Making a difference — showing the difference

Book of abstracts and papers

17–18 October 2011
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Update on a unique student identifier for the VET sector — a foundation element for e-portfolios</td>
<td>1</td>
</tr>
<tr>
<td>Alison Anlezark</td>
<td></td>
</tr>
<tr>
<td>Beyond the e-portfolio: Personalised and collaborative learning</td>
<td>2</td>
</tr>
<tr>
<td>Lilian Austin and Lyn Doolan</td>
<td></td>
</tr>
<tr>
<td>ePortfolios in textile design: Critical thinking, reflection and assessment of personal creative practice</td>
<td>4</td>
</tr>
<tr>
<td>Meaghan Botterill and Claire Beale</td>
<td></td>
</tr>
<tr>
<td>Learning to be literate: Introducing ePortfolios in first year teacher education</td>
<td>6</td>
</tr>
<tr>
<td>Meaghan Botterill and Wendy Warren</td>
<td></td>
</tr>
<tr>
<td>ePIE feats and failures: Opportunities and challenges for ePortfolio implementation for career and professional development in remote education workforces</td>
<td>8</td>
</tr>
<tr>
<td>Alicia Boyle</td>
<td></td>
</tr>
<tr>
<td>Mapping the use of ePortfolios in recognising skills and attaining professional standing</td>
<td>18</td>
</tr>
<tr>
<td>Roslyn Cameron</td>
<td></td>
</tr>
<tr>
<td>Enhancing employability of final year health promotion students using iPortfolio</td>
<td>31</td>
</tr>
<tr>
<td>Jude Comfort</td>
<td></td>
</tr>
<tr>
<td>Employing students to promote eportfolio use: A win–win scenario</td>
<td>32</td>
</tr>
<tr>
<td>Jude Comfort and Hannah Jago</td>
<td></td>
</tr>
<tr>
<td>Evidencing reflective practice with e-portfolios</td>
<td>34</td>
</tr>
<tr>
<td>Joanne Connaughton and Susan Edgar</td>
<td></td>
</tr>
<tr>
<td>Reflective ePortfolios for teachers: A case study</td>
<td>36</td>
</tr>
<tr>
<td>Judie Cross</td>
<td></td>
</tr>
<tr>
<td>Implementing mentoring circles in an MBA program with Mahara</td>
<td>37</td>
</tr>
<tr>
<td>Stuart Dinmore</td>
<td></td>
</tr>
<tr>
<td>ePortfolios in Moodle</td>
<td>39</td>
</tr>
<tr>
<td>Mark Dreschler and Kim Edgar</td>
<td></td>
</tr>
<tr>
<td>GPS Learning Pathways: 3600 students using eportfolios in five weeks</td>
<td>40</td>
</tr>
<tr>
<td>Pauline Farrell and Julianne Seaman</td>
<td></td>
</tr>
<tr>
<td>Beyond the ‘Mahara and regional RPL’ E-portfolio Implementation Trial 2010</td>
<td>42</td>
</tr>
<tr>
<td>Angela Garbin, Kathryn Thomson and Lillian Primerano</td>
<td></td>
</tr>
<tr>
<td>e-Portfolios: Looking at assessment challenges in 2011 at the Centre for Adult Education (CAE)</td>
<td>44</td>
</tr>
<tr>
<td>Ann Hardingham</td>
<td></td>
</tr>
<tr>
<td>Title</td>
<td>Page</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>TAFESA South’s Pebble Pad PD Pathways Project: The ripple effect</td>
<td>46</td>
</tr>
<tr>
<td>Deborah Jeanes</td>
<td></td>
</tr>
<tr>
<td>Reflective practices with iPortfolio in an Australian accounting course</td>
<td>47</td>
</tr>
<tr>
<td>James Jing, Mellida Frost, Rosie Kerr, Brian von Konsky and Vincent Chang</td>
<td></td>
</tr>
<tr>
<td>Scaffolding VCAL learners with ePortfolios</td>
<td>49</td>
</tr>
<tr>
<td>Ken Johnson and Rosa McKenna</td>
<td></td>
</tr>
<tr>
<td>e-Portfolios to support continuing professional development for the ICT industry: Preliminary investigations</td>
<td>50</td>
</tr>
<tr>
<td>Ashley Jones and Margaret Granger</td>
<td></td>
</tr>
<tr>
<td>ePortfolios to assess and develop professional competency in speech pathology</td>
<td>51</td>
</tr>
<tr>
<td>Abigail Lewis</td>
<td></td>
</tr>
<tr>
<td>Using eportfolio to address professional standards in a teacher education programme: The student voice</td>
<td>52</td>
</tr>
<tr>
<td>Lyn Lewis and Philippa Gerbic</td>
<td></td>
</tr>
<tr>
<td>North West Queensland Indigenous Resources Industry Initiative — Employment Passport Project: Employment passports for Indigenous jobseekers using VUMI ePortfolio</td>
<td>54</td>
</tr>
<tr>
<td>Michael Limerick</td>
<td></td>
</tr>
<tr>
<td>The ePortfolio approach: Supporting authentic assessment for student learning</td>
<td>56</td>
</tr>
<tr>
<td>Lynn McAllister and Kim Hauville</td>
<td></td>
</tr>
<tr>
<td>Planned flexibility — the model: Making the journey from ePortfolio project to ePortfolio learning program</td>
<td>66</td>
</tr>
<tr>
<td>Lynn McAllister and Kim Hauville</td>
<td></td>
</tr>
<tr>
<td>EpCoP initiatives 2011: Making a difference through collaboration</td>
<td>68</td>
</tr>
<tr>
<td>Carole McCulloch</td>
<td></td>
</tr>
<tr>
<td>Carpentry apprenticeship assessment incorporating eportfolios</td>
<td>70</td>
</tr>
<tr>
<td>Michael McIlraith</td>
<td></td>
</tr>
<tr>
<td>Use of an ePortfolio tool to support specialisation in physiotherapy</td>
<td>71</td>
</tr>
<tr>
<td>Lindsey Maggs and Vicki Smith</td>
<td></td>
</tr>
<tr>
<td>Developing tools to facilitate integrated reflection</td>
<td>73</td>
</tr>
<tr>
<td>Jon Mason</td>
<td></td>
</tr>
<tr>
<td>Developing consensus — an e-portfolio reference model for e-learning</td>
<td>84</td>
</tr>
<tr>
<td>Jon Mason, Sung Wook Shin and Yong Kim</td>
<td></td>
</tr>
<tr>
<td>Scaffolding pre-service teachers representing their learning journeys with eportfolios</td>
<td>86</td>
</tr>
<tr>
<td>Jennifer Masters</td>
<td></td>
</tr>
<tr>
<td>Supporting the storage requirements of learner e-portfolio content</td>
<td>87</td>
</tr>
<tr>
<td>Allison Miller and Jerry Leeson</td>
<td></td>
</tr>
<tr>
<td>An e-portfolio solution for CPD requirements in nursing</td>
<td>99</td>
</tr>
<tr>
<td>Bec James-Mobbs</td>
<td></td>
</tr>
<tr>
<td>Title</td>
<td>Page</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Providing structure and promoting personalised learning within an 18 day wilderness walk: A blend of ePortfolios and multimodal feedback</td>
<td>100</td>
</tr>
<tr>
<td>Brendon Munge</td>
<td></td>
</tr>
<tr>
<td>Implementing ePortfolios at Challenger Institute of Technology</td>
<td>102</td>
</tr>
<tr>
<td>Annelieske Noteboom and Christine Cooper</td>
<td></td>
</tr>
<tr>
<td>ePortfolios and the challenges of assessment: A case study of programs and processes</td>
<td>104</td>
</tr>
<tr>
<td>Nicola Parker and Simon Housego</td>
<td></td>
</tr>
<tr>
<td>Showing the difference by being the difference: Professional portfolios</td>
<td>106</td>
</tr>
<tr>
<td>Trisha Poole</td>
<td></td>
</tr>
<tr>
<td>Mapping curriculum for ePortfolio integration into assessment</td>
<td>108</td>
</tr>
<tr>
<td>Jennifer Rowley and Peter Dunbar-Hall</td>
<td></td>
</tr>
<tr>
<td>A story of documenting evidence for teacher professional standards</td>
<td>110</td>
</tr>
<tr>
<td>Jennifer Rowley and Ruth Weeks</td>
<td></td>
</tr>
<tr>
<td>Adopting an e-portfolio as an assessment tool: Investigating options, issues and future possibilities</td>
<td>112</td>
</tr>
<tr>
<td>Robyn Smyth, Graeme Horton, Catherine Studdert, Brett Griffin and Ian Symonds</td>
<td></td>
</tr>
<tr>
<td>Nursing assessment for learning</td>
<td>125</td>
</tr>
<tr>
<td>Roger Stack</td>
<td></td>
</tr>
<tr>
<td>Students and staff collaborating to make a difference</td>
<td>126</td>
</tr>
<tr>
<td>Sandra Stewart</td>
<td></td>
</tr>
<tr>
<td>All joined up: Easing the transition from claimant to student with an RPL ‘add-on’</td>
<td>128</td>
</tr>
<tr>
<td>Shane Sutherland, Colin Dalziel and Alison Felce</td>
<td></td>
</tr>
<tr>
<td>The personal learning space: So much more than just an eportfolio</td>
<td>130</td>
</tr>
<tr>
<td>Shane Sutherland, Alison Poot and Colin Dalziel</td>
<td></td>
</tr>
<tr>
<td>Lessons learnt — implementing e-portfolios into VET staff training</td>
<td>132</td>
</tr>
<tr>
<td>Ray Tuckey</td>
<td></td>
</tr>
<tr>
<td>Encountering ePortfolios: Developing a framework for pedagogical change</td>
<td>134</td>
</tr>
<tr>
<td>Colin Warren</td>
<td></td>
</tr>
<tr>
<td>Transition pedagogy and assessment in ePortfolios: Teaching and learning in Pebblepad in first year teacher education</td>
<td>136</td>
</tr>
<tr>
<td>Wendy Warren</td>
<td></td>
</tr>
<tr>
<td>Don’t put the ePortfolio cart before the proverbial academic horse: Developing staff and student capacity for effective ePortfolio use</td>
<td>138</td>
</tr>
<tr>
<td>Paula Williams and Natalie Gamble</td>
<td></td>
</tr>
<tr>
<td>Encouraging the use of ePortfolios in adult and community education</td>
<td>140</td>
</tr>
<tr>
<td>Pauline Wilson</td>
<td></td>
</tr>
</tbody>
</table>
Student attitudes towards the use of ePortfolios: Experiences from the University of the South Pacific

