Interactive visual media much more engaging than text with a few graphics
- A lot of what is produced today is a remix/derivative of something someone else has already produced
- Music and parody are an ideal way of supporting learning. Music sticks in brain and triggers recall. It also reduces stress
- Decoding music requires high level thinking
- Advertisers use music and jingles to sell a message so why can't teachers do the same
- Teachers benefit from taking ownership in what is being developed. This is known as the “IKEA Effect” which encourages customers to take ownership in the product by assembling it themselves. Customers feel pride in their efforts. Another example is the lack of popularity of cake mixes in the 1950s which were not popular until customers were required to add an egg. Customers have ownership in the process
- Teachers currently need one foot in the classroom and one foot in the digital world
- Teachers need time to concentrate on innovative ideas. Google allocate 15% of employee time for innovation.

### **Masahiro Ando – Nagaoka University of Technology, and Maomi Ueno – The University of Electro-Communications, Japan**

#### E-Learning Using Tablet PC

Key points from presentation:

- Note taking reinforces learning – Tablets therefore benefit learners by making annotation easier
- Extraneous words can be eliminated by using annotations
- Tablets reduce cognitive load associated with handwriting or keyboard entry
- Users of Tablets can see the relationship between content and annotations
- Research has found that students were comfortable using annotations on tablets even if they had limited PC skills.

### **Stephen Burdick – University of Michigan Health System, USA**

#### Building your E-Learning Program on any Budget: Four Rules for Sustainable Success

Key points from presentation:

- Launched m-learning programs at the University in October 2005 with its effectiveness reviewed recently
- Programs based on sound learning principles and business practices
- E-learning programs must add value for all stakeholders

- Align e-learning efforts with the strategic direction of the organisation
- Advocate for learner success – get to know your learners
- Measure outcomes which include performance/behaviour change. Just measuring who passed a test or completed an activity is not enough.

### **Natasja Saranchuk and Heather Kanuka - University of Alberta, Canada**

#### Technology Adoption and Academic Development

Key points from presentation:

- Need to enhance the learning experience at all times
- Keeping up to date with technology is a challenge
- The changing learning workplace is shaping changes in learning
- Gap and tension exist between what teachers would like to do and the level of management support to get there
- Online program support group meets regularly to discuss issues and share ideas. It's relatively easy to establish a group, however getting and keeping a facilitator can be difficult
- Technology must not precede the pedagogy
- Time required to implement an online program is often limited and the quality suffers accordingly
- Decisions must be made based on what is known about what will work
- Need for integrated and multi-layered approach and not just a one-off workshop
- Need to determine what will work and what is sustainable
- Collaboration is required so that nothing is forced on teachers
- Start by connecting through a face-to-face workshop then go online
- Practice what we preach about technology. If we are advocating technology use then we should also be using it
- The development approach should be to do better things, not do things better.

### **Charles Miller and Brad Hokanson – University of Minnesota, USA**

#### Designing the Online Learning Experience: A Role-Based Design Perspective

Key points from presentation:

- ADDIE instructional design model does not involve people. It has a process and technology focus.
- Learn from failure and don't be put off by the experience.
- Start the instructional design activities as an artist would approach a new painting. This requires the instructional designer to question everything.
- Treat instructional design as a craft and take time to develop new concepts.
- Too many people focus on the process not the learning.
- Better outcomes can be achieved if a product fails one third of the way through development then amendments are made accordingly.
- Need to make everyone feel part of the learning.

## ***The International Experience***

---

### **Peter Chan, John Wilkinson, Charles Graham and Jennifer Skeen - Brigham Young University, USA**

Blended Learning: Transforming Teacher Roles in 21st Century Education

Key points from presentation:

- Face-to-face and online in parallel gave the option to switch between the two. This is the best option but is more costly
- Students in blended programs performed better than in face-to-face only.

### **Richard A. Schwier - University of Saskatchewan, Canada**

Connections and Contexts: The Birth, Growth and Death of Online Learning Communities

Key points from presentation:

- Learning communities get strength from each other through a sense of belonging
- Collaboration between all stakeholders is a key to successful online learning
- Storytelling is a community connector
- Communities happen in formal, informal and non-formal contexts.

### **Ionna Ghergulescu and Cristina Hava Muntean - National College of Ireland**

Learner Motivation Assessment with <E-Adventure> Game Platform

Key points from presentation:

- Need for real time, live feedback when using games in online learning activities
- Now interacting with the “digital wisdom generation”, therefore the old methods of teaching will not work.
- Currently there is a lack of assessment models for learning programs which include games
- Also, lack of adaption of games to suit different learner styles and requirements.

### **Rebecca Meeder and Peter Leong - University of Hawaii – Manoa, USA.**

How Adult Characteristics Affect learning in 3D Virtual Environments

Key points from presentation:

- Students liked to have space to learn. In the Second Life environment they did not feel crowded
- Students liked the sense that they were in the environment but were not on a web cam
- Students felt that they were part of a community and were close to classmates
- Students wanted structure and ability to explore
- The 3D environment gave students a sense of building something
- Students did not like the “flat” environment such as PowerPoint
- Virtual environment enables students to do things that they could not do in the real world
- Students can work at their own pace and schedule learning around personal/family commitments
- Virtual environment encourages extravert behaviour
- Students feel comfortable in the virtual environment and don't have negative feelings when they make mistakes. They have an opportunity to learn from failure.

## ***The International Experience***

---

### **Li-Ling Chen - California State University**

Enhancing Special Needs Learning with iPad

Key points from presentation:

- 13.5% of students in the USA have special needs
- iPads have been specifically designed to present cost effective audio visual content including text in a convenient size
- iPads have a number of benefits for people with special needs:
  - Built in universal access
  - Light weight
  - Touch screen
  - Ease of use
  - Low cost
  - Range of Apps.

### **Laura Pasquini - University of North Texas, USA, Melissa Johnson - University of Florida, USA, and Michelle Rodems - University of Louisville, USA**

Connecting First Year Students to Formal and Informal Learning

Key points from presentation:

- Pasquini does not believe in the concept of digital natives
- Reference to Blooms Digital Taxonomy
- Peers feel more comfortable communicating with each other
- Set up a network of student ambassadors to champion online learning programs. Previous students could take on this role.

### **Micael Cawdery and Brent Hirata - Leeward Community College, USA**

Quick, Cheap and Easy Instructional Redesign. Thank You Google

Key points from presentation:

- Need to recreate the energy of the classroom in an online learning environment
- Review what others are doing, continually ask questions and review examples
- Talk to a number of different designers to get a range of views and ideas
- Review existing resources to determine how they can be used or adapted
- Find a champion
- Create and stick to a timeline
- Benefits can be obtained from developing a consistent course framework which individual teachers can add too
- Costs can be minimised by using basic and readily available tools
- If teachers are developers they can relate to those who will be delivering and learning.

### **Craig Kapp - New York University, USA**

Visualizing the Future: How Augmented Reality can empower faculty, inspire students and bring ideas to life in the classroom

Key point from presentation:

- Demonstrated the features of the “ZooBurst” software which enables 3D digital story telling
- Showed a different option for presenting information.

### **Sarah Haavind and Richard Carter – Lesley University, USA**

Four steps to fostering collaborative presence in online discussion forums

Key points from presentation:

- Pedagogy and goals of online are the same as for face-to-face programs
- Some students feel threatened in the face to face classroom environment. They feel uncomfortable answering questions when others are around them. They can also feel that they are rushed and because they need time to collect their thoughts they do not engage in discussions. They are therefore alienated from the learning process
- Online discussions give shy learners the opportunity to be involved. They have time to reflect and put their thoughts together before responding. Some learners who dominate classroom discussions are also stopped from inhibiting the progress of others
- Although classroom discussions are live and face to face they can be shallow
- Need to move from brainstorming to dialogue
- Need to change the language used when giving instructions and feedback. For example, “We missed your voice in the discussion” and not “I noticed you did not post anything this week”. Words such as “must”, “late” etc should be avoided because they are negative and not friendly
- All connections with learners need to be personalised. Encourage participants to add to postings, ask questions and offer suggestions to extend their learning experiences and enhance the experiences of others
- Don’t ask questions in such a way that responses are only an assessment of the quality of the posts associated with the topic. When asking questions think about what the responses are likely to be, and how the learners will approach getting the required information and how they will process and post it
- Teachers must set and document clear criteria for online discussions. This sets the boundaries and helps maintain control
- Encourage learners to take a stand on an issue and discuss their views which may be different to others, however postings must contain points of view that are not a personal attack on the views of others
- Engage the learners in self assessment of their postings. The example presented included a “mid-stream dialog” which required students to review their postings against the requirements and write a brief report about how their postings are meeting the desired outcomes. This reflective activity at the mid point is evaluated by the teacher who evaluates progress and can make interventions if necessary. Since doing this the quantity and quality of postings has increased
- Learner self-assessment encourages deeper learning
- Teachers need to set dates for postings which allow time to digest information and formulate appropriate responses. However, it is important students comply with requirements and submit by the due dates.

### **Lesley Farmer – California State University**

Teaching Digital Citizenship

Key points from presentation:

- To engage learners, e-learning tools used in learning programs must match the learning requirements. For example, if visual then video is appropriate, if text then an appropriate presentation of text must be used
- Whatever approach is used it must call learners attention to the information presented and clearly present a need for obtaining the information
- Learners must be engaged and this can be achieved by getting them to manipulate the information presented in some way. Case studies and outcomes based activities should be used. Activities that involve decision making also help
- Teachers should encourage the development of an online community that supports each learner and encourages sharing of learning experiences
- A web site related to digital citizenship is available at: <http://k12digitalcitizenship.wikispaces.com>

### **Elaine Correa – Medaille College, USA**

Call it what it is: Cheating! From disconnected spaces to Engaged Learning-Web-Based Instruction in a culture of entitlement

Key points from presentation:

- Context of learning has changed with a shift to online learning. We now work in an environment comprising communities of learners and not classes
- Students have changing views about learning. They are taking ownership and have higher expectations associated with what they get for every dollar they spend on their education. The more they spend, the greater the expectations ie \$\$\$\$ = As
- Learning is therefore becoming a currency that students can use to get a better job. The more learning (qualification) the better chance of getting a job, or a better job
- The pressure to perform well is therefore great and chances of cheating and plagiarism increases. Some is deliberate, some is not. Some teachers are to blame because they do not stress the importance of referencing other peoples work enough before or during learning programs. Teachers also need to clearly explain to their students what plagiarism is, and the consequences of using someone else's work
- The managers of some colleges are to blame because they want to get students through and have a high success rate. The speaker gave an example of a student who used the content from an example thesis, took the cover off it and submitted it as their own work. The teachers were alarmed when management told them to help the student to get through
- Assignments with fixed outcomes make it easier for a student to use someone else's work. Assignments must therefore be set appropriately and encourage students to think for themselves and be original in the work they submit
- Before submitting work students need think about the task, reflect on what they have done and determine the outcomes of their actions.

### Paula Bigatel – Penn State University, USA

#### Prove-It – A Hands on E-Course to Demonstrate Technical Competencies

Key points from presentation:

- Participants were shown examples of the online course developed to teach instructors how to work with the university's Learning Management System (LMS). The previous course had not been successful due to low numbers attending. It was believed that this was because attendance was not mandatory
- There is a need to assess the competency of online facilitators to determine their level of skills and knowledge appropriate for working with learners in an online environment
- Need to develop a facilitator guide to maintain consistency of outcomes
- Used the ADDIE and Backwards design models to develop the course
- Need to either have different sections or separate courses for different people with different skill levels
- Online courses need to be self-paced but structured
- Regular feedback to the learner is critical. Learners need to know that they are progressing appropriately.

### Tatyana Pashnyak – Florida State University, USA

#### Creating Facebook Communities of Practice: a Content Analysis

Key points from presentation:

- Need to use Facebook in a systematic way to harness its full power
- Important to teach issues associated with security and privacy
- People want to use Facebook because it makes them feel part of a community
- Facebook can be a powerful learning tool for both formal and informal learning
- Teachers need to be facilitators and not hand holders
- Include several discussion questions to help introduce each subject. This will help reduce learner anxiety
- Online facilitators need to foster a community spirit and support each other online. Face-to-face classes tend to be a group of individuals and not a learning community
- Create an environment in which learners build relationships and learn from each other
- Develop rubrics to enable grading/assessing of online participation.

### Destination: DevLearn 2011 – Las Vegas, USA

#### Expanding the Possibilities for Learning

##### Contacts

- Refer to the individual presenter details in the Outcomes section of this report.

##### Objectives

This conference was arranged around seven themes to address issues associated with emerging technologies and the opportunities and challenges driving organisational knowledge and performance. The themes at DevLearn 2011 were appropriate for addressing the Fellow's skills deficiencies in that they covered:

- Management
- Technology
- Strategy
- Learning
- Enterprise
- Knowledge
- Performance.

The DevLearn 2011 conference provided Scannell with the opportunity to review a range of content development tools and explore different e-learning delivery strategies.

The following information is based on outcomes from the conference sessions attended by Scannell. The session abstracts are included in this report in Attachment 2 and have been taken from the DevLearn 2011 Event Guide.

### Dr. Michio Kaku – Professor of Theoretical Physics - City University of New York, Host of the Science Channel's Sci Fi Science and Author of Physics of the Future

#### General Session

Key points from presentation:

Dr. Michio Kaku is an internationally recognised authority in two areas. The first is Einstein's unified field theory, which Dr. Kaku is attempting to complete. The other is to predict trends affecting business, commerce and finance based on the latest research in science. Dr Kaku is the author of numerous books, including *Parallel Worlds*, *Physics of the Impossible* and his newest *Physics of the Future*.

Based on his experiences as a theoretical physicist and host of the Science Channel's Sci Fi Science television program, Dr Kaku speculated about the next one hundred years of technology development. This included an exploration of the revolutionary developments in technology, computers and quantum physics that may change how we learn, engage and live with technology.

Dr Kaku explained that although technology has reduced costs in areas such as manufacturing and communication. The costs of education have remained static which he believes is because the way we provide education has not changed for hundreds of years.

Dr Kaku explained that technology is changing as a result of 'Moore's Law' which focuses on the long-term trends associated with computer hardware. The Law, based on observations by George Moore (co-founder of Intel), recognised that the number of transistors which can be integrated into an electronic circuit would double every 12 months. Currently the doubling time is approximately 18 months.

The result of this development in chip technology is more powerful, faster, smaller and cheaper electronic devices. Computer hardware will therefore become inexpensive, however software will remain expensive. Scannell believes this is evident when comparing the costs of computers, particularly laptops, which have reduced significantly over the past few years. By comparison the cost of software and technical support has remained about the same.

The use of a range of devices in everyday life will aid learning. For example, intelligent glasses will provide a visual interface to access the Internet which will be all around us, just as electricity is all around us. We don't think about how the electricity is provided, we just flick a switch and it is there. This will be the same with the Internet, it will just always be there. As an example, Dr Kaku used driving a car while wearing a pair of intelligent glasses as providing an opportunity to access short training sessions.

Scannell believes this would need to be in cars with intelligent safety systems because if talking on a mobile phone causes distractions now, the potential for distractions associated with accessing the Internet through intelligent glasses while driving are many times greater.

Dr Kaku discussed the virtual world and its benefits for training. Two examples are:

- Augmented reality
- Virtual reality.

*Augmented Reality* will take learners into a modified version of the real world which has been supplemented with computer generated visual and auditory elements. A commercial example of Augmented Reality can be seen by accessing the following YouTube address. The video shows how a Lego Augmented Reality kiosk is used to demonstrate one of their products:

<http://www.youtube.com/watch?v=mgnubHtL2Ek>

Another example is a game Scannell encountered on his return to Australia called *appBlaster* which can be download to an iPhone or iPod. The device is attached to a toy 'ray gun' and the camera on the iPhone or iPod is activated to display the real world (the current location inside or outside). The application then generates attacking aliens which must be stopped. Although this is a game, the concept can be adapted to develop appropriate learning activities. For example, instead of attacking aliens, the screen could show OHS issues which must be addressed in real time on the user's worksite.

More information about this product and the company developing it is available at:

<http://www.apptoyz.com.au>

*Virtual Reality* is a computer generated, simulated version of the world. In some situations it can be lifelike, producing a highly visual 3-D sight and sound experience. For example, training simulators have been developed for pilots, train drivers and the military (tanks etc).

Dr Kaku presented the concept of virtual learning environments based on the concept of the Matrix and Holodecks. In these environments holograms interact with virtual people and objects to create a highly interactive simulated world. Although this concept is futuristic, elements of it already exist today in the form of holograms and 3D technology.

Although this emerging technology will take the drudgery out of education and lead a shift from the traditional 'chalk and talk' approach, history has shown that the people on which change impacts do not always openly embrace it. Dr Kaku sited the example of how people long ago refused to accept the then new technology of electricity and the telephone. This resistance is also occurring today with resistance to virtual worlds, and social networking such as Facebook and Twitter.

Like many other people at this and the other conferences attended by Scannell, Dr Kaku stated that privacy was a major issue of concern that will need to be addressed in the online world of the future.

### **Mark Harter, Learning Technologist - Catalyst360°**

[A Non-graphic Designer's Guide to Good-looking Learning](#)

Key points from presentation:

Harter suggested teachers and e-learning developers should be constantly on the look out for images and videos which can be used in learning resources. This can be easily achieved by using mobile phones which a large majority of people now own. These phones have advanced capabilities to capture images and videos at any time of day or night. Some mobile phones also have basic video editing capabilities.

Mark showed examples of how freely available software, fonts and graphics can be used to produce high quality e-learning. It was stressed however, that every element must have a relationship to other elements in the resource. Also, font colour, graphic size and position and white space must be considered.

### **Aisha Taylor, Senior Instructional Designer and Anthony Del Barto, Senior Media Specialist - ACS, a Xerox Company**

[Blended Learning: Innovative Solutions for a New Generation of Learners](#)

Key points from presentation:

This session was based on a case-study session that included the Foundation, Immersion and Reinforcement model for design of blended learning which the presenters defined as 'any learning that combines multiple delivery channels'.

The presenters stressed the following elements as being vital to the success of blended e-learning strategies:

- Important to conduct a thorough needs analysis
- Identify and validate existing content
- Determine what content will work in a blended learning environment and what will not
- Need to have the people with appropriate skills and knowledge work on development
- Management support must be obtained and maintained throughout the project
- Strong leadership is needed throughout the project lifecycle
- Determine what you want to do then identify the appropriate technology available
- Design to enable 'chunks' which can be used in a number of different learning programs
- Inform and engage all stakeholders before, during and after the process.

### **Ed Spizzirri - Senior Systems Engineer, OutStart**

[Mobile Learning – Build Once, Deploy Across All Devices](#)

Key points from presentation:

The demonstration in this session showed how easily e-learning content can be developed by using readily available programs, in this case PowerPoint, then be converted for deployment on the Internet, mobile phones or tablets. A 30 day free trial is available from the following website:

[http://www.outstart.cm/mobile\\_trial/htm](http://www.outstart.cm/mobile_trial/htm)

It is this type of development tool that teachers will need to quickly and easily develop resources for mobile technology.

### **Shari Brennan, Learning and Development Consultant, V.P. - Wells Fargo**

[Developing & Implementing Organization-wide e-learning Standards & Templates](#)

Key points from presentation:

This session highlighted the importance of maintaining consistency across the organisation when developing and implementing e-learning strategies. Key points from the session included the need for:

- Standards for structure of tests and questions
- Brand approval through marketing department



- Working to a common design methodology
- Include examples in templates
- Development of a style guide
- Agreement on the type of graphics eg no clip art and only original vector graphics
- Standard navigation
- New and updated resources to be put in the new template to allow previous resources 'fade out'.

Although there are many benefits associated with maintaining consistency, care must be taken to make sure the resources don't all look the same, become boring and do not engage the learners.

### Steve Rosenbaum – Author of 'Curation Nation'

#### Why the Future of Learning is Context

Key points from presentation:

The key message at the start of this session was that e-learning is all about the people and that it is no longer something on the sideline. The emergence of the 'Cloud' presents visions of something that is nice and fluffy and creates a calming feeling. However, we all know that storm clouds can quickly appear on the horizon to cause disruption. The amount of information now available on the Internet is staggering and there is a danger that if presented with too much information, people will start to block it out.

Some statistics presented during this session highlighted how much information is now available on the Internet. For example, in 2003 five Exabyte's of information was created. Today, the same amount is generated every two days. Facebook hosts 140 billion photos and it is expected that another 70 billion will be added in 2011.

All the information now available has brought into question the effectiveness of search algorithms. Many people will have experience searching for a particular topic based on a couple of words they have entered only to be presented with a host of unrelated topics, some which are completely inappropriate. Rosenbaum believes that the search algorithms lack the human touch and because of the volume of information to be searched are no longer appropriate. He instead believes in the concept of curation of information.

A comparison can therefore be made between the artefacts in a museum and the information available through the Internet. At a museum, the curator decides what the public want to see based on analysing their needs and then displays them accordingly. The large percentage of artefacts however, remains in storage. The same process can be applied to information. A teacher can act as the 'curator' and filter what their students need to see. Teachers need to replace algorithms and filter the information and present it to their specific audience accordingly.

As individuals, most of us are already doing this on regular basis. Many people in the workplace receive a large number of emails, texts and tweets every day and do not read or respond to all of them. We know what we are interested in so filter out the unimportant messages and ignore them. A teacher as a curator of information needs to do the same. They will know what information is appropriate for their own and their students' needs and ignore the rest.

Rosenbaum presented three key elements needed for effective curation of information. These are:

- Choose your digital clothing – select a topic of interest that is part of your digital identity to respond to postings, tweets etc. This is similar to the way we decide what we will wear each day and is how the world will view us

- Listening is more powerful than speaking – gather, organise and filter the good information
- Find clarity amongst all the noise - pull out only the things that matter.

Rosenbaum believes curation can be used to empower teachers and students and discussed the following curation best practices:

- Define quality for the readers in your view remembering that what is good for one is not necessarily good for all
- Provide a context and clarify sources
- Tell a story (narrative) to support the context and maintain interest
- Develop a theme and a voice
- Encourage people to participate.

Rosenbaum concluded the session by stating that today we are all creators of information and that the web is not only something separate from us, "the web is us".

### Lance Dublin - Dublin Consulting and Co-author of Implementing e-Learning

#### Building a Learning Strategy to Address Today's Challenges

Dublin started his presentation by stating "if you don't know where you're going, any road will take you there". He also quoted Chinese Philosopher Sun Tzu who stated "Strategy without tactics is the slowest route to victory. Tactics without strategy is the noise before defeat".

These statements highlight the importance of a properly developed and implemented e-learning strategy. Dublin stressed the importance of considering people in all aspects of the strategy. He quoted Arie de Geus, Royal Dutch Shell Corporate Planning Director, who in his book *The Living Company* maintains that the most enduring companies treat their enterprises as living communities rather than purely economic machines.

Dublin discussed the concept of generational differences and that the level to which technology is embraced is about mindset and not generational preconceptions. Other presenters at the conferences attended by Scannell also expressed this view that all generations are basically the same, however the social contexts are different. Every generation has individuals who are not as enthusiastic as others to embrace technology and change. In each generation however, there are individuals who willingly embrace change and work with it.

Dublin's session also included discussion about humans being natural learners and that learning can occur 24/7/365 and courses are not the only containers of learning. Dublin believes that although traditional courses are cost effective because the information can be transferred to a group of students assembled in the one location, they are not an effective learning option. As an example, Dublin stated that if content was delivered in a classroom well before it was needed to perform a task in the workplace, the performance may be compromised because the individual concerned may have forgotten key elements of the task. Learning should therefore occur any time and any place to enable the acquisition of skills and knowledge on-demand.

### Michelle Lentz, Owner - Write Tech, and Stevie Rocco, Learning Designer - Penn State University

#### Yours, Mine & Ours: Copyright & Creative Commons in Education & Training

Key points from presentation:

This session presented information about intellectual property and copyright and what constitutes fair use. The main focus was on Creative Commons (CC) licensing obligations. More information is available through the Stevie Rocco Learning Materials website at:

<http://www.learning.signpostwebdesign.com>

### Mary McLean-Hely, Director of Instructional Design - The College Board

#### The Changing Role of the Instructional Designer

Key points from presentation:

Topics in this session included the evolutionary stages of learning design. These being:

- Analogue –(Instructivist, Behaviourist)
  - Linear
  - Offline
  - Topic based
  - Knowledge transfer
- Digital – (Constructivist)
  - Non-linear
  - Online interaction
  - Focus on skill development
- Connected (Connectivist)
  - Connected socially
  - Connected learning environment
  - Interaction
  - Immediate.

McLean-Hely believes that learning should include activities that enable learners to connect with other learners. This can be achieved by the use of social media to exchange views, comments, critiques etc.

The world of learning is more about presenting information than just delivering facts without context.

#### **Product Demonstrations**

The DevLearn 2011 conference also included two additional features. These were the Expo which comprised of separate trade stands in one large area throughout the conference. Exhibitors included a range of e-learning software and learning management system developers and suppliers and training providers. The other feature was the DemoFest which provided participants the opportunity of viewing product demonstrations by the 85 exhibitors who highlighted their tools, technologies and processes.

### **Destination: Learning 2011 – Orlando, USA**

*Balancing Learning: Changing Workforce, Workplace and Designs*

#### **Contacts**

Refer to the individual presenter details in the Outcomes section of this report.

#### **Objectives**

This conference is conducted annually by the Masie Center which is a 'think tank' that provides consultancy services to a wide range of public and private organisations. The centre focuses on the changing workplace and workforce together with the learning strategies required by individuals and organisations to grow in an environment of change.

The conference was attended by 2046 people and included a number of high profile keynote speakers and approximately 240 workshops on a wide range of e-learning topics.

Learning 2011 provided Scannell with the opportunity to review current approaches to e-learning from a pedagogical perspective. Although the workshops attended by Scannell were mainly focused on development and delivery of e-learning, some strategic and curriculum design topics were included. The large number of attendees and presenters the Learning 2011 conference provided Scannell with an opportunity to network with an extensive range of VET providers and practitioners.

The following information is based on outcomes from the conference sessions attended by Scannell. The session abstracts are included in this report in Attachment 3 and have been taken from the Learning 2011 Event Guide.

#### **Outcomes**

Attendance at the conference provided the opportunity to participate in the 'Business Behind the Magic' behind-the-scenes tour of some of the Disney World facilities. The tour focused on explaining how five business principles have shaped the success of the Disney organisation. These principles are:

- Leadership excellence
- People management
- Quality service
- Brand loyalty
- Inspiring creativity.