Javed Yusuf and Pita Tuisawau
Welcome

This book represents the assembly of the presentations and papers of the ePortfolios Australia Conference 2011 and offers an insight into the variety and depth of topics covered at this event. This set of papers, case studies and abstracts showcases current ePortfolio practice amongst the vocational education and training, higher education and adult and community education sectors from Australia and overseas.

These papers and abstracts cover a wide range of industries and disciplines that highlight the experiences of many, which we hope will help you to develop your interest and expand your expertise into the varied ways ePortfolios are serving as a catalyst to make and show a difference in adult learning.

The cross-sector focus highlights the changing nature of the tertiary sector environment and educational practice; we hope this will generate ideas that all will be able to share and use with learners.

The themes for this year’s conference were assessment, pathways and participation, evidencing standards and quality assurance, workforce development and graduate employability, and international engagement.

All full papers published in this eBook have been peer reviewed.

Conference Organising Committee

Allison Miller, Australian Flexible Learning Framework
Beverley Oliver, Curtin University
Linda Lilly, Curtin University
Kim Hauville, Queensland University of Technology
Lynn McAllister, Queensland University of Technology
Wendy Harper, Queensland University of Technology
Update on a unique student identifier for the VET sector —
a foundation element for e-portfolios

Alison Anlezark
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Abstract

Alison Anlezark is working with the Data and Performance Measurement Principal Committee to prepare a business case for Ministerial approval on the introduction of a unique student identifier (USI) for the VET sector.

The proposed model for the USI will facilitate linking to VET achievement and attainment data in the National VET Provider Collection. This will make it easier for students to find, collate and authenticate all their training into a single portable record (or transcript), which will be invaluable for e-portfolios.

In this short presentation Alison provides an update on progress to date, covering the proposed approach, likely timelines and critical success factors.

Biography

Alison Anlezark

Alison Anlezark is Manager, Policy Support Unit at the National Centre for Vocational Education and Research (NCVER). In this role she is responsible for the secretariat functions of the Data and Performance Measurement Principal Committee, and has been working with this committee on the unique student identifier (USI) project for the past 18 months. Prior to taking on this role she managed the Longitudinal Surveys of Australian Youth (LSAY) branch at NCVER.

She has a strong academic background in research and is currently studying a Masters in Public Policy at Flinders University (SA).
Beyond the e-portfolio: Personalised and collaborative learning

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Lyn Doolan
La Trobe University

Abstract

Much discussion around e-portfolio systems has focused on the tools they provide students to present themselves for professional employment and registration. This presentation will demonstrate the power of extending and expanding the e-portfolio concept beyond this narrow strait jacket, showing how it can incorporate teaching, learning and assessment strategies which will ‘add a substantial, lively, personally transformative dimension to lifelong learning’ (Kift et al., 2007).