The tour included visits to:

- Disney Textile Services which is one of the largest laundry facilities in the world. The tour focus was on Leadership excellence and Inspiring creativity
- Epcot® Cast Services provides support for cast members (employees) before they interact with the guests (public). Disney calls this interaction 'going on stage'. The tour focus was on People management and Inspiring creativity
- Main Street U.S.A.® examined how Disney strives to provide quality guest services by addressing needs, wants, stereotypes and emotions. The tour focus was on Quality service, Brand loyalty and Inspiring creativity
- The 'Utilidor' System is a support system located beneath the Magic Kingdom® theme park. This area has been developed to engage and empower cast members to enable them to interact effectively with guests and other cast members. The tour focus was on Brand loyalty and Inspiring creativity.

A key message from the tour highlighted Disney's focus on people. The Disney organisation aims to hire people based on attitude, not aptitude. Disney wants talented and gifted people, however the organisation also wants people who have a willingness to make a positive impact in the workplace.

Senior management support is also vital to the success of the Disney organisation. This support includes a high degree of recognition for individual staff effort. This is part of the Disney culture and is reflected in the level of organisational success.

### **Judy Brown, Dr. Conrad Gottfredson and Jason Haag - Advanced Distributed Learning (ADL) Co-Lab**

#### Mobile Learning: Getting Started

Key points from presentation:

- ADL is an initiative of the United States Secretary of Defense and was responsible for creating a collection of standards and specifications for developing e-learning called the Sharable Content Object Reference Model (SCORM)

- ADL has recently undertaken research into the effectiveness of m-learning and plan to release findings in mid-December 2011
- Mobile devices such as tablets are becoming more popular because they are portable, permit 'instant-on' and the battery lasts all day
- Information is accessible wherever and whenever the user needs it
- Mobile devices are generally accessed for three reasons:
  1. To alleviate boredom by accessing some form of entertainment
  2. To attend to regular daily activities such as Internet banking, obtaining flight details etc.
  3. To sort out some form of trouble
- M-learning can be defined as using a hand-held or wearable computing device to access learning content and associated information
- M-Learning is definitely not just about taking existing content and making it smaller to fit into a new medium
- Instructional designers should use small 'stick notes' to storyboard content. This helps restrict the amount of content on each screen
- Terminology used in content needs to change. The use of terms such as *Click*, *Next*, *Back* and *In the Next Section* is not appropriate for mobile devices. Terms such as *Touch*, *Pinch* and *Zoom* should be used because they reflect the actions of users
- Use the very best instructional designers and developers for m-learning
- Use mobile as part of a blended learning solution. Don't focus on creating a standalone program
- Dr Gottfredson presented what he calls the five moments of learning needs. These being:
  1. When accessing learning for the first time
  2. When wanting to learn more
  3. When trying to remember
  4. When things change
  5. When things go wrong.
- M-learning needs to be more than just a way of providing learning within an organisation. It must become part of the culture of the organisation
- Learners forget 80% – 90% of what they have learnt within 3 – 4 weeks if they do not have an opportunity to apply the learning in some way. There is therefore a need for follow up sessions/ activities to reinforce the previous learning
- Haag stated that it was important to forget what we think we know about m-learning and focus on believing what we actually see working
- Create new content for m-learning. Don't just convert existing web based content
- Write once for deployment to multiple device types
- Scope correctly at the start. This will allow support for multiple devices
- ADL has produced an m-learning guide which is available at: <http://mlearnadl.net>
- More information including details of resources, authoring tools and an m-Learning Handbook is available from ADL at: <http://adlmobile.wikispaces.com>
- Although not endorsing the product the "jQuery" mobile framework was given as an example. Information about this is available at: <http://jquerymobile.com>
- Dreamweaver now provides a developer tool.

### **Peter Cappelli - The Wharton School**

#### Managing the Older Worker

Key points from presentation:

- Cappelli presented via a live interactive video interview and focused on the changing workforce and workforce imperatives
- There are an increased number of people staying in, returning to and changing work at an older age
- People need to work longer because of economic conditions
- There are now four generations in the workplace working together
- Interpersonal skills are very important in maintaining relationships between generations
- Increasing level of the just-in-time approach to human resource management
- Maintaining morale is a key issue for employers
- Older generation have higher levels of morale
- Younger people have difficulty supervising older people resulting in age discrimination during recruitment and work
- There is still a reluctance of employers to invest in training
- Physical capital is often viewed as more important than human capital eg if a company has supply or manufacturing problems they fix them as a priority. HR issues are not viewed with the same importance
- Need to spend more time developing the right people instead of hiring people who perform at the interview but are not as capable of performing the tasks as they said they could.

### **Stephen Lambert – Television Producer**

#### Undercover Boss

Key points from presentation:

- The television series resulted in a realisation that there a lot of good people on the frontline, however they are often not properly trained to perform at their peak
- Communication is important in all organisations and the lack of it is a major issue
- Money is not just the main motivator for people to work. Appreciation of effort is desired by most employees
- On the job training is still the major source of learning
- Managers need to spend time on the frontline to get a better perspective and awareness of what is going on in the business.

### **Chris Lyons - McDonalds Hamburger University**

#### McDonald's Development Experience

Key points from presentation:

- Important to adopt a blended approach to learning
- The traditional classroom is no longer appropriate
- Instructors now need to engage and interact with individuals and groups
- Organisations need to be committed to supporting the lifelong learning of staff

### Elliott Masie - The Learning Consortium

Learning Apps: Teaching, Learning & Support with Apps & Clouds

Key points from presentation:

Masie presented this seminar about the role that "learning Apps" might play in learning efforts. A learning App is a single, focused, thin, mini-application that can work from a tablet, mobile device or computer. Designers can populate learning Apps with targeted content, learning activities, performance support tools, collaboration capacities and more.

Learning Apps may be developed for new employees being onboarded (inducted), senior leaders in a leadership program or a cross-functional team with a new assignment to work together. Masie spoke about a process to brainstorm, wireframe and design a learning App that can support blended learning, e-learning, on-the-job training or other learning modes. With content and context based in the 'Cloud', these thin and highly affordable Apps could emerge as powerful teaching, learning, coaching and performance tools.

Masie presented the concept of 'affordances' throughout this and other sessions at the conference. In an e-learning or m-learning context the term affordances refers to the ability of the technology to permit someone to perform some action. Other key points from this session included:

- An application is a thin layer that brings together data and information from a number of sources
- Apps do not need to be complicated or expensive. The Learning 2011 app was developed for a cost of US\$7,500- and comprised no more than 1000 lines of code. The Masie Centre needed to spend time deleting some of the functionality so the App could have been developed for less had the project been scoped correctly
- People only use 1% of feature of proprietary software such as MS Word, Excel etc so they therefore spend 99% of their time ignoring the features that have been built into the programs
- Apps need to work on multiple platforms
- By using mobile technologies people have a tactile relationship which they do not have with text
- An App for induction into an organisation could provide new employees with information they need to do their job and also provide them with the tools they need to do their job. The App could also provide ongoing support throughout employment.

### Clay Pennington - Reach Local

10 Ways to Train 4 Generations (with Lots of Gizmos) in 1 Workplace

Key points from presentation:

- Develop a range of online role plays based on real world scenarios and using actors to ensure accuracy and credibility
- Develop activities to simulate cold calling
- Use specific meeting software in practice call activities
- Implement social and peer involvement games
- Introduce voicemail skills training. Calls are recorded and provide an opportunity for constructive feedback from supervisors or trainers
- Produce a range of short (five minute) videos and include information about viral video techniques
- Use Prezi presentation software in place of PowerPoint. Prezi is more engaging and gets attention. Prezi also helps to minimise the overuse of slides

- Provide staff with access to corporate social media tools such as Yammer. These are only visible from within the organisation. Mostly younger staff are using Yammer
- Set up a Wiki which is a website which enables users to add, modify or delete content
- Develop training programs where trainer is remote and communicates via the web and enables two-way communication.

It is important to remember that it's not so much about generations; it's about people of different ages with a range of different experiences.

### President Bill Clinton

Keynote Address

Key points from presentation:

President Clinton was the 42nd President of the United States and is founder of the William J. Clinton Foundation. The foundation has a mission to:

"Improve global health, strengthen economies worldwide, promote healthier childhoods and protect the environment by fostering partnerships among Governments, businesses, non-governmental and passions. – to turn good intentions into measurable results".

*Source: The Clinton Foundation – www.clintonfoundation.org*

The Foundation seeks solutions that will make meaningful and positive changes to the lives of individuals. During his address, President Clinton described the challenges we face resulting from globalisation and the importance of collaborative learning in a common future, based on shared goals and values.

On the Foundation's website, President Clinton is quoted as stating that the success of their work is measured by a single question i.e. "Are people better off now than when we started?". This question is not only appropriate for the work of the Clinton Foundation but also for educationalists who should also ask the same question. They need to know that what they are doing is making a difference to the lives of learners.

### Ben Coyte, Lisa Pedrogo, Marcia Breese & Rosemary Fitzpatrick - Turner Broadcasting

How to Produce & Edit Learning Stories

Key points from presentation:

- When developing the story you need to consider:
  - Why are you doing it
  - Who is it for
  - How will you deliver it
- Still shots are often better than a video because detail is easier to see
- Storyboards are important because they record exactly what shots are needed
- When filming don't pan around a room because this can make it hard for the viewer to focus on the content
- Limit the amount of zoom
- Apply the 'rule of thirds' to compose screen shots. This requires developers to divide the screen into nine equal sections by imagining two equally spaced horizontal and vertical lines
- Provide a clear view of faces because it is important to show emotion

## ***The International Experience***

---

- When filming faces always shoot from the same side. Safety, access and lighting may determine which side is appropriate
- Talking and pictures are more powerful than just an interview
- Include appropriate titles, maps and graphics, but do not overuse
- Include fading however, take care when using fade effects because these effects can be distracting or inappropriate. For example, in a news story about a tsunami don't use a ripple effect in the fade
- Build excitement or control emotions with the speed of cuts
- Minimise background music because it can be distracting
- Developers do not need to use expensive equipment to film good video. For example, mobile phones now have excellent video and photographic capabilities. Software such as iMovies is suitable for editing. Apple Final Cut is a more powerful editing system.

### **Dean Kamen – Founder of DEKA Research and FIRST® (For Inspiration & Recognition of Science & Technology)**

#### Innovation

Key points from presentation:

For Kamen, school was a painful experience. He didn't like school because he was a slow learner and likened learning 'to being hit with a fire hose'. Kamen believes that if he was a child today the reasons for his attitude to school work would not be explored and he would probably be given medication to fix the problem.

Kamen found school to be intimidating and frustrating. He failed tests because he wanted to spend time rewriting questions and his answers because they could be better. Kamen believes:

- People need to be empowered to create their own learning
- There is a need to make learning fun and educate for inspiration
- Innovators look at what everyone else does but see them differently.

### **Jill Gardner & Theresa Bruece - The Walt Disney Company**

#### Enabling Content & Encouraging Collaboration: Anytime, Anywhere & on Any Device

Key points from presentation:

- There was an identified need to establish a global coaching program for the organisation
- The number of mobile devices being used by the company executives is rapidly increasing. App development for mobile devices is also increasing
- There was some uncertainty about direction, however the use of technology is the driver
- Conduct virtual classes online and use social networking for formal classes
- Provide a range of online resources for self-directed learning. These include mobile books and interactive .pdf files
- Blended learning for the organisation being discussed included executives being sent short videos then followed up by questions
- Yammer is used for informal learning
- Amount of usage and time associated with emails has been replaced by using Jive
- Currently pay external developers for Apps, however aiming at creating their own App store

## ***The International Experience***

---

- Take the opportunity to market internal programs by email because employees regularly check emails on their mobile devices. Some every five minutes
- Learning must be available on any device.

### **Informal Lunch Session**

#### Is Instructional Design Dead?

Key points from presentation:

- There has been a paradigm shift. Learning no longer just takes place in the classroom. It happens everywhere and in a range of modes
- Instructional designers need to open their mind and see things in a different way
- Need to determine if the desired outcomes are being achieved and not just hand over the resource and move on to the next project
- It's not about what the instructional designers want people to learn it's about what people want to learn
- Instructional designers need appropriate skills plus an 'X' factor
- Instructional designers must have the ability to question what is going on around them and be creative
- Content is no longer 'king', it is the way it is delivered
- Instructional designers need to establish a partnership with clients.

This session, together with comments from other speakers at all three conferences, highlighted the importance of the role instructional designers play when developing online learning resources. It is no longer the case of subject matter experts writing content that is then put into a manual or saved as a .pdf file for download from the internet. Skilled instructional designers take data and information from subject matter experts then structure it, develop activities and present it appropriately to engage learners. Instructional designers must have a thorough understanding of the principles of adult learning and apply them in their work in order to satisfy learner needs.

### **Karen Gerome, Francesca Maffei-Lazev & Stacy Cook - Liberty Mutual Group**

#### Humor & Compliance: Not an Oxymoron!

Key points from presentation:

The outcome from this project that was on a very limited budget, was a video based on the *Law and Order* television show, It presented the subject matter with some humour which was more widely accepted than just a page turning resource. The approach overcame a resistance to change.

### **Cary Harlow, Hewlett Packard**

#### Storytelling Workshop: A Learning Example

Key points from presentation:

- Stories must have:
  - A setting
  - Protagonists or characters with a crisis or situation to be resolved
  - A plot
  - A theme (moral)
  - A business purpose and imperative

- Keep stories to 3-5 minutes in length
- More information and examples are available from the Centre for Digital Storytelling at: <http://www.storycenter.org>

**Jeff Daly – CEO Farmers Insurance, Dr Arthur McMann – Veterans Affairs University, and Bill Pelstor – DeLoitte University**

### General Session

Key points from presentation:

During this session the three speakers discussed learning within their organisations. Key messages were:

- To successfully develop and implement learning strategies leaders of organisations need to be able to motivate people to get things done
- The world around us is the learning environment
- For many people face-to-face delivery is still the preferred option however, this approach is becoming economically unviable. A blended learning approach is now the best option
- Learning program development and implementation requires an integrated team approach comprising younger and older people
- Focus on experiential and simulated learning environments.

**John Lithgow**

### Keynote Address

Key points from presentation:

In the afternoon session, Masie interviewed John Lithgow on the topic of the power of storytelling in the learning process. Lithgow explained how storytelling is an art form that is in danger of being lost because of the influences of the media and technology. The need to pass stories from generation to generation by word of mouth is being diminished.

In the evening session, Lithgow demonstrated his ability to engage an audience by presenting his show 'Stories by Heart'. He told a story about a childhood experience which later helped him with his father who was struggling with a health issue.

Lithgow demonstrated how good storytelling can be used as an aid to training. A good story will gain the attention of learners; draw them into the experience and present information that will be remembered. A good story will also provide a way for learners to learn about themselves during the journey through the story.

When teachers and online content writers develop case studies they must therefore include more than just a few factual points joined together to make paragraphs. The work must tell a story that engages the learner.

**Elliott Masie - The Learning CONSORTIUM**

### Games, Gamification, Mobile & Social Learning: Opportunity & Hype

Key points from presentation:

- The hype around new learning trends cons us into believing that we have progressed further than we really have
- In many tenders for learning contracts m-learning devices such as tablets and iPhones are included just because it is expected

- Learning design must reflect the need and be based on evidence
- Need to bring learning to work and not the workers to learning
- No matter how effective people are at work there is always some spare time for learning something
- People don't read texts all day however, they are regularly looking at their emails which can provide an opportunity for delivering training in small chunks
- Humans like to compete and have fun therefore games can be an effective method for delivering training
- People learn best when they are social with other people. Social networks such as Facebook support this approach
- With games people learn through repetitive failure. They are failing their way forward. For example, in games that involve progressing from one level to another, players generally fail a number of times before they learn how to proceed to the next level
- Games can be used for motivational purposes. For example, the Global Corporate Challenge motivates participants to increase their fitness levels
- Communities of practice only support a few members. They are like a gated community which does not let others in. For effective learning to take place we must connect with a wide circle of other learners
- Social learning is not just about the technology. It is about the interaction with others
- Learner engagement is not just dropped in at various points in the resource. It is designed into the learning
- When using social media everyone is a brand ambassador for the organisation that employs them
- It is important to experiment and try new things.

**Betsy Myers – Head of the Centre for Women and Business at Bentley University, and Bob Baker – Chief Learning Officer, The Learning CONSORTIUM**

### Panel Discussion

Key points from presentation:

- During this session the speakers discussed learning within their organisations
- It is OK to fail but always give 100% effort to the task
- Value-reverse mentoring. Older workers can learn a lot from younger workers
- Leaders need to foster an environment in which people want to work with them
- Leaders need to know the impact their decisions have on others
- Leaders need to ask people what they can do to make the person's work life better and what the leader can do to make the organisation better
- People within the organisation need to be valued and supported
- Innovation involves revisiting the past
- Checklists are important. Don't trust things to memory. For example, the pilot who landed the passenger jet on the river in New York used a checklist to make sure he did everything he needed to do
- Learning moves through three stages:
  1. Knowing – Curriculum focused and teacher led
  2. Doing – Competency based with a learner focus
  3. Being – Focus on behaviour and a collaborative approach to working things out together

- Games are making content more compelling
- People don't often initially understand. It may be some time before they are immersed in the learning
- Learning starts with the culture not the tools.

### Concluding Remarks

The Fellowship enhanced Scannell's professional and personal development by extending his understanding of e-learning and m-learning technology and how they can enhance flexible delivery, not only for the building trade apprentices but also for all learners. In particular the Fellowship enabled Scannell to:

- Understand the importance of developing strategic plans to enable the coordinated integration of a range of media into blended learning programs as part of the overall organisational delivery and assessment strategy
- Review the features and benefits of the latest e-learning and m-learning technologies to enable best practice flexible delivery
- Determine curriculum design and development requirements to support a changing learning environment
- Enhance existing instructional design skills to create e-learning and m-learning content to effectively engage participants in the learning process
- Enhance existing online facilitation skills
- Explore issues associated with privacy and security, particularly associated with social networking and Cloud software.

At the three conferences attended, a large number of software companies demonstrated e-learning and m-learning development products. Although these products contained features to make it easy for trainers to develop their own online resources, the output appeared to be not much different to what has been developed in Australia under the Australian Flexible Learning Framework's Toolbox funding since 2000. Like the Toolboxes, the development tools demonstrated at the conferences provide interactive e-learning and assessment resources comprising case studies, scenarios, video, animation and activities.

An e-learning tool developed through Australian Flexible Learning Framework funding was the Application for Rapid E-learning Development (ARED). The tool enabled VET practitioners with basic computer skills to develop their own resources using a selection from six templates.

The software demonstrated at the conferences generally had more features than ARED, however these came at a cost. ARED is freely available whereas the software demonstrated must be purchased on a commercial basis. Some are only available through the Cloud thus passing control of the resources to a server in another location. This creates security and privacy issues associated with participant records. It also means that if there are hardware faults, the training provider may not have access to their own resources.

From his observations at these conferences, Scannell concludes that Australia has been at the forefront of online development and instructional design for many years. The Toolboxes and other online resources developed by TAFEs and other organisations have supported Australian learners by providing a range of engaging resources. It is apparent however, that other countries have caught up to Australia and are now focusing on developing resources for mobile learning applications. As a coordinated national approach proved successful for the Australian Flexible Learning Framework Toolbox series, a similar approach is needed to support the development and implementation of m-learning resources in Australian VET.

# Knowledge Transfer: Applying the Outcomes

---

### Benefits of Proposed Fellowship

The Fellowship has benefited Scannell's professional and personal development by providing additional skills and knowledge to extend his understanding of ICT in teaching and learning. In particular the Fellowship enabled Scannell to:

- Develop strategic plans to integrate new media into next generation blended learning solutions
- Explore the latest technologies to enable digital learning best practice in classroom and across all institute processes (mobile devices, iPods, blogs, digital tablets, multimedia, mobile and wireless technologies and robotics)
- Implement e-learning successfully as part of an overall organisational delivery and assessment strategy
- Design and develop curriculum to support the changing focus of VET learner needs
- Enhance existing instructional design skills to create e-content that is relevant, engaging and effective
- Enhance existing facilitation skills to support online collaboration as well as face-to-face learning
- Explore issues encountered by other training providers when delivering e-learning programs (eg Cyber citizenship, LLN and motivation).

### Knowledge Transfer

Scannell travelled to Canada and the USA through the ISSI Fellowship to attend conferences and visit colleges and other appropriate organisations to identify examples of flexible delivery of VET. Scannell explored options for embedding e-learning, m-learning and other innovative delivery and assessment strategies into training programs.

Although the outcomes of the Fellowship address the immediate needs of building and construction apprentices, it is expected that all teachers in different industries will also be able to develop innovative and engaging programs based on the outcomes of the research.

The key benefits of the Fellowship to the VET sector are:

- Identification of delivery and assessment strategies that will make the learning environment more accessible, stimulating relevant and engaging for different generations of learners
- Development of strategies that will support the application of Competency Based Completions (CBC) and associated compliance issues
- Reduction in waiting lists for apprentices wishing to start their formal training at a Registered Training Organisation (RTO). In some trades this can be weeks or months
- Identification of methods of supporting apprentices with language literacy and numeracy (LLN) issues prior to commencement of trade skills training
- Identification of strategies for the development of learning content for apprentices prior to commencing formal RTO based training. Content may include but not be limited to: OHS, sustainable work practices, career advancement, quality, legislation and environmental standards compliance
- Ability to foster a mentoring and coaching relationship between teachers and learners
- Encouragement of collaborative learning between apprentices from the same and other trades
- Adoption of a student centred approach to assessment
- Validation of on-the-job training, work experience and assessment undertaken by trade apprentices

## Knowledge Transfer: Applying the Outcomes

---

- Provision of guidance for teachers and assessors on how they can best use the technology in on-site and off-site assessment activities and provide specific examples related to specific trades such as plumbing and carpentry
- Identification of opportunities for educational resource developers in Australia to promote their skills, knowledge and products globally.

### Sharing Skills and Knowledge With Other Stakeholders

Information obtained during the Fellowship assists Scannell in his role as Curriculum Services Manager at Holmesglen. In this role, Scannell manages the development of a range of curriculum for the Crown (through Skills Victoria), industry clients and the Institute. Scannell also manages the VET professional practice activities at the Institute. This involves managing programs delivered through the Institute's Professional Development Calendar. As these programs for staff, together with other programs for external clients, benefit from an increased level of online delivery, the skills and knowledge obtained through the Fellowship underpin Scannell's daily work at Holmesglen. The skills and knowledge will also support Scannell during his involvement with the development, implementation and validation of Holmesglen's new e-learning strategy.

Holmesglen, like many other organisations in Australia and overseas, has implemented Moodle and Blackboard Collaborate for delivery of online learning and assessment. The skills and knowledge obtained through the Fellowship enable Scannell to provide advice to instructional designers and developers of e-learning and m-learning.

At Holmesglen, Scannell also manages the Curriculum Maintenance Management (CMM) service for Skills Victoria for the Building and Construction, Furnishing and Water industries. The CMM provides operational advice on the implementation of Training Packages and Crown curricula so Scannell therefore has regular contact with different teacher networks. Through the CMM, Scannell disseminated information about options for delivery and assessment involving e-learning and m-learning.

Shortly after his return, Scannell presented information about the outcomes from overseas visits at an Apprenticeship and Traineeship Teachers Conference at Holmesglen on 30 November, 2011. The focus of the conference was on flexible methods of delivery and assessment and was aimed to help support teachers within different trade areas.

Scannell also presented a session at the Holmesglen Teaching and Learning Showcase on 6 December, 2011. This is an annual event to showcase examples of best practice to Institute staff.

In his role at Holmesglen, Scannell also is in a position to meet with teachers from different TAFEs through teacher network groups serviced by the Curriculum Maintenance Manager for Building and Construction, Furnishing and Water industries. Whenever possible, Scannell discusses options for flexible delivery in particular associated with Competency Based Completions.

It is also planned that Scannell will present at the TAFE Development Centre (TDC) teaching and learning conference in September 2012.

# Recommendations

---

To work in a rapidly changing and challenging VET environment, teachers need to keep pace by undertaking professional development to maintain appropriate skills and knowledge. IBSA has suggested that funding be made available for digital literacy programs so that stakeholders can capitalise on the opportunities presented by the NBN.

Key to the success of any initiatives to support the introduction of Government training policy, and industry need, are different and innovative approaches to trade training and assessment. To achieve this requires many trade teachers to continue to apply traditional methods of teaching based on their own learning experiences and to embrace new methodologies using a range of new and emerging technologies.

As stated previously in this report, the Queensland Training Ombudsman believes e-learning is becoming integral to trades training because many new apprentices, including recent school leavers, are accustomed to and expect to use technology for learning. This is particularly true for Generation Z learners who were born in the early to mid 1990s into the world of the Internet and mobile technologies.

Care must be taken however, not to characterise people by placing them in a category just because they were born during a certain time period. Scannell discovered that just because an individual may be seen as a Baby Boomer based on their birth date, they may also have the characteristics and attitudes towards technology of someone born in the Generation Z time period.

Based on his findings, Scannell believes that not only does e-learning provide flexibility when delivering the theoretical components (underpinning knowledge) associated with trade training; it also enables teachers to remotely assess learners on the job using a range of digital devices. Scannell found that a blended approach was recommended by all people visited and by the presenters at the conference sessions attended. Blended learning is the most educationally sound and efficient way of delivering learning.

Through the Fellowship, Scannell determined that a key component of the blended approach is the increasing use of social technologies such as Facebook, which was viewed by many presenters as a valuable learning tool. Facebook can however, present issues for teachers. For example, grading online participation and contribution can be difficult. Scannell found that the use of social media also presents privacy and security issues. These were major concerns expressed by many presenters and will need to be addressed as soon as possible, particularly with the emergence of Cloud computing.

The enormous amount of information available through the Internet has led to the development of a new learning theory called Connectivism, which recognises that because of the amount of information available, nobody can possibly know everything. Connectivism takes the 'know what' and the 'know how' which are associated with previous learning environments to the 'know where', which is an appropriate approach for the information age. Learners will need to be equipped with the skills and knowledge required to identify the information sources that will provide them with the information they need, when they need it, no matter where they are located.

The following are the four areas of skill deficiency identified by Scannell before undertaking this Fellowship. The four deficiencies are those discussed by Shepherd (2009)<sup>23</sup> in his paper The e-learning skills gap and presented previously in this report.

The bullet points under each skill area reflect the key learnings from Scannell's visits to overseas organisations and associated recommendations. These learnings are currently being used to inform decisions associated with the development of a new e-learning strategy and development of e-learning programs at Holmesglen.