As educational designers in the Faculty of Education at La Trobe University we have worked with academic staff to design a range of innovative learning and assessment experiences based around the students’ Personalised Learning Space, PebblePad. These activities are multi-modal and multilayered and encourage pre-service teachers to make meaning of their own learning and experiences through socially constructivist learning activities (Jonassen, 2000). Students are further guided through a process of active reflection modified from the 5 Rs (Bain, 2002), so that their learning is scaffolded to encourage the articulation and understanding of the nexus between theory and practice. PebblePad offers us the ideal environment to realise these aims.

In our pre-service programs, students have worked on a variety of learning tasks, both individually and in groups, using PebblePad as a powerful study tool to create multimedia artefacts of their learning journey, which goes beyond the mere requirements of the assessment process. The outcome for the students is enhanced opportunities for deep reflection and higher level meta-cognition. The result to the lecturer is far richer and engaging evidence of learning.

Biographies

Lilian Austin

Lilian Austin is an educational designer in the Faculty of Education at Latrobe University. Lilian has a background in teaching, in both ESL and workplace learning. In the past ten years she has been focusing on the effective use of ICTs and e-learning in both the VET and Higher Education sectors. She has initiated and developed a range of online and instructional design initiatives and has been an educational designer on large scale e-learning resource development projects for the VET sector.
Lyn Doolan

Lyn Doolan is an educational designer in the Faculty of Education at Latrobe University.
ePortfolios in textile design: Critical thinking, reflection and assessment of personal creative practice

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Claire Beale
RMIT University

Abstract

Critical thinking, reflection and assessment of personal creative practice using ePortfolios focused on the need for textile designers to develop a philosophical approach to their professional practice and be able to communicate this to others. In our experience in the program, however, many textile design students rely on visual forms of expression and have difficulty in aligning the academic imperative for critical thinking and engagement with their assumptions about the ‘real world’ of design practice.

One of the challenges in creative disciplines is for students to develop the necessary skills to be able to professionally expound on their practice in order to attain recognition and experience, as well as capitalise on opportunities. Within Bachelor of Arts — Textile Design (BP 121), second and third year students were exposed to eLearning tools, including the PebblePad ePortfolio system, to develop their reflective writing, analysis and creativity in textile design practice.

This case study describes how PebblePad was implemented in second and third year curricula, specifically the use of blogs and webfolios, to enhance students’ reflective skills and to develop and communicate their creative practice. This also allowed students to demonstrate key graduate attributes as they apply to the discipline. The use of these tools/activities provided students with opportunities to develop an understanding of the forms of writing required for professional practice, and allowed for a scaffolding effect in which the learning was acquired in a cumulative manner. Given the self-reflective and highly personal nature of this form of writing and creative practice, it was important to provide a supportive, flexible and instructive series of materials where students could develop drafts, refine and polish, and finally complete at least one professional piece of writing for public dissemination.

The key outcomes from this project have been the enhanced engagement with online learning tools as part of a whole-of-curriculum approach, directly relevant to the professional practices within the discipline specific context. Students were able to engage with the process and see it as a meaningful activity linked to their professional development, which was evidenced through increased student engagement and confidence with reflective and creative writing processes via the use of blogs and webfolios.
Pedagogically, it allowed a transition from teacher-centred instruction to student-centred learning through creative, imaginative and inventive solutions to curriculum development. Ultimately, this saw a continued improvement in Course Evaluation Survey (CES) results and student feedback.

**Keywords**: PebblePad, textile design, RMIT, graduate attributes, professional practice

**Biographies**

**Meaghan Botterill**

Meaghan Botterill is the Senior Coordinator, Educational Technology Integration at RMIT University. In this role, she is responsible for the implementation of enterprise-wide educational technologies with a current focus on the introduction of ePortfolios into academic courses and programs across the university. Meaghan has a background in English as a Second Language and adult literacy and was the Resources Coordinator of RMIT’s Study and Learning Centre. She has extensive experience in online learning resource development. In 2003, she was the joint winner of the RMIT University Teaching Award for Student Centred Learning.

**Claire Beale**

Claire Beale is a lecturer in the BA Textile Design program at RMIT University Melbourne, Australia. She lectures in second and third year of the program, in various courses including second year Textile Arts and Culture, third year Textile Business and Careers and Textile Studio. Claire has over 14 years combined experience in the fashion and textile industries, from retail operations to bespoke design services. She has a postgraduate qualification in Tertiary Teaching and Learning from RMIT, an Honours degree in Fine Art from the University of Melbourne, and is currently undertaking a PhD project exploring craftsmanship and the construction of meaning in the context of narratives, collaborative communities and practical relationships with textile surfaces.
Learning to be literate: Introducing ePortfolios in first year teacher education

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Wendy Warren
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Abstract

*Learning to be Literate* (Literacy 1) is a core first year course offered in the Bachelor of Education at RMIT. It introduces students to the concepts, constructs and practices of teaching and learning about literacy within an Australian context. The course is designed to assist students learn about their own literacy practices, as they in turn gain knowledge, strategies and skills to develop reading, writing and oral language in lower primary students in the early years of schooling. One of the challenges in developing the next generation of teachers is exposing them to new technologies that enhance innovative teaching practice and provide opportunities for authentic assessment tasks that students can use as models for their professional practice placement.

Central to this course has been the importance of providing a supportive environment whereby first year students start to develop their identities as tertiary learners and pre-service teachers. This case study explores how PebblePad was used in Literacy 1. Firstly, students received an induction to PebblePad in Week 1, and then completed eight weeks of scaffolded writing and research tasks. These tasks were assessed incrementally and worth 50%. The second assignment was a conventional end-of-semester task, which built on skills and content established in the first task and used tools that included preparation forms, blogs, webfolios, video, audio and visual uploads and feedback forms.

The key outcomes of this project have been the engagement with new ICT literacies, while developing more complex and sophisticated understandings of the concepts of literacies and how they are acquired. Importantly, academic literacies in reading and writing have been established, resource selection and development has begun, self-motivated learning, professional accountability, responsibility and the ability to make connections between observations and course material. Great opportunities have been experienced for risk taking, creativity and the interpretation of tasks as students have created two detailed literacy portraits: one of themselves and the other of a five-year-old child. Pedagogically, it has also provided opportunities for collaborative learning across individual, communal and institutional levels.
This course has thus established the foundations of a rich ePortfolio that students can use to show evidence of a range of professional competencies for future applications and resumes and can be built upon in later semesters following this initial intense induction to ePortfolios.