### Strategic Skills

Strategic skills are the managerial skills required to be applied in the development and implementation of an organisation's e-learning strategy. They may be applied by learning and development managers, other key stakeholders within the organisation, external consultants or in a combination. Strategic skills include analysing strengths, weaknesses, opportunities and threats with regard to the use of e-learning in the organisation; establishing an overall strategy for the use of e-learning; establishing the technical infrastructure; overcoming any resistance among key stakeholders; marketing the e-learning strategy; and evaluating the effectiveness and efficiency of e-learning and blended learning programmes.

Recommendations to address strategic skills deficiencies:

- Senior management must create a vision and develop an e-learning strategy to underpin this vision. They must also show strong leadership demonstrated by their attitude, behaviour and commitment to providing resources (human and physical).
- Middle managers must create an operational plan to ensure the seamless implementation of the e-learning strategy. The organisation must develop systems and processes specifically for e-learning. Trying to make e-learning fit into an existing framework of policies, procedures and processes will not achieve the desired outcomes.
- Google allows its staff 15% of their time to devote to being creative. Teachers should also use some of their non-teaching time to be innovative and embrace the principles of 'disruptive change'. They must be risk takers and learn from failures.

For this to occur however, teachers must have the support of their managers who must allow teachers to explore ways to make better things instead of just making things better. Often the outcomes of these research and development activities are intangible and hard to justify because they do not have an immediate impact on the bottom line. For some organisations this has become more important than the educational outcomes for the learners.

- E-learning programs must add value in some way. There should be some educational benefit associated with delivery online. Merely creating .pdf documents and asking students to read them does not encourage learning. A Constructivist approach encourages learners to explore the resources and build on existing skills and knowledge.
- Professional development programs for e-learning must take an integrated and multi-layered approach and not just be a one off workshop. They must be flexible and structured and not force something on the teachers. The programs must also be sustainable.
- If an organisation is serious about e-learning then it must practice what it preaches. If the organisation is selling the benefits of e-learning to its clients then e-learning must be part of the culture of the organisation.
- Funding for e-learning programs must be based on a costing model appropriate for e-learning and not just on the traditional face-to-face learning costing model.
- Providers should initially determine what they can do with existing resources and plan for future development. By starting off in a small way a provider can develop small e-learning programs using existing content and minimum technology. They can focus on doing it right and not focus on trying to do all things to all people too quickly.
- Because a teacher is good in the classroom and can relate well to their learners, it does not mean that they can be a good online facilitator. Training providers need to assess the competency of teachers to determine that they have the necessary skills and knowledge to facilitate e-learning. Teachers needing professional development should then be encouraged and supported to attend. Professional development in the use of new technologies is particularly vital. The increased use of mobile devices such as tablets and phones together with social technologies is reshaping the learning environment.

### Curriculum Design Skills

These skills apply to the design of any learning intervention, whether or not the decision is taken to include an e-learning element. However generic this process might be, these skills must be in place if e-learning is to be used appropriately. The skills include analysing the learning requirement; analysing target audience characteristics; analysing practical constraints and opportunities; selecting effective methods for each key stage or element in the intervention; and selecting learning media to efficiently deliver each of these methods.

Recommendations to address curriculum design skills deficiencies:

- 'Technology must not precede the pedagogy.' This was the key message from the Fellowship. Curriculum developers must focus on the learning outcomes and not base e-learning solely on the availability of technology.  
All too often e-learning is developed to suit the technological capability of the organisation. The focus instead should be on developing e-learning programs that are pedagogically sound then determine the technology required to deliver it. The allocation of funding should be based on addressing learner needs and not just the availability of technology within the organisation.
- A number of presenters stated that based on studies and their personal experiences, blended learning involving e-learning is better than face-to-face options. The best option is to run an e-learning program in parallel with a face-to-face program. This enables learners to swap seamlessly between both programs as circumstances require. This approach is not often taken because of the costs involved in developing two programs to achieve the same outcomes.
- Curriculum developers need to recognise that e-learning is more student centred and provides a link between formal and informal learning. It is flexible, individualised and personalised and enables students to proceed at their own pace. By developing curriculum for delivery in a Constructivist learning style e-learning will provide a way to increase student engagement with the content. A variety of activities and media (video, audio, animation etc) will lead to increased interaction and deeper learning.
- Blended learning does not fit comfortably with current approaches to curriculum development, timetabling, available technology and teaching practices. All stakeholders must recognise that e-learning is not the same as face-to-face and must adjust their work practices accordingly.
- Researchers, instructional designers and instructors need to work together when developing a blended learning program. Working in isolation will not lead to successful learning outcomes for participants.
- Text does not have soul and is impossible to interact with. Our generation was raised in an era of the 'tyranny of text'. We are now shifting from a text-based culture to a visual and interactive culture. Curriculum developers must shift away from developing courses that are too focussed on 'shovelling in knowledge' that they believe the learners should know, then adding some more just in case. This approach will turn learners off.
- Developers must realise that just like any other type of learning programs, successful e-learning programs must be based on sound learning principles and business practices.
- When developing an e-learning program all stakeholders, including the learners, need to be involved in the problem definition. Individuals should not make decisions on their own which may have negative impacts on all other stakeholders.
- Evaluation needs to measure performance and behaviour change and not just measure who passed a test or completed an activity.
- Security and privacy are important issues to consider and must not be overlooked when developing e-learning programs.

- Teachers are increasingly using Facebook and discussion boards as part of learning programs. Although these technologies are valuable learning tools it is difficult for teachers to assess individual postings, level of participation and interaction with other learners. Rubrics are therefore a valuable tool to help assess online participation.

### Content Creation Skills

E-learning content can take many forms, including tutorials, simulations, games, assessments, videos, podcasts, troubleshooting guides and simple reference material. This content may constitute the full extent of the intervention or, more commonly, represent an element in a blended solution that may well include components that are not delivered online. E-learning content creation skills may be applied by learning and development professionals, e-learning specialists and subject experts, with elements contributed by creative and technical specialists. The skills include project managing the process of content creation; designing the content; preparing the written and spoken elements; preparing interactions and test items; sourcing audio-visual assets; using authoring tools to build the content; and testing and refining the content.

Recommendations to address content creation skills deficiencies:

- Content creators should always build on the capability of technology to create immersive environments that recreate actual events. This leads to developing a learning environment that individuals can relate to.
- When undertaking assessment, learners need a chance to reflect. It is therefore important for content creators and instructional designers to include quizzes with some form of individualisation.
- Music can be an important learning tool. It increases interest and sticks in the brain. For example, the themes from many TV shows tell a story about the show. Advertisers also use music to place a message permanently in our brain. Marketers succeed using this approach so why shouldn't educators?

Music also reduces stress and decoding the message presented by it during training requires the application of high-level thinking by learners.

- Storytelling is an effective learning tool when it presents case studies/scenarios in a format which learners can relate to. For example, in the style of a comic book.

Short videos are an ideal way to apply traditional storytelling techniques in e-learning or m-learning programs. The movie capabilities of digital cameras and mobile phones can be harnessed by teachers to provide a quick and relatively easy way of producing a story that engages motivates and empowers learners. However, to be effective, digital stories need to be properly structured.

Doug Stevenson (2012) from Story Theater International presents what he calls the *Six Core Elements of Emotional Eloquence* (storytelling). These elements are:

- Engage first; then motivate
- Emotion is the fast lane to the brain
- Use metaphors and stories to frame your content
- Brand your message by weaving a theme
- Go deep, not wide
- Close your speech with a message of hope.
- For content creators the ADDIE instructional design model provides structure however, it focuses on the process involved. Creators need to make sure they involve the people. The processes must be secondary.
- Instructional designers need to think like an artist and treat their field as a craft and question everything.

- Simulation provides a safe learning environment where learners can make mistakes without real life consequences. For many years flight simulators have been used to train pilots. The military are also using simulators to train personnel in the use of dangerous equipment. The same approach will also work when training apprentices in a range of trades.
- There is a need to change the language used by teachers when giving instructions and feedback online. For example, "We missed your voice in the discussion" is better than "I noticed you did not post anything this week". Words such as "must" and "late" should be avoided. These are not friendly and have the potential to alienate learners.
- To engage learners, e-learning tools must match the learning requirements. For example, if a visual environment is required then video is appropriate, if text is required then the appropriate presentation of text must be used. Which ever approach is used it must call learners attention to the information presented and clearly present a need for obtaining the information.
- Learners must be engaged and this can be achieved by getting them to manipulate the information presented to them in some way. Case studies and outcomes-based activities should be used. Activities that involve decision-making also help to engage learners.
- If including games in online programs there is a need for real time, live feedback to encourage further participation.

### Facilitation Skills

As e-learning evolves, it is likely to involve communication and collaboration between learners and facilitators, as it is e-content. These skills relate to the involvement of learning and development staff in the delivery of a learning intervention, with technology as an enabler. The skills include facilitating live online sessions using web conferencing tools or virtual worlds; setting up a learning intervention in a virtual learning environment (VLE) or learning management system (LMS); designing and facilitating online learning activities; and employing computer technology effectively in the classroom.

Recommendations to address facilitation skills deficiencies:

- When teachers present information they must allow for some interaction to ensure they engage the learners.
- Some students have difficulty working at their own pace and require ongoing guidance and support from teachers and peers.
- Some students present a high standard of work, however they work slowly and may at times be late submitting their work. Time management skills for teachers and learners are therefore an important part of e-learning programs.
- Teachers need to engage the fast students when they finish activities early. They may otherwise become bored if they have nothing else to do.
- Not all learners who are successful in a face-to-face environment can learn effectively online. They may need increased support from their teacher/s throughout the program.
- The development of effective rubrics is needed to assist in the transition from paper based to e-based assessment.
- Interruptions can occur during online activities in class because of delays in searching and accessing sites and information caused by technology limitations and faults. Teachers need a 'Plan B' as a backup in the event of technical difficulties.
- Although tablets (iPads etc) are effective tools they can be addictive and encourage frivolous and unnecessary searching during class activities. Teachers therefore need to be alert to what each student is doing.

## Recommendations

---

- Teachers often tend help learners too much by showing them where to go online to get the necessary information instead of encouraging the learners to search for the information themselves.
- Online discussions are a valuable learning tool although it is often difficult to locate contributions from individual learners. This can be very time consuming for teachers.
- Benefits are obtained by engaging learners in the self-assessment of their own discussion board postings. This gives them the chance to reflect on their work and track their progress.
- E-portfolios are a valuable learning and assessment tool. They provide learners with the opportunity of reflection and experience using a range of technology. Teachers can use e-portfolios for either delivery or assessment activities.
- Reverse mentoring programs need to be implemented to enable younger people with high levels of technology skills to mentor older people. Although this goes against the traditionalist view of mentoring where the 'village elder' knows all, teachers will achieve better learning outcomes by actively supporting reverse mentoring programs.
- Note taking reinforces learning. By using tablets (iPads etc) in class, students can make annotations on the screen and avoid using extraneous words. Students can see the relationship between the content and annotations. The cognitive load associated with handwriting is also reduced. Some presenters stated that students were comfortable using annotations on tablets even though they had limited PC skills.
- Teachers need to foster a culture of learning advocacy.
- Teachers and other stakeholders need to form e-learning support groups (Communities of Practice) that meet on a regular basis. These groups can meet online however it requires a facilitator with high levels of appropriate skills and knowledge to encourage ongoing participation. Strategies need to be developed to encourage new people to join Communities of Practice and be integrated into them.
- If face-to-face and online programs are delivered in parallel, learners can switch between the two to suit individual circumstances. Teachers therefore need to feel comfortable working in both of these learning environments.
- Teachers need to determine what works online and in a face-to-face learning environment to determine how they can work together in the proposed program.
- Online learners need to be supported so that they can get strength from each other and develop a sense of belonging in a community. Although learners like independence they also want structure.
- Delivery using tablets is ideal for students with special needs because the tablets present audio, video and text in a convenient size. The touch screen makes tablets easy to use.
- Student ambassadors (e.g. previous students) should be encouraged to take on a support role to champion the uptake of e-learning amongst new students.
- Teachers should not ask questions that extract a response that only assesses the quality of the posts to the discussion board. Questions need to encourage learners to take a stand or point of view on an issue. When asking questions think about what the responses are likely to be, and how the learners will approach getting the required information and how they will process and post it.
- Some students feel threatened in the face-to-face classroom environment. They feel uncomfortable answering questions when others are around them. They can also feel that they are being rushed and because they need time to collect their thoughts they do not engage in discussions. They are therefore alienated from the learning process.

## Recommendations

---

- Teachers can use online activities to foster a comfortable learning environment and support learners in achieving the desired outcomes. Online discussions give shy learners the opportunity to be involved and give them time to reflect and put their thoughts together before responding. Some learners who dominate classroom discussions are also stopped from inhibiting the progress of others.
- Teachers must be aware that although classroom discussions are live and face-to-face they can sometimes be shallow.
- All connections with learners need to be personalised. They need to be encouraged by teachers to add to postings, ask questions and offer suggestions. This approach will extend their learning experiences and enhance the experiences of others.
- Teachers must create and document clear criteria for online discussions. This sets the boundaries and helps maintain control.
- Teachers must encourage learners to take a stand on an issue and discuss their views. Although these may be different to others however, postings must contain points of view that are not a personal attack on the views of others.
- Learners need to be engaged in the self-assessment of their postings. This may be in the form of a midstream dialogue which requires students to review their postings against the requirements, then writing a brief report about how their postings are meeting the desired outcomes. This reflective activity at the mid point can be evaluated by the teacher who determines learner progress and make interventions if necessary.
- Teachers need to set dates for postings which allow time to digest information and formulate appropriate responses. However, it is important students comply with requirements and submit by the due dates.
- Facebook and other social network tools need to be used in a systematic way to harness their full power as a learning tool for both formal and informal learning. People use Facebook because they want to feel part of a community. This enables members of the community to learn from each other.

Based on his findings discussed previously in this report, Kellock made a number of recommendations to Skills Victoria that included the following related to professional development of trade teachers:

- The use of flexible delivery options be developed to deliver training in these trades be documented and promoted to relevant staff in all institutes
- The TAFE Development Centre (TDC) develop professional development activities profiling the use of flexible delivery practices across plumbing industry and the potential use of sub-contractors where it is not considered viable for TAFE staff to deliver
- The TAFE Development Centre (TDC) coordinate professional development to prepare teachers to deliver training and assessment in the workplace.

The information obtained by Scannell following the Fellowship research supports Kellock's recommendations for the professional development of trade teachers. Although directed at all teachers, and not just trade teachers, the TDC 2012 Professional Learning Program includes appropriate programs. These can be accessed through the TDC website at: <http://tdc.vic.edu.au>

John E Lawlor (2009)<sup>24</sup> states that when information is communicated through vision and strategy people are empowered to make the best decisions. This is the message Scannell received from the organisations he visited and also from many presenters at the conferences attended. Scannell has confirmed that for e-learning to be successful in an organisation it must be part of the culture of the organisation. It is therefore the responsibility of everyone in the organisation to show a commitment to ensuring that the desired outcomes of e-learning programs are achieved.

# References

---

## Endnotes

- <sup>1</sup> Embi, R. 2007 Computer Anxiety and Computer Self-Efficacy Among Accounting Educators at Universiti Teknologi Mara (Uitm), Malaysia, Virginia Polytechnic Institute and State University, Virginia.
- <sup>2</sup> Churchill, W (Date unknown), *Biography for Winston Churchill*, IMDb.com, Inc. viewed 25 September 2010, <[www.imdb.com/name/nm0161476/bio](http://www.imdb.com/name/nm0161476/bio)>.
- <sup>3</sup> Thompson, L. and Lamshed, R. 2006, *E-learning within the building and construction and allied trades*, Australian Flexible Learning Framework, Brisbane.
- <sup>4</sup> National Quality Council/Council of Australian Governments Joint Steering Committee 2009, *VET Products for the 21st Century, Final report*, Canberra, Australia.
- <sup>5</sup> Simonson, M. Smaldino, s. Albright, M. Zvacek, S. 2006, *Teaching and Learning at a Distance*, 3rd ed. Pearson Education, Inc. New Jersey.
- <sup>6</sup> Innovation and Business Skills Australia (IBSA) 2012, *Environmental Scan – 2012: Securing future workforces: Advancing technologies and addressing competition*, East Melbourne, Australia.
- <sup>7</sup> *Sustainable Policies for a Dynamic Future*, Carolynne Bourne AM, ISS Institute 2007.
- <sup>8</sup> Ibid.
- <sup>9</sup> *Directory of Opportunities. Specialised Courses with Italy. Part 1: Veneto Region*, ISS Institute, 1991.
- <sup>10</sup> The United Nations Non Government Organisation (NGO) has worked for many years to create a global buy-in on sustainability. Starting with the definition developed in 1987 this organisation is now working on many fronts to ensure that sustainability is understood and adopted by all sectors of Government, Industry, Education and the Community.
- <sup>11</sup> Skills Australia's *Australian Workforce Futures: A National Workforce Development Strategy 2010*, pp. 1-2. [http://www.issinstitute.org.au/pdfs/WWF\\_strategy.pdf](http://www.issinstitute.org.au/pdfs/WWF_strategy.pdf)
- <sup>12</sup> Victorian Government 2008, *Securing Jobs for Your Future – Skills for Victoria*, Department of Innovation, Industry and Regional Development, Melbourne.
- <sup>13</sup> Skills Victoria 2010, *TAFE Delivery Guidelines*, Department of Education and Early Childhood Development, Melbourne.
- <sup>14</sup> Kellock, P. 2009, *Plumbing and Carpentry Enrolments: A Report to Skills Victoria*, The Asquith Group, Melbourne.
- <sup>15</sup> Thompson, L. and Lamshed, R. 2006, *E-learning within the building and construction and allied trades*, Australian Flexible Learning Framework, Brisbane.
- <sup>16</sup> Embi, Roslani. 2007, *Computer Anxiety and Computer Self-Efficacy Among Accounting Educators at Universiti Teknologi Mara (Uitm), Malaysia*, Virginia Polytechnic Institute and State University, Virginia.
- <sup>17</sup> Flexible Learning Advisory Group 2010, *January – June 2011 Framework Business Plan*, Australian Flexible Learning Framework, Brisbane.
- <sup>18</sup> Lefoe, G., Olney, I. and Herrington, A. 2008, *Enabling teaching, enabling learning: How does staff development fit the educational technology landscape?*, Proceedings from the Australasian Society for Computers in Learning in Tertiary Education conference (ascilite 2008), Melbourne.
- <sup>19</sup> Calcei, J. 2009, *E-learning integral for trades training* Department of Training and Workforce Development, Government of Western Australia, viewed 4 July 2010 <<http://moodle.westone.wa.gov.au/mod/forum/discuss.php?d=48>>

## References

---

- <sup>20</sup> Shepherd, C. 2009, *The e-learning skills gap*, Fastrak Consulting Ltd, UK.
- <sup>21</sup> Karash, R. 2011, *Learning Organisations: Where the Learning Begins*, viewed 3 January 2012 <[http://www.see.ed.ac.uk/~gerard/MENG/MEAB/lo\\_index.html](http://www.see.ed.ac.uk/~gerard/MENG/MEAB/lo_index.html)>
- <sup>22</sup> Bates, T. Dr. 2010, *2011 Outlook for online Learning and Distance Education*, Contact North, Ontario, Canada, viewed 3 January 2012, <[www.contactnorth.ca/trends-directions/2011-outlook-online-learning](http://www.contactnorth.ca/trends-directions/2011-outlook-online-learning)>
- <sup>23</sup> Shepherd, C. 2009, *The e-learning skills gap*, Fastrak Consulting Ltd, UK.
- <sup>24</sup> Lawlor, John E. 2009 *The Importance of Strategic Planning*, Practical Decisions, USA.

### Reference List

- Bates, T. Dr. 2010, *2011 Outlook for online Learning and Distance Education*, Contact North, Ontario, Canada, viewed 3 January 2012, <[www.contactnorth.ca/trends-directions/2011-outlook-online-learning](http://www.contactnorth.ca/trends-directions/2011-outlook-online-learning)>
- Calcei, J. 2009, *E-learning integral for trades training*, Department of Training and Workforce Development, Government of Western Australia, viewed 4 July 2010, <<http://moodle.westone.wa.gov.au/mod/forum/discuss.php?d=48>>
- Churchill, W (Date unknown), *Biography for Winston Churchill*, IMDb.com, Inc. viewed 25 September 2010, <[www.imdb.com/name/nm0161476/bio](http://www.imdb.com/name/nm0161476/bio)>.
- Embi, R. 2007 *Computer Anxiety and Computer Self-Efficacy Among Accounting Educators at Universiti Teknologi Mara (Uitm)*, Malaysia, Virginia Polytechnic Institute and State University, Virginia.
- Flexible Learning Advisory Group 2010, *January – June 2011 Framework Business Plan*, Australian Flexible Learning Framework, Brisbane.
- Innovation and Business Skills Australia (IBSA) 2012, *Environmental Scan – 2012: Securing future workforces: Advancing technologies and addressing competition*, East Melbourne, Australia.
- Karash, R. 2011, *Learning Organisations: Where the Learning Begins*, viewed 3 January 2012 <[http://www.see.ed.ac.uk/~gerard/MENG/MEAB/lo\\_index.html](http://www.see.ed.ac.uk/~gerard/MENG/MEAB/lo_index.html)>
- Kellock, P. 2009, *Plumbing and Carpentry Enrolments: A Report to Skills Victoria*, The Asquith Group, Melbourne.
- Lawlor, John E. 2009 *The Importance of Strategic Planning*, Practical Decisions, USA.
- Lefoe, G., Olney, I. and Herrington, A. 2008, *Enabling teaching, enabling learning: How does staff development fit the educational technology landscape?* Proceedings from the Australasian Society for Computers in Learning in Tertiary Education conference (ascilite 2008), Melbourne.
- National Quality Council/Council of Australian Governments Joint Steering Committee 2009, *VET Products for the 21st Century, Final report*, Canberra, Australia.
- Shepherd, C. 2009, *The e-learning skills gap*, Fastrak Consulting Ltd, UK.
- Simonson, M. Smaldino, s. Albright, M. Zvacek, S. 2006, *Teaching and Learning at a Distance*, 3rd ed. Pearson Education, Inc. New Jersey.
- Skills Victoria 2010, *TAFE Delivery Guidelines*, Department of Education and Early Childhood Development, Melbourne.

## References

---

- Stevenson, D, Story Theatre International 2010, *Emotional Eloquence – The Lost Language of Leadership*, Colorado Springs, CO, viewed 6 January 2012, <<http://storytelling-in-business.com/emotional-eloquence>>.
- Thompson, L. and Lamshed, R. 2006, *E-learning within the building and construction and allied trades*, Australian Flexible Learning Framework, Brisbane.
- Victorian Government 2008, *Securing Jobs for Your Future – Skills for Victoria*, Department of Innovation, Industry and Regional Development, Melbourne.

# Attachments

## Attachment 1: E-Learn 2011 Conference Abstracts

The following are the abstracts for the conference sessions attended by Scannell and have been taken from the AACE E-Learn 2011 Conference Program.

### **Barbara Means - SRI International, USA**

#### *Keynote address*

*Elementary and secondary schools were slower than private industry and higher education to embrace online learning options, but budget crises have done what technology evangelists could not. Estimates of the number of blended learning courses taken annually U.S. students have topped 3 million, and online options are no longer limited to course recovery, summer school, and Advanced Placement. This presentation considered the emerging research base on blended learning as part of mainstream practice in K-12 schools-- its effectiveness, implementation, and implications for equity.*

### **Barbara Grabowski - Penn State University, USA**

#### *Online Learner Competencies: Results of a Worldwide Validation Study*

*Several researchers argue that online learners should develop certain knowledge, experience, abilities and attitudes (or competencies) to gain the greatest benefit from their online studies and achieve high performance. The IBSTPI Directors add to this discussion by specifying critical online learner competencies, following a rigorous research process. Fourteen competencies were clustered into three domains: personal, learning, and interaction, and further specified by 89 performance statements. Over 11 months, worldwide validation data were collected on the criticality of this set of competencies and performance statements. High reliability coefficients speak to the quality of the constructed set. Rank ordering of these competencies and performance statements and different perceptions between online learner and online learning providers and two major world regions offer important insights into which skills are necessary for engaging in a successful online learning experience.*

### **Sew Mee Barton, Leanne Ngo and Andrew O'Loughlin - Deakin University, Melbourne Australia.**

#### *Emerging Technologies for Using iPads for Managing and Marking Large Student Cohorts: Transition from Hardcopies to E-Copies Marking*

*The topic "Emerging Technologies on using iPads for managing and marking large students cohorts: Transition from hardcopies to e-copies marking from the teachers experiences." These studies will examine innovative approaches to teaching and learning as a way of exploring cultural changes in response to new technologies.*

**Yang Yang, Eva Heinrich and Elizabeth Kemp - Massey University, New Zealand**

*Supporting Assessment in E-Learning: Collecting Students' Work and Generating Analysis Data for Assessment and Feedback*

The use of web 2.0 tools empowers teachers and online instructors to emphasize social aspect of learning and promote in-depth discussions even when students are at a distance. Assessing students' collaboration and achievement through the use of e-learning tools tends to be difficult and the amount of work involved in collecting information for grading can be overwhelming. This study provides an approach to addressing the assessment of e-learning, by automating the collection of students' work and by generating input into the assignment module of the Learning Management Systems. It is intended to reduce the time and effort that teachers spend on collecting relevant data for assessing e-learning. It also generates artifacts, composed of student learning contributions, participation and interaction data, that are returned to students and underpin the marking feedback. A research tool implementing this new approach for the assessment of online discussions has been implemented for the Moodle.

**Natasja Saranchuk and Heather Kanuka - University of Alberta, Canada**

*"Moving Online": Faculty Development*

This presentation will provide insight into one traditional university's experience of offering an online course for faculty new to this environment and wanting to create a 'pedagogically sound' online or blended course. An evaluation of this course will determine the motivating and inhibiting factors for using learning management systems' technology in the future. This work is important for the development of support and training sessions for faculty.

**Herb Mahelona and Amy Burvall - TechnoTroubadours and Teacherpreneurs**

*General session*

When Herb Mahelona and Amy Burvall started making music videos parodying familiar pop songs set to history or literature-inspired lyrics, they did not conceive it would develop into a full-blown "project" that would appeal to such a variety of niche groups and reach far beyond the boundaries of their small Hawaii classrooms. To date their collection of 53 videos, produced with relatively no budget and basic tools, have earned over 3 million views on YouTube since being uploaded a year ago and their most popular video – French Revolution to Lady Gaga's "Bad Romance" – has been translated by fans into French, Spanish, German, Dutch, and Cantonese. What is most intriguing is perhaps how this humble teacher-created content has been made useful in not only high school classrooms, but in universities, home-schools, re-enactment clubs, museums, and media/tech conferences around the globe. Mahelona and Burvall consider themselves to be "Digital Bards" or "Technotroubadours" of sorts, and believe in the power of music, storytelling, rhyming verse, and humor in augmenting the learning experience.