**Keywords:** teacher education, transition pedagogy, assessment, PebblePad, RMIT

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**Biographies**

**Meaghan Botterill**
Meaghan Botterill is the Senior Coordinator, Educational Technology Integration at RMIT University. In this role, she is responsible for the implementation of enterprise-wide educational technologies with a current focus on the introduction of ePortfolios into academic courses and programs across the university. Meaghan has a background in English as a Second Language and adult literacy and was the Resources Coordinator of RMIT's Study and Learning Centre. She has extensive experience in online learning resource development. In 2003, she was the joint winner of the RMIT University Teaching Award for Student Centred Learning.

**Wendy Warren**
Wendy Warren is a teacher educator in literacy and humanities at RMIT. Many years of exploring the use of ICT in learning and teaching has led to the current venture of using ePortfolios with teacher education students. Being involved in the change process of teaching and learning with new technologies continues to be most illuminating, challenging and inspiring.
ePIE feats and failures: Opportunities and challenges for ePortfolio implementation for career and professional development in remote education workforces

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Abstract

‘Delivering a Smart Territory through Quality Education and Training’ is the tag line of the Northern Territory Department of Education and Training Strategic Plan 2011–2014. Specific outcomes of the ‘Quality People and Partnerships Strategy’ include the need to develop career pathways for Indigenous staff and increase the number of Indigenous staff with education qualifications. Throughout 2010 a team of researchers from Charles Darwin University with their technical partner, The Work Lab, developed and trialled ePIE (Electronic Portfolios for Indigenous Educators), a professional learning and career development framework for remote Indigenous Assistant Teachers. This solution was needed to meet the key recurring themes for Indigenous staff professional development identified in a 2009 survey: these were:

- any delivery needs to consider the specific training needs of a small, geographically dispersed audience cost effectively; and
- there is a need to develop a workplace-based training model with enhanced flexibility through the use of technology.

The ePIE project team was responsible for the design, development and delivery of training in the use of the electronic portfolio for workplace-based professional learning. And, although ePIE’s design was driven by the needs of Assistant Teachers, evidence presented also had to be suitable for formal assessment by Registered Training Organisations (RTOs) and show progress towards the Northern Territory Department of Education and Training (DET) Professional Standards for Assistant Teachers.

This paper describes the outcomes to date from a suite of projects and will demonstrate the potentially significant role that ePortfolios can play in the continuing education of remote education workforces. The discussion considers both the opportunities and challenges for remote learners/employees, VET providers and public agencies considering the adoption of ePortfolios for career and professional development.

Keywords: ePIE, Northern Territory, workforce, Indigenous, remote

Introduction

Indigenous teacher education programs have been offered by the Batchelor Institute of Indigenous Tertiary Education (BIITE) (or its predecessors) for over 35 years. Aboriginal Assistant Teachers (remote NT nomenclature) (Northern Territory Department of Education, 1999) are employed by the Northern Territory
Department of Education and Training, local School Councils, Catholic Education Office or NT Independent Schools. Assistant Teachers (ATs) employed by NT DET numbered 299 in 2010 (Northern Territory Government, 2010), covering an area from the Tiwi Islands in the north to Finke in the south, and Lake Nash in the East to Kintore in the west. Approximately 150 ATs (Grace, 2010) are currently enrolled in one or more of the new qualifications, or in the final stages of completing their Certificate III in Education Work across the Northern Territory. Issues for Registered Training Organisations (RTOs) and NT DET in meeting the professional development needs of ATs include insufficient funding, geographical spread of schools, small numbers of ATs in discrete locations, individual student circumstances, poor English literacy and numeracy skills, poor access to information and communications technology, the need to work around school timetables, school management and teaching staff turnover rates. These have, in turn, had an impact on students’ capacity to complete their studies and/or engage in pathways to higher levels of study (Northern Territory Department of Education, 1999).

In 2010, NT DET commissioned a research team from Charles Darwin University (CDU) to explore the potential of ePortfolios to meet these needs as they have the capacity to:

- safely store and present evidence online (in a range of digital/multimedia formats) of all knowledge and skills, regardless of where, when and how it is acquired;
- aggregate and present evidence for formal assessment purposes, including the Recognition of Prior Learning (RPL);
- aggregate and present evidence for demonstrating performance against Professional Standards and for employment applications;
- improve communication between peers, assessors and other audiences; and
- support professional development planning and lifelong career development (Joint Information Systems Committee (JISC), 2008).

Literature review

Indigenous Assistant Teachers are frequently the longest serving members of the school staff; they are usually recruited locally, providing a link to the community, making them essential not only for continuity but also for inducting new staff and mediating the cultural distance between the non-Indigenous teachers and the local students (Northern Territory Department of Education, 1999). Much anecdotal evidence exists to suggest that ATs have a vital role to play in Indigenous education (Harper & Hallenstein, 2009; Winkler, 2006). At one level, ATs can help to address the so-called ‘crisis’ in educational continuity in the NT, due to factors that include high rates of teacher turnover, low attendance rates, high student mobility, low levels of English literacy and disruptive socio-cultural issues arising in communities. But, as a central aspect of ATs work, the task of ‘cultural mediation’ rests on a number of assumptions about the value of Western discourse/education in Indigenous settings, while also requiring that ATs themselves have significant grounding in such discourse and related pedagogy (Cooper, 2008).

However, the ATs own professional development has faced an ‘identity problem’, not helped by the fact that their jobs are often open to local and regional interpretation.
by any number of competing interests including students, parents, community leaders and elders, principals, teachers and government departments. Quite often in the classroom ATs are relegated as translators only, or as responsible for behaviour management and menial clerical duties (Cooper, 2008; Warren, Cooper, & Barturo, 2004). Clear and meaningful roles for ATs will allow them to contribute more effectively, and better guide their needs, desires and access to professional development.

In relation to the formal training that is available for ATs, a key finding in research undertaken by Harper and Hallenstein (2009) was that teachers are often willing to support ATs in their training, but current flexible learning models fail to give them an adequate structure for doing so and do not recognise competing demands on the time of both parties. They also report that there is often little communication between classroom teachers and the vocational education and training (VET) trainers. This in turn means that the ATs are unsure how to implement what they are learning with the support of the teacher, and the teachers for their part have little idea of the sorts of tasks they can be handing over to the assistants (Harper & Hallenstein, 2009).

The use of portfolios has a rich history in teacher education (Strudler & Wetzel, 2005). ePortfolios offer potential for ATs to document a broader range of skills, knowledge and attributes than simply meeting learning outcomes and in so doing, can assist them to demonstrate continual improvement and their contribution to a learning organisation. The ability of an ePortfolio to support verification through reflection on professional practice allows people who may not have evidence or appropriate professional references to demonstrate competence. Multi-media technologies afford ePortfolios a range of benefits beyond those of traditional paper-based portfolios. Efficient and effective maintenance, storage and accessibility, ability to present and reflect on artefacts using a range of media and multiplicity of organisation are just a few of their characteristics (Boyle, 2009). Butler, in her review of the literature identified further benefits of ePortfolios over traditional portfolios, including ICT skill development, feedback and communication facilitation, fostering a sense of pride in one’s own work, providing rich pictures of student learning and competencies, engaging students more in the assessment process and reduced costs of reproduction and the inclusion of privacy features (Butler, 2006). ePortfolios can provide a better understanding of the learning that is required, of the work environment in which the learning is taking place, and ultimately improve the learning experience for ATs, their classroom teachers and VET trainers. Little is known, however, about their application in the context of Aboriginal learners (Boyle, 2009), or their implementation in organisations.