Their videos have not only instigated conversation about History in cyberspace, but have inspired others to create their own musical interpretations of academic subjects as well. The "Historyteachers", as they are called on YouTube, are getting used to the idea of being "teacherpreneurs" and actively use social media such as Twitter and Facebook to communicate and collaborate globally with "fans". This session reflected on the use of music and other multi-media elements as "hooks" or remediation for learning, address the impact of teacher and student-created digital content and the importance of connecting/collaborating on an international scale.

**Masahiro Ando - Nagaoka University of Technology**

**Maomi Ueno - The University of Electro-Communications, Japan**

*E-Learning Using Tablet PC*

This paper discusses the effect of using tablet PCs in e-learning. We carried out an analysis based on the "dual channel model," which models the information-processing capabilities of humans. More specifically, we provided learners with paper media, keyboards, pen tablets, and tablet PCs to be used as input devices for annotations during e-learning, measured the gaze point of each learner using an eye-mark recorder, and analyzed the performance of each device by performing memory and comprehension tests, using questionnaires, and evaluating the note-taking activity. As a result, we found that the use of tablet PCs in e-learning (1) reduces the extraneous cognitive load imposed by making annotations, (2) makes it easier to gaze at the content in synchronization with the narration, (3) increases learners' comprehension and memory retention abilities, and (4) enables efficient note taking, thus increasing the accuracy of the notes as learning aids.

**Stephen Burdick - University of Michigan Health System, USA**

*Building your E-Learning Program on any Budget: Four Rules for Sustainable Success*

This paper is a summary of findings based on a 7-year case study in which a comprehensive eLearning program was planned, designed and built for a healthcare workforce of 26,000 at the University of Michigan Health System (UMHS). These findings are anchored in a 5-year evaluation of the program's performance since the implementation in 2005. The evaluation generated lessons from which an array of rules was formed to shape future development. The top four rules highlighted in this paper were vetted by means of a survey sent to educators on UMHS staff and a second survey conducted in cooperation with members of the Illinois State Medical Society. These rules have proven to be essential for building a sustainable eLearning program, regardless of budget or scope.

**Natasja Saranchuk and Heather Kanuka - University of Alberta, Canada***Technology Adoption and Academic Development*

*The growing demands and needs to assist teaching staff in institutions of higher education with the adoption of new and emerging technologies is being propelled from several directions. But innovative teaching initiatives, intended to help university instructors better leverage technology, are not without tensions. To gain a better understanding of these tensions, we interviewed directors of teaching development centres in Canada, United States, Australia, and the UK. The results of this study indicate that there is a tension between what teaching centres are doing and what they would like to be doing with respect to the integration of technology into teaching practices. The following themes emerged from this study: uncertainty about how best to leverage technology, questions regarding a teaching development centre's role in being strategic, and the need for scalability. In this presentation we will provide a broad discussion of the findings and implications for academic development for technology adoption.*

**Charles Miller and Brad Hokanson - University of Minnesota, USA***Designing the Online Learning Experience: A Role-Based Design Perspective*

*Role-based Design is a contemporary framework oriented to inspire creativity and innovation in the instructional design process, specifically by following the value-based roles of an artist, architect, engineer, and craftsperson. In this paper we provide an authentic narrative and critique of real-world design problems addressed through practical integration of the four roles and perspectives of Role-Based Design. First, we examine the design of an e-assessment environment that transforms performance evaluation in post-secondary American Sign Language education. Second, we examine the design process of a hybrid learning environment for geospatial technology integration in K-12 education. We conclude by reframing Role-Based Design as a contemporary perspective for evaluation of the design and development of future online learning environments.*

**Peter Chan, John Wilkinson, Charles Graham and Jennifer Skeen - Brigham Young University, USA***Blended Learning: Transforming Teacher Roles in 21<sup>st</sup> Century Education*

*This paper reports the experience and findings of employing blended learning to teach a pre-service teacher education course on enhancing instruction by integrating technology. Blended learning means that the faculty produced and delivered the core instructional experience using computer technology thus transforming its own role to one of increased types and amount of interaction with students to enhance the personalization and quality of the instruction and learning. Findings indicate that in certain settings students prefer blended learning and blended learning instruction can outperform exclusively online instruction. Case studies of the four primary types of blended learning and a presentation of principles of success will provide a framework for discussion of its effectiveness. The potential for teaching more students more effectively with limited resources makes blended learning an important consideration for the times.*

**Richard A. Schwier - University of Saskatchewan, Canada***Connections and Contexts: The Birth, Growth and Death of Online Learning Communities*

*Much of what we understand about the notion of online learning communities and how they develop, grow, and die away is based on examinations of formal online learning environments— primarily post-secondary courses managed by institutions of higher learning. As effective as formal environments may be, paying exclusive attention to them limits our understanding of the nature of social learning. Informal learning environments, by contrast, can tell us a great deal about how people learn together in natural settings, and can teach us a great deal about what happens when the authority for learning is entrusted to learners. This presentation considers what we have learned about learning communities in formal and informal online environments and speculates about what is at the heart of how learners make use of social interaction for the purpose of learning.*

**Ionna Ghergulescu and Cristina Hava Muntean - National College of Ireland***Learner Motivation Assessment with <E-Adventure> Game Platform*

*In order to engage the new generation of learners, educational games were integrated in e-learning. Among the games' benefits for the learning process one will note their motivational potential. Since learners have different goals, preferences, skills, knowledge, as well as motivation, one-size-fits-all games cannot satisfy and motivate all learners equally. Moreover, during the game play learners' motivation may easily change, thus motivation assessment is required for enabling motivation-based adaptation. This paper proposes a methodology to assess learner motivation in educational games based on motivation assessment metrics used in the e-learning area. The paper shows how these metrics can be mapped and integrated with an educational game using the game development medium (an authoring tool in this case). The proposed solution can be easily applied to other educational games and can further contribute towards adaptive games that aim to keep players motivated and to support them to achieve the learning outcome.*

**Rebecca Meeder and Peter Leong - University of Hawaii – Manoa, USA***How Adult Characteristics Affect learning in 3D Virtual Environments.*

*This paper presents an analysis of adult learner characteristics and how these characteristics affect learning in 3D multi-user virtual environments. Adult students who enrolled in a graduate educational technology course that was taught in the Second Life 3-D multi-user virtual world in Fall 2010 were selected for this particular study. The students were interviewed and surveyed about their personal real life circumstances and their learning experiences within Second Life. Constant comparative method was used to analyze the interview transcripts of participants in this study. Analysis of the interview transcripts revealed four basic themes. These themes include the feeling of immersion matching up with specific learning styles, the need for socialization while learning in the online, the variety of learning within the environment, and real life situations affecting motivation to learn within the environment.*



**Li-Ling Chen - California State University**Enhancing Special Needs Learning with iPad

The learning impact of iPad for students with special needs has been gaining great attention in education since its inception in April 2010. Some sporadic case reports have testified how these students can benefit from the integration of iPad into their learning. However, with the wide range of students' special needs and hundreds of iPad assistive apps available in the market, how can an educator appropriately select the right application to appropriately meet a student's needs? Fortunately, various lists of iPad apps for special education have been documented in the literature. However, several critical questions still waited to be addressed, such as what iPad apps can be used for special education, how can the apps be practically integrated into daily instructional activities, and what are the effects of those application. The purpose of this paper is to provide special educators, professionals, and researchers with findings on the effects of iPad apps use for students with special needs.

**Laura Pasquini - University of North Texas, USA.****Melissa Johnson - University of Florida, USA.****Michelle Rodems - University of Louisville, USA.**Connecting First Year Students to Formal and Informal Learning

The changing landscape of technology, information and communication is challenging higher education to rethink its approach to learning. Online resources are social and collaborative, which impact the academic realm. Emerging technologies are creating a new dynamic for learning beyond the traditional classroom experience. Although online learning has been present in higher education, the shifting technological trends have altered how and when this learning occurs, specifically amongst first year students. With current developments in educational technology, formal and informal learning communities have tremendously enhanced peer-to-peer connections, knowledge sharing, social learning, and critical thinking for first year students (Kennedy, Judd, Churchward, Gray, & Krause, 2008).

**Michael Cawdery and Brent Hirata - Leeward Community College, USA.**Quick, Cheap and Easy Instructional Redesign. Thank You Google

When challenged to offer a quality first-step teacher preparation degree to the students located across 6 different islands, Leeward Community College's Associate of Arts in Teaching (AAT) program came up against a wall. We needed an online instructional platform that would ensure a consistent and dynamic design with special consideration for our desired personal connection with entire program. Did I mention, we did not have any money, and instructors had little technical know-how! Enter Google and the AAT redesign process. Through a process that took approximately 2 years, we were able to include all faculty in a worthwhile 9 course baseline departmental redesign process with minimal capacity. We would like to share with you how we approached the issue of DE in tough economic times in order to ensure a quality and consistent instructional design process predicated on student learning and success.

**Craig Kapp - New York University, USA**Visualizing the Future: How Augmented Reality can empower faculty, inspire students and bring ideas to life in the classroom

Imagine being able to rotate around the solar system, navigate through a data set in 3D, and interact with a simulated ecosystem - all from the palm of your hand. With Augmented Reality, it's possible! Augmented Reality (AR) is a technique through which 3D virtual objects can be overlaid onto the "real world" in real-time, using nothing more than a home computer or a mobile device. In this session we will explore various educational uses of augmented reality including scientific simulations, digital storytelling, assistive technology and data visualization and show how faculty members can use these tools to engage and inspire students.

**Sarah Haavind and Richard Carter – Lesley University, USA**Four steps to fostering collaborative presence in online discussion forums

This paper explains key elements of online teaching practice that enhance the interactive, collaborative nature of online discussion activities in blended or fully online courses. Building on previous research and using a grounded theory approach, these four essential steps are consistently successful at fostering "collaborative presence" in online discourse. To foster collaborative presence: Use a friendly, casual tone to express expectations. Avoid firm, off-putting terms like "must" or capital letters around requirements and deadlines; Give time in the first weeks for building trust and fostering a sense of community connection and safety among participants; Provide specific suggestions of how participants might build on one another's ideas or extend dialogue so that participants feel comfortable doing so; and Include a mid-course cycle of self-assessment based on rubrics or clear expectations for online discussion participation.

**Lesley Farmer – California State University**Teaching Digital Citizenship

As technology advances, so do the techniques for abusing it. While traditional crime has not increased in some countries, cyber crime are becoming increasingly common and steadily growing. One of the duties of educators is to teach the learning community about digital citizenship so everyone can understand, address, and prevent technology abuse. This paper defines digital citizenship, discusses its ramifications on individuals and the learning community at large, and recommends strategies for digital citizenship education.

**Elaine Correa – Medaille College, USA**

*Call it what it is: Cheating! From disconnected spaces to Engaged Learning-Web-Based Instruction in a culture of entitlement*

As students become increasingly more technologically skilled, concerns for maintaining high academic standards on-line continually challenge practitioners of web-based teaching environments. Despite the obvious advancements that digital learning opportunities provide learners, the increase of access to education via technology raises many new ethical concerns. Allegations of plagiarism and cheating in institutions of higher learning have rapidly increased with access and availability to electronically based media, particularly the internet. To address these concerns, a series of collaborative visual media video pieces were designed by faculty and students as alternative pedagogical tools to address academic integrity and honesty on-line.

**Paula Bigatel – Penn State University, USA**

*Prove-It – A Hands on E-Course to Demonstrate Technical Competencies*

Statement of the instructional problem: The Director of Faculty Development offers a course for faculty new to online teaching. It is a pedagogy course that helps faculty adjust their teaching practices to better suit the online learning environment. A prerequisite for this pedagogy course is familiarity and facility in the learning management system (LMS), ANGEL. However, training in ANGEL is very limited and inadequate. This newly developed course is designed to fill this gap in training so that faculty is better prepared for a successful experience in the pedagogy course.

**Tatyana Pashnyak – Florida State University, USA**

*Creating Facebook Communities of Practice: a Content Analysis*

Facebook can be effectively used in academic contexts (Ellison et al., 2007; Nazir et al., 2008; Pempek&Yermolayeva, 2009; Schwartz, 2009; Roblyer et al. 2010). This study is a content analysis of two Facebook classroom groups. Fifty community college students, enrolled into two sections of Electronic Communication Applications course, were asked to post one weekly status update as part of classroom experience. After the first week of required posts, students became increasingly more active while still posting academic-related updates. Students were reminding each other of upcoming deadlines, discussed requirements for various projects, shared ideas, and even supported struggling classmates by posting positive comments. By the end of the semester, both Facebook groups have essentially become virtual communities of practice (Wenger, 1998). The transformation process as well as content of status updates posted throughout the semester is analyzed and discussed in this paper.

**Attachment 2: DevLearn 2011 Conference Abstracts**

The following are the abstracts for the conference sessions attended by Scannell and have been taken from the DevLearn 2011 Conference Program.

**Mark Harter, Learning Technologist - Catalyst360°**

*A Non-graphic Designer's Guide to Good-looking Learning*

Do you struggle with making technical concepts or software training visually appealing? Are your courses filled with bullet points or wordy text? You don't need an advanced certification in graphic design to make good-looking eLearning or presentations. If you don't have strong design skills, this session will teach you how to create good-looking visuals to support learning.

During this session, participants will discover easy-to-learn tools and techniques for creating visually engaging training. You'll learn simple graphic design techniques, how to make graphic design software work for you, and where to go online to get ideas or stock images.

In this session, you will learn:

- Why it is important that your course is good looking
- Simple graphic design techniques anybody can do
- Making graphic design software work for you
- Where to go online when you need ideas or stock images

Audience: Novice and intermediate designers, developers, and others who are new to eLearning, course design, or presentation design.

**Aisha Taylor, Senior Instructional Designer and Anthony Del Barto, Senior Media Specialist - ACS, a Xerox Company**

*Blended Learning: Innovative Solutions for a New Generation of Learners*

Blended learning used to be simple: eLearning plus face-to-face, and voila! you've got blended learning. Today, designing a blended learning offer is about understanding the delivery channel, the best practices for design, and picking the right mix for your audience and business need. It's about creating fit-for-purpose learning solutions that effectively help learners achieve the learning objectives, while creating content reusable in other blends. You'll get the lessons learned from working with a large energy company in its first attempt at distance and blended learning, and you'll learn the newest delivery channels (mobile, gaming, Massive Open Online Courses (MOOCs)) and the delivery channels on the horizon.

Participants in this interactive case-study session will learn the Foundation, Immersion, and Reinforcement model for design of blended learning. You'll leave with fresh ideas on implementing blended learning, a job aid that guides you in how to choose the right blend of delivery methods based on learning objectives, and a set of questions to ask yourself to begin building a strategy for implementing blended learning in your organization.

In this session, you will learn:

- How to define blended learning
- How to determine the possible delivery channels and blend them in a meaningful way to support the learning objectives
- How to recognize challenges to implementing blended learning, and several ways to overcome them
- How to determine whether and how to incorporate new and emerging learning channels.

Audience: Intermediate and advanced designers, developers, managers, executives, and others interested in design best practices and strategies for implementing blended learning.

#### **Ed Spizzirri - Senior Systems Engineer, OutStart**

*Mobile Learning – Build Once, Deploy Across All Devices*

Learn how OutStart Hot Lava Mobile, two-time winner of eLearning! Magazine's "Best Mobile Learning Solution," provides a complete solution – from content development and secure deployment on any device to analysis and tracking. You'll learn how Hot Lava Mobile allows you to easily provide impactful mobile learning, performance support, priority communications, and more.

#### **Shari Brennan, Learning and Development Consultant, V.P. - Wells Fargo**

*Developing & Implementing Organization-wide e-learning Standards & Templates*

A company or organization that has learning and development consultants using many different eLearning layouts, templates, or no templates creates an inconsistent experience for the learner. This can cause issues with content not working properly with the LMS. In addition, without a standard approach, the overall brand or look required by the company or organization is not applied correctly, or at all.

Participants in this case-study session will learn how Wells Fargo formed a group to create eLearning standards that all business lines participated in setting and agreed to use. The standards cover everything from grammar usage to audio to user interface. You'll learn how standards were set and how eLearning templates were created. (All templates and standards incorporated the new Wells Fargo brand.) You'll learn how they implemented the materials and communicated them to learning and development professionals across the company. You'll get best practices for applying a brand to eLearning standards and templates and see a demo of the Style Guide Website created to hold all standards and templates.

In this session, you will learn:

- How to form a company team to develop and implement eLearning standards
- How to create templates that work for a large company or organization
- Best practices for incorporating a brand and working with the brand or marketing team
- How to implement and communicate eLearning standards and templates

- How to provide access to the standards and templates for all learning and development professionals.

Audience: Novice to intermediate participants with a basic understanding of how to develop eLearning solutions.

#### **Steve Rosenbaum – Author of 'Curation Nation'**

*Why the Future of Learning is Context*

In a world of overabundant data, the curator selects and shares the most relevant and useful information for the audiences and communities being served. This engaging presentation is based on the recently released book *Curation Nation* that surveyed more than 60 thought leaders and companies to explore and define the power of curation for brands, media, and consumers. Come to DevLearn to learn from Steven Rosenbaum, the father of user-generated video, how curation is the "New Magic" of the connected world.

#### **Lance Dublin - Dublin Consulting and Co-author of *Implementing e-Learning***

*Building a Learning Strategy to Address Today's Challenges*

Strategy is the foundation from which all your organizational learning investments, plans, processes, goals, and objectives will emerge. An effective strategy should link to the business' objectives and is the basis upon which you will ultimately measure your success. A successful strategy must address the who, what, when, where, and why of employee learning and development – but it must simultaneously address the technology now central to its success. With deep roots in learning technology, DevLearn offers ideas and new perspectives on how to successfully integrate all the diverse learning technologies available today into your learning strategy.

#### **Michelle Lentz, Owner - Write Tech**

#### **Stevie Rocco, Learning Designer - Penn State University**

*Yours, Mine, & Ours: Copyright & Creative Commons in Education & Training*

It is now possible to easily find art, photography, music, video, content, and even software on the Web for free. All you need is a basic understanding of attribution and copyright regulations. In this environment of tight budgets and deadlines, the temptation to use content, images, and media from the Web increases. But what can you use, under what circumstances, and how do you give credit where credit is due?

Participants in this session will get an easy-to-understand overview of intellectual property and copyright, what constitutes fair use, and how creative licensing can help you navigate the copyright morass. You'll cover Open Attribution, Creative Commons (CC) licensing, GNU licensing, and Fair Use, as well as open content. You'll learn how and when you can use different CC licenses in the same material, and details of technical means to automate not only the crediting process for using such materials, but also to add additional resources to eLearning as desired.

In this session, you will learn:

- What items on the Web are re-usable and what items require special permission
- What Creative Commons licensing and GNU licensing is and how to find CC-licensed images and media

- How to use OpenAttribute to easily and appropriately cite CC-licensed images and media
- What open educational resources are and where to find them
- How to add supplemental open educational resources to eLearning using the Folksemantic widget.

*Audience: Intermediate designers, developers, and others with a basic knowledge of Web browsers and browsing, saving files, and navigating the Web.*

#### **Mary McLean-Hely, Director of Instructional Design - The College Board**

##### The Changing Role of the Instructional Designer

*Participants in this session will look at where instructional design started, how it has developed, and the recent expansion of roles of instructional designers. You'll assess your own skills on a rubric and set goals for yourselves. You'll learn what the acceptable artifacts of your competencies are, where employers can find them, and how to stay current and maintain good learning. You'll also learn about basic instructional design skills (formative assessment, gap analysis, research, SME development, writing, chunking, production, and delivery) as well as some not-so-basic skills that certain instructional designers have nurtured: cutting edge technology, rapid eLearning authoring tools, voice overs, videography, product development, and collaboration.*

*In this session, you will learn:*

- A short history of instructional design
- How that relates to being a freelance instructional designer or a Director of Instructional Design
- The different types of instructional designers
- How to stay current in the marketplace
- Assessment of participants' skills on a rubric
- Personal reflections from the group

*Audience: Intermediate designers, developers, and others with some familiarity with instructional design. This session is ideal for instructional designers and those looking to build team of instructional designers – in house or virtually.*

### **Attachment 3: Learning 2011 Conference Abstracts**

The following are the abstracts for the conference sessions attended by Scannell and have been taken from the Learning 2011 Conference Program.

#### **Judy Brown, Dr. Conrad Gottfredson and Jason Haag - Advanced Distributed Learning (ADL) Co-Lab**

##### Mobile Learning: Getting Started

*The use of smartphones and tablets has exploded in the past couple of years. It's only natural that what so many of us use at home, we want to leverage for work. If you would like to start a mobile learning initiative in your organization but have no idea where to start, join us! We'll share pragmatic guidance, the steps you should take and free mobile learning resources to help you on your journey*

- Getting started: where to begin and the questions to ask
- Available resources
- How to get management buy-in.

#### **Stephen Lambert – Television Producer**

##### Undercover Boss

*This year, CBS reality series "Undercover Boss" is the recipient of our Spotlight on Media & Learning award. Elliott Masie was impressed with the lessons that each of the undercover CEOs - from organizations like Waste Management, Subway and Churchill Downs - learned about learning. He has invited the Executive Producer of "Undercover Boss" to fly here from the UK to discuss the CEOs' experiences and what they each discovered about the value and importance of workplace learning. In addition, Stephen will share some of the humorous challenges of disguising and embedding a major CEO into a workplace, asking them to do the hard daily work of a restaurant, hotel or even solid waste disposal organization. This will be a high-energy, interactive discussion with Stephen Lambert.*

#### **Chris Lyons - McDonalds Hamburger University**

##### McDonald's Development Experience

*At McDonald's, we're evolving. Our commitment to people and passion for talent development has been strong for 56 years, but we've recently taken a leap that goes beyond the newly re-imaged restaurants in your local community. The development experiences we now offer look modern and feel personal. We leverage technology and innovative classrooms to make a more significant impact on business performance! Learn what we are doing, what we've learned and reflect on where your organization's opportunities are for "big change" and "even bigger impact".*

- Evolving learners' experience and driving performance
- Closing our training professionals' skill gaps
- Modernizing classrooms and leveraging technology.

**Bob Mosher and Conrad Gottfredson - Masie Centre Faculty****Judy Brown - ADL Co-Lab**Mobile Support: The REAL Mobile Learning

Although there has been a lot of buzz around mobile learning, many of the best learning implementations on mobile devices are actually mobile support. Since mobile devices permeate most every aspect of our lives, what better way to extend support for moments of need than through a platform that resides in the context of solving problems and getting the job done? We'll show working examples of mobile support and speak to design principles to get you started today!

- The difference between mobile learning and mobile support
- Design considerations to explore and ideal places to start
- Working around platform issues.

**Clay Pennington - Reach Local**10 Ways to Train 4 Generations (with Lots of Gizmos) in 1 Workplace

Challenge: Learning professionals today face a multitude of issues when creating and implementing knowledge transfer and skills-based training: multi-technological, cross-generational learning environments are a challenge! What is a good approach for sales, customer service and product training when dealing with multiple generations who use many technologies? Join a small group of colleagues in exploring practical approaches to this challenge. Our objective in the hour: 10 actionable ways to train multiple generations who use multiple technologies! Results will be shared with the Learning 2011 Community.

**Ben Coyte, Lisa Pedrogo, Marcia Breese & Rosemary Fitzpatrick - Turner Broadcasting**How to Produce & Edit Learning Stories

Learn the basics of how to tell impactful stories through produced content: interviews, video, still images, graphics and editing. We will provide you with a planning checklist for how to visualize and prepare produced content, as well as examples of different methods that showcase their varied impacts. We will also share best practice suggestions for successful execution.

- Building modules for your content that match your client needs
- Distribution and availability of content considerations
- Tips and tricks for getting more with less when using assorted tools.

**Jill Gardner & Theresa Bruece - The Walt Disney Company**Enabling Content & Encouraging Collaboration: Anytime, Anywhere & on Any Device

In many organizations, increasing work demands and priorities continue to result in reduced time for employee development. With the explosion of inexpensive mobile phones and devices like the iPad, mobile growth offers tremendous opportunity for content delivery beyond formal learning. Learn how Disney is employing strategy, technology and publicity to extend learning and collaboration beyond the classroom to wherever learners are using their varied mobile devices.

- Defining strategy to ensure content connects and aligns to the business
- Accessing content anytime, anywhere and from any device
- Ensuring employees are aware of resources available to them while encouraging knowledge sharing and collaboration.

**Karen Gerome, Francesca Maffei-Lazev & Stacy Cook - Liberty Mutual Group**Humor & Compliance: Not an Oxymoron!

When it comes to compliance training, learning professionals are faced with two separate yet equally important challenges: providing training on a required topic and making that training engaging. We'll share the true story of how 3 learning professionals successfully met those challenges using humor and collaboration.

- Using characters and humor to personalize the relationship between the learner and the training story
- Our overall approach to address a change management component for 40,000 employees (on a budget of about \$1,000)
- Collaboration among 3 learning specialists with different skill sets, working together for the first time.

**Cary Harlow, Hewlett Packard**Storytelling Workshop: A Learning Example

Looking for a roadmap to create a great corporate story? Together, we will build an actual story during this hour. I'll explain the basics of turning what we create into something actionable in a corporate learning environment. Come get your hands dirty as we go from great idea to rough outline to finished story in short order. You'll take away a real guide to story development.

- Template for moving from business to story language through easy steps
- Mixing data and truth in a story concept
- Learning opportunities for corporate storytelling.

**Elliott Masie - The Learning CONSORTIUM**Games, Gamification, Mobile & Social Learning: Opportunity & Hype

There is a high volume of "chatter" in the learning field. If we were to believe it all, our entire workforce is learning on their mobile phones in a structured, social learning model and earning points from a gamification mechanism. That scenario is far from reality! Yet, there are real "affordances" in the DESIGN of learning resources that leverage game theory, are device-ready and take advantage of collaborative and social knowledge. Elliott Masie will provide a perspective of games, gamification, mobile and social learning as we head into 2012. He will provide some key examples, push the role of design and rant a bit about the hype factor that actually blocks innovation in our field.

- Gaming, competition, simulation, gamification and recommendation: all different creatures
- Blending learning: using the best of each approach for each design
- Lower the hype and increase the experimentation.