The project

Implementation

NT DET commissioned a team from Charles Darwin University (CDU) and The Work Lab (www.theworklab.com.au) to develop and trial an ePortfolio that would meet the diverse needs of ATs, Registered Training Organisations (RTOs) and NT DET.
For the ATs, the ePortfolio had to:

- provide a lifelong tool to document their knowledge and skills;
- recognise their knowledge and skills against formal qualifications in the Australian Qualifications Framework (AQF) and the draft Professional Standards for ATs;
- provide a safe electronic filing cabinet or repository for personal reflection, planning and goal setting, communication and/or collaborative learning;
- be able to be repurposed for presentation for employment, promotion or accreditation in addition to any assessment purposes; and
- be accessible, regardless of their level of digital literacy.

Trainees and assessors employed by RTOs operating in the NT required the ePortfolio to:

- be organised and easy to navigate;
- clearly demonstrate competency and be capable of meeting the audit requirements of the Australian Quality Training Framework (AQTF) (http://www.nqc.tvetaustralia.com.au/aqtf).

For NT DET, it needed to:

- show and record progress towards any endorsed Professional Standards for ATs;
- be suitable for either or both career development and Recognition of Prior Learning (RPL) purposes;
- have the capability to expand to suit the broader NT DET Indigenous education workforce, including school-based auxiliary staff, early childhood and Indigenous teachers upgrading through training for full teacher registration;
- be interoperable with existing and projected NT DET information and communications technology (ICT) architecture that included a Moodle learning management system and a media server;
- be constructed to support migration to NT DET's preferred hosting partner after development; and
- be sustainable, allowing updating by NT DET in the future with sufficient access to a range of training/help guides and the capacity to support an independent help desk.

In order to meet the complex and differing structures and expectations of these stakeholders, Mahara, an open source ePortfolio (http://www.mahara.org) was chosen by the project team for its ability to be customised, its interoperability with a broad range of applications, and, its data export capabilities.

**Design**

ePIE incorporates webpage components to create a more welcoming interface and to encourage ATs to feel a sense of ownership over the ePortfolio and content. The ePIE home page (Figure 1) is organised into four areas:
• *My place*, a scaffolded entry point for those who are not yet ready for uploading files into a repository for assessment (or other purposes).

• *My learning stories*, which lists all the skills and knowledge required to complete a qualification and is a place to download information about assessment, including templates and examples, and upload assessment items.

• *My resources*, which contains the ePIE user guides and other useful web-based resources.

• *My communication*, which supports networking between ATs and their mentors.

![ePIE home page](image)

**Figure 1**: ePIE home page

In ePIE, the existence of an electronic PLP helps to ensure that ATs are much more in control of their learning and professional development futures, and, their progress can be more visible and supported by other staff in the school environment. The PLP is accessed from ‘My place’ together with the ATs ‘Profile Page’, self-assessment checklists against the domains in the Australian Core Skills Framework (Australian Government, 2008) including digital literacy proficiency, and access to their ‘My photos’ view in their ePortfolio.

The approach taken with view and content development was that units were clustered in views according to logical work-based tasks/suggested co-delivery and assessment. Templates were provided for each assessment task and additional resources/information to support the tasks included in the view. The work-based tasks developed for the qualifications were then mapped into these work areas, and to each unit of competency. Templates were attached to each task/activity to assist with completing assessments if an AT did not have any alternative form of evidence already available. And, for a number of activities, samples of evidence using a range of digital formats were sourced to provide additional ideas for presenting evidence for assessment.

If an AT uploads a file into their ePortfolio they wish to use as evidence for assessment, they can upload it to the ‘My files for assessment’ area.
Once selected, the file enters the ‘RPL Online’ repository and can be opened and assessed online (or printed), and feedback provided, by their RTO assessor into their ePortfolio. ‘RPL Online’ can also provide any number of reports required by the RTO for AQTF compliance when required.

**Review**

Monthly documented meetings and weekly email exchanges between the development team and the NT DET project management staff enabled evidence to be gathered about the opportunities and challenges identified centrally for implementation. Unstructured interviews with six NT DET regional staff in the Central Australia and Barkly regions of the NT over six months provided information about regional considerations for implementation and, were a valuable source of information shared with them from principals, teachers and ATs. Two visits to each of 12 schools in these regions were undertaken and provided opportunities for principals and/or senior teachers to share their views. Four RTO trainers/assessors provided valuable and ongoing insights and 40 ATs shared their opinions about the opportunities and challenges for implementing ePIE during the training sessions held.

**Findings and discussion**

*What opportunities does the ePIE solution offer?*

**For remote learners/employees** an ePortfolio solution offers them safe storage and easy retrieval of a vast range and types of artefacts that they can use for work, assessment and accreditation purposes. With the relative scarcity of safe storage spaces in their homes, this was much welcomed by the ATs. Although only a handful of ATs have access to computers and the internet in their own homes, access is available in the school. The ability for ePIE to accept a range of digital media, and its ability to hyperlink to other sources of information on the web, including retrieving content from external Web 2.0 host sites, has provided the impetus for ATs to improve their level of digital literacy. They found being able to create MS PowerPoint presentations and digital stories with text and narration in their first language and English for both assessment purposes and classroom use particularly empowering. Working and learning as a group allowed them to critique each other's work and reflect on their own. With a range of new skills and an increased confidence in their job roles as a result of the interest and investment in their professional development, many teachers commented on their ATs improved ability to work in teaching teams.

ATs using ePIE had more regular communication with their VET trainers/assessors and regional NT DET support staff. There was more timely access to course information and feedback on assessment. Given the previous inconsistency of visits by VET trainers/assessors these features were greatly appreciated by both ATs and their school-based support staff. Many made their views accessible to other ATs both in their community and elsewhere, and although they have yet to take advantage of the opportunity to use this ePIE feature, they have identified the potential for collaborating on projects and getting feedback on their work from ATs residing outside their community. Importantly, the ePortfolio and associated investment made in staff to support its implementation, assisted to support the completion of a higher number of qualifications and units, and provided efficient transition to higher
level qualifications. The greater flexibility in the type/nature of evidence provided for assessment and the lesser reliance on written English for all assessment purposes was welcomed and embraced by the ATs, contributing to the increase in completions.

**For VET providers** ePIE provided increased access to students, particularly those working in remote communities. There was a greater opportunity for timely communication and feedback to students and an increased efficiency in assessment as evidence could be accessed as soon as it was made available to view. Although still awaiting full implementation, the use of the ‘RPL online’ feature will allow for increased efficiency and standardisation of assessment, and the access to a full range of supports for AQTF compliance. ePIE contributed to increased completions, increased transition to higher level qualifications and new enrolments.

**For NT DET** ePIE improved access to quality professional development for employees, and through its use, their improved capabilities. In addition, ePIE will support the efficient reporting against the Professional Standards, once endorsed, for accreditation and promotion purposes. The potential for ePIE to service other workforces within NT DET was realised with school-context content developed for the TAA40104 Certificate IV in Training and Assessment (for teachers), BSB30407 Certificate III in Business Administration (for office workers/administrators) and CHC30108 Certificate III in Community Services Work (for other school-based para-professionals).

*What challenges does the implementation of ePIE present?*

**For remote learners/employees** the challenges for implementation vary, and are, for the most part, dependent upon the learning culture in their school. Principal support for their ongoing professional development, mentoring and active engagement by their classroom teacher in their learning is critical. The workplace needs to provide opportunities to support the use of the ePortfolio by linking daily practice to professional development and to support the collection of existing evidence that could be used for RPL purposes. An understanding of VET and the needs of Indigenous adults as learners would certainly assist the ATs and support the relationship between the school and the RTO. Dedicated web-enabled computer workspaces/learning spaces that ATs can access whenever they are able are important for ePortfolio implementation. Access to and knowledge of the use of digital cameras, headsets, video cameras and scanning devices is also important for the creation of evidence/ artefacts for ePortfolios and for their job role. Ideally, other staff in the school with knowledge of and proficiency in the use of the ePortfolio and associated technologies need to provide this support, assisted by remote/online support. ATs need regular dedicated time within work hours to undertake their professional development. Many will need support to continue to develop their English literacy and numeracy, and levels of digital literacy, in order to complete higher level qualifications and to perform in job roles associated with the completion of those qualifications. They will need support to develop skills to improve their ability to reflect on their learning journey, in on-line collaboration and through a combination of support (including the PLP), become more self-directed in their learning.

**For VET providers** the most immediate challenges to the successful implementation of ePIE is their knowledge and confidence in the use of ePortfolios
and associated technologies. Also, most have little knowledge of how to confidently assess digital evidence against the necessary requirements for competency. Although originally imagining the design of ePIE from a workplace perspective, its current use is being driven by the trainers/assessors who have had difficulty navigating its content in this style. Although still early in its implementation, it appears that until workplace-based learners are more self-directed and knowledgeable about the language of VET, and, VET trainers/assessors more confident in the use of ePortfolios, view design and content will need to be unit, rather than workplace task/activity based. The implementation of ePIE continues to require VET trainers/assessors to engage regularly with school-based staff to determine how the formal learning and workplace activities can be better coordinated for assessment purposes. Currently, if elected to use, ‘RPL online’ provides weekly alerts to trainers/assessors to advise them when new evidence has been uploaded for assessment, however, opening ePIE will need to become as automatic as opening their email to support regular communication and feedback to students. As this is not an institutionally-based system, RTOs will need to work closely with NT DET to maintain a collaborative ongoing monitoring and development role to ensure ePIE's currency and useability.

For NT DET the challenges for implementation are broad. There is a need for both head office and regional/remote champions to continue to support ePIE’s implementation and future development and to provide the necessary support structures in the field. Regional/remote staff in coaching and support roles need sufficient knowledge to be able to effectively use ePortfolios and have the technology skills to be able to assist in the construction of valid evidence from/in the workplace. In order to be able to do this, they need both experience in working in remote school settings, and, the necessary skills and knowledge to support VET learners. ATs, teachers and schools need to be supported to develop a local learning organisation. This will need the allocation of time and the necessary resources for it to become a reality. For successful implementation, funding needs to be secured and allocated for the necessary ongoing development, support, monitoring and evaluation of the ePortfolio over a minimum three to five year period.

ePIE has been migrated to the NT DET host, and responsibility for its implementation given to the Centre for School Leadership, Learning and Development. This Centre is concurrently developing other Mahara ‘Institutions’ for other professional development frameworks within NT DET such as the Highly Accomplished and Lead Teacher Program (HALT) and the Action Mapped Personal eLearning Program (AMPeL). Arrangements still have to be made with RTOs to ensure alignment with their needs for assessment. However, ePortfolios are not like a software program to be accessed when needed for a specific task, they need to be regularly reviewed and updated by the ‘owner’, and depending on their use, responses given to communication and collaborative activities. Information needs to be shared across departmental silos so that ePIE is recognised, understood and used by those with all those whom the ATs need to interact. Further decisions need to be made about its longer term future. Policies and strategies for its adoption need to be developed if ePIE is to move from a trial/pilot phase and the changes identified in this phase, implemented. Expertise will need to be developed within NT DET to assess digital portfolios of evidence against Professional Standards for both ATs and Indigenous teachers requesting full teacher registration. Managing the size of the server/s required to host all the ePortfolios that could potentially be created will
require ongoing review and consideration will need to be given to if/how the data is going to be exported and provided to individuals when they are no longer NT DET employees.

Conclusions
Remote learners/employees, VET trainers/assessors and NT DET have agreed that ePIE can be part of the solution to their workforce development needs. Trialling the implementation of ePIE has provided foundations for broader adoption, but more time is needed to evaluate its design, features, content and usability from the perspective of all stakeholders. Its success to date suggests that it is time for NT DET to consider the necessary policies and strategies required for adoption, and this will require the associated planning for ongoing development and collaboration with RTOs, training, support, communication and technology infrastructure. If NT DET, as a significant purchaser of VET does implement ePortfolios for supporting the career and professional development of its staff, VET trainers/assessors will likewise need support to increase their knowledge and confidence in their use, particularly as it relates to their construction, communication and collaboration features, and, how to accurately assess digital evidence of competency. Future development of ePIE and its successors will be guided by ongoing research and evaluation with all key stakeholders. Meeting the challenges identified for implementation is possible with a commitment to collaboration and a desire to reach the national and local policy targets.

Acknowledgements

The author wishes to acknowledge the Indigenous Assistant Teachers, regional NT DET staff, the NT DET project managers, RTO trainers and assessors and The Work Lab who have all contributed to developing, testing and growing ePIE. Without their support, such a bold vision would never have been realised.

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Biography

Alicia Boyle

Alicia Boyle, of The Northern Institute and the Social Partnerships in Learning Research Consortium, Charles Darwin University, has worked in VET/TAFE education and training for 27 years. She has been in Darwin with Charles Darwin University since 1999 and was the Education Coordinator for the Desert Knowledge Cooperative Research Centre for seven years. Alicia has been the Chair of the Central Australian Education and Training Network for over seven years and works extensively in applied research with key interests in education and industry development in regional and remote areas. She is currently leading a team developing and implementing an ePortfolio framework for the Indigenous/remote education workforce in the Northern Territory and developing multimedia learning resources to support workforce development in remote communities.
Mapping the use of ePortfolios in recognising skills and attaining professional standing

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Abstract

ePortfolios have many applications across disciplines and educational sectors. The aim of this paper is to examine the application of ePortfolios in spaces related to skills recognition and professional accreditation. This includes the application of ePortfolios for the recognition of prior learning (RPL) and for recording and applying for professional recognition through professional standards and the bodies who administer them. Although this type of activity is relatively new and emergent, there would seem to be a growing use of ePortfolios for applications outside of educational settings although some of this activity may occur within educational institutions through partnerships and the embedding of profession standards within curriculum. The Council of Australian Governments (COAG) RPL Initiative 2006–2009 saw a large number of RPL projects funded across Australia in the VET sector and represented the growing interest of Australian governments in the importance of recognising skills previously attained through informal and non-formal learning environments. This paper is an exploratory study that aims to scan the contemporary literature and practice as a means to gauge the level of this type of activity with particular reference to the use of ePortfolios in skills recognition (RPL) and in attaining professional standards. It is envisaged that the research will be expanded to international developments in the same areas and will use the Prior Learning International Research Centre (PLIRC) based at Thompson Rivers University in BC, Canada, as a major conduit to the research. PLIRC comprises a group of international scholars in the field of RPL. The centre has been developing an international research agenda for RPL since June 2009 and it is hoped this research will form part of that international research agenda.

Keywords: ePortfolios, RPL, professional standards, skills recognition, professional recognition

Introduction — RPL in Australia

Australia introduced recognition of prior learning (RPL) as part of a larger national training reform agenda that included the introduction of a competency-based vocational education and training system, inclusive of a national qualification system and training packages. RPL is a standard and requirement of any offering of accredited training that is embedded in the Australian Qualifications Framework (AQF), initially introduced under the national framework for the recognition of training (NFROT) in 1992. Since then, RPL has slowly become a central activity within post compulsory education and training.
Bateman and Knight’s (2003) review of RPL within the VET sector in Australia between 1995 and 2001 acknowledges the concept of RPL has continued to develop and evolve within each Australian state and territory. They conclude that shifts in terms of definition, application and focus have occurred due to responses to different state and territory policies (Bateman & Knight, 2003, p. 7). Within the VET sector, RPL is defined as an assessment process. ‘While ANTA uses the broad framework of “Recognition” to encompass all forms of assessment, RPL and credit transfer, it still distinguishes between RPL and other forms of assessment for the purposes of implementation’ (Wheelahan et al., 2003, p. 13).

In terms of the higher education sector the Australian Vice-Chancellors’ Committee’s (AVCC) Credit Transfer Project defined RPL as: ‘Recognition granted for any form of knowledge and/or skills acquired through work or life experience as well as through studies in courses credentialed by providers other than Australian universities or TAFE’ (Haydon, 1994, p. 5). In response to the need for a new joint approach to policy on credit transfer and articulation between Vocational Education and Training (VET) and Higher Education (HE), the Pathways to Partnerships project was commissioned by the Australian Vice-Chancellors Committee (AVCC) and the Australian National Training Authority (ANTA).

COAG RPL Initiative 2006–2009

Early in 2006 the Council of Australian Governments (COAG) agreed to fund a series of RPL Initiatives for the VET sector to improve the take-up of RPL. The bilateral funding was conducted from 1 July 2006 to 30 June 2009. Leary (2008, p. 5) summarises the key objectives of the program as follows:

The key objective of the program was to build the Australian vocational education and training (VET) system’s capacity to deliver quality RPL for enterprises and individuals and to drive good practice. It aimed to assist RTOs provide streamlined and simplified recognition practices; to ensure RPL processes minimise time and costs for applicants; to assist individuals and employers to be better informed about RPL; and to assist State and Territory Governments to set up sustainable systems and remove blockages to RPL.

The mid-term assessment report on these initiatives was published in the last nine months of the program and contains a snapshot of the program through a series of case studies and summary tables of the projects (Leary, 2008). Table 1 provides a summary of the types of projects funded under this initiative.
### Table 1: Summary of COAG RPL initiatives 2006–2009

<table>
<thead>
<tr>
<th>State/territory</th>
<th>Project description and target</th>
</tr>
</thead>
</table>
| New South Wales         | RPL Promotion strategy (network of VET practitioners)  
                          | RPL PD Strategy (RPL assessors)  
                          | RON online Network (RPL assessors)  
                          | Virtual RPL Advisory & Referral Centre (RPL candidate)  
                          | Diverse projects to improve & streamline RPL practice (n=45) |
| Queensland              | Capability building (RPL assessors)  
                          | Update of RPL Resource (RPL assessors/RTOs)  
                          | Qld Assessment Resources (RPL assessors)  
                          | Qld gap training Sub-Project (RPL assessors & candidates)  
                          | RPL Pathways Research |
| Victoria                | VIC. Govt. Policy Drivers  
                          | Communication Strategy (RPL assessors)  
                          | Capacity Building (RPL assessors)  
                          | VIC. Capacity of private RTOs to provide high quality  
                          | VIC Evaluation |
| Northern Territory       | RPL multimedia kit for Frontline Management (RPL assessors)  
                          | Improving RPL in skill shortage areas (RPL assessors & candidates)  
                          | CDU resources development (RPL assessors & candidates) |
| Western Australia       | Consolidating skills of the RPL professional (RPL assessors)  
                          | Informing the stakeholders (RPL assessors) |
| South Australia         | Communication Strategy (multi-target)  
                          | Skill recognition sub-project (report on multi-cultural issues & RPL) |
| Tasmania                | Skills gap analysis and training (RPL assessors) |
| Australian Capital Territory | Capacity Building (RPL assessors) |

Source: Adapted from Leary (2008)

A significant number of these funded projects focused upon the building of capacity for RPL assessors. It cannot be ascertained from the report how many of these projects had ePortfolio components to them.

Cameron (2011) conducted a review of Australian RPL literature and research for the time period from 1990 to 2010 and concluded there were several major themes identified in Australian RPL research. These major themes are categorised as follows:

- Implementation: Drivers and benefits of RPL
- Implementation: Barriers to RPL
- Access and social inclusion
- Target groups
- RPL in the workplace
- Use of ICT and Web 2.0 technologies for RPL
- Building RPL practitioner capability.
Use of ePortfolios for RPL

The focus of this paper is the use of electronic portfolios to assist in RPL processes and those recognition processes related to professional recognition (PR).

Electronic portfolios or ePortfolios are essentially electronic versions of paper based portfolios which are ‘created in a computer environment, and incorporating not just text, but graphic, audio and video material as well’ (Butler, 2006, p. 10). The Joint Information Systems Committee (JISC) defines ePortfolios as follows:

*An ePortfolio is the product, created by the learner, a collection of digital artefacts articulating experiences, achievements and learning. Behind any product, or presentation, lie rich and complex processes of planning, synthesising, sharing, discussing, reflecting, giving, receiving and responding to feedback. These processes - referred to here as ‘eportfolio-based learning’ – are the focus of increasing attention, since the process of learning can be as important as the end product*  
(JISC, 2008, p. 6)

Butler (2006) refers to the development of portfolios from paper based to electronic formats and processes and describes how portfolios provide alternate forms of assessment that move away from summative assessments to more ‘authentic’ assessments that can chart a students’ developmental thinking over a period of time. These portfolios do not rely on one piece of evidence and demonstrate students’ wider abilities. JISC (2007) identified a range of purposes that ePortfolios might play across an individuals’ lifelong learning journey: applications for employment or admission to further study; transition to new environments and transition processes; learning, teaching, and summative and formative assessment; and personal development planning (PDP) and continuing professional development (CPD). In 2008 JISC added two more concepts to this list of purposes: the celebration of learning; and entry to courses as part of the transition purpose referred to in 2007.

Several authors have developed typologies of portfolios with Abrami and Barrett (2005) developing three types of portfolios: process portfolio; showcase portfolio; and assessment portfolio. Smith and Tillema (2003) argue for the need to differentiate between types of portfolios and presented four types of portfolio: dossier portfolio; training portfolio; reflective portfolio; and personal development portfolio. These portfolios are differentiated by two major dimensions: (i) the purpose of the portfolio, as either being selection or promotion oriented or learning or developmentally oriented: (ii) the setting of use, as either being mandated by external requirements or self-directed or voluntarily initiated for personal use’ (Smith & Tillema, 2003, p. 627). A complete description of the Smith and Tillema (2003, p. 627) typology is provided in Table 2.
**Table 2: Smith and Tillema’s (2003) portfolio typology**

<table>
<thead>
<tr>
<th><strong>Dossier</strong> portfolio:</th>
<th><strong>Reflective</strong> portfolio:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• record of achievement or a mandated collection of work for selection or promotional purposes required for entry to a profession or programme detailed coverage of attainments.</td>
<td>• purposeful and personally collected array of work providing evidence of growth and accomplishments to be brought forward for promotion and admission.</td>
</tr>
<tr>
<td>• establishment of standards and a precise specification of levels of competence is required.</td>
<td>• compilation of evidence reveals best practices or key competencies chosen to meet certain criteria along with a self-appraisal showing progress over time and understanding of accomplishments across different contexts.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Training</strong> portfolio:</th>
<th><strong>Personal development</strong> portfolio:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• required or mandated exhibit of efforts collected during learning or in a curriculum programme highlights the core professional knowledge, skills or competencies a person has acquired</td>
<td>• personal evaluation and reflective account of professional growth during a long-term process.</td>
</tr>
<tr>
<td>• evidence collected during the time frame of a course as a representative sample of the students’ work.</td>
<td>• collection itself is an opportunity to discuss and give value to the activities of the person who is building an identity.</td>
</tr>
<tr>
<td>• Some reflective comments in the training portfolio might explain the selected evidence.</td>
<td>• importance of the collection lies in the opportunity for sustained conversation with peers or colleagues about experiences and in refining or restructuring one’s growth.</td>
</tr>
<tr>
<td>• Evidence often has a fixed format to help the collector provide appropriate evidence.</td>
<td></td>
</tr>
</tbody>
</table>

**Source:** Adapted from Smith & Tillema (2003, p. 627)

Smith and Tillema (2003, p. 628) state that ‘[al]though all portfolios are sources of evidence, the precise type of portfolio distinguishes between what counts as evidence ... Therefore, not properly distinguishing between portfolio types can lead to mismatches of practices and confusing assessment tasks which can distort the associated and subsequent processes of selection or development.’ The Smith and Tillema (2003) portfolio typology provides a very appropriate framework from which to further explore the research being preliminarily presented here in this paper. It may well be that further research and analysis may expand and add to the typology when a more in depth analysis is undertaken of the use of eportfolios for RPL and PR. Figure 1 provides a visual depiction of the Smith and Tillman portfolio typology.
An interesting aspect of the use of e-portfolios in learning and skills recognition is the importance of learner control and ownership and that the technology must be put in its place.

[*E*]portfolios are about people, rather than technology. The tools have to be unobtrusive, supportive and flexible enough to accommodate the diverse needs and preferences of learners ... A guiding principle behind reflective e-portfolio development – learner control – should apply to the tools learners use as well as to the content

(*JISC, 2008, p. 10*)

Miller (2009) refers to the use of e-portfolios for assessing existing skills for the purpose of gaining recognition or credit towards a formal qualification in the Australian VET sector. The types of technology that can be used for RPL evidence gathering includes: accessible mobile devices (digital and video cameras); mp3 recorders; smart mobile phones and point of view devices (PVDs). She argues that e-portfolios can assist with managing ‘digitally rich assets and artefacts’ (Miller, 2009, p. 5) as evidence for skills recognition. Miller concludes that although e-portfolios can support both the retrospective and prospective approaches to RPL, there are currently limited examples of its use, both in Australia and internationally.

Perry (2009, p. 17) explored the use of e-portfolios to support RPL and found examples/case of this in a number of different contexts which included: recognising the business and administration skills of rural women by TAFE NSW Western Institute; an assessment in fabrication and welding (with a strong focus on photo
and image evidence) at TAFE NSW Illawarra; and an RPL professional development tool being developed by DFEEST in South Australia, which will include information about how e-portfolios are supporting the RPL process.

Perry (2009) went on to present three case studies as examples of registered training organisations (RTOs) are utilising e-portfolios to support RPL processes. The RTOs are: Charles Darwin University and Desart; Lifeline (Hobart) and; Swinburne TAFE. A summary of these case studies are detailed in Table 3. The first case study has also been reported by Boyle (2009a).

Table 3: Cases studies of RPL and ePortfolios

<table>
<thead>
<tr>
<th>Project description &amp; organisations</th>
<th>Qualification &amp; learners</th>
<th>Software</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charles Darwin University &amp; Desart, the Association of Central Australian Aboriginal Art and Craft Centres.</td>
<td>Certificate III in Arts Administration: 60 art workers via an RPL process and appropriate gap training.</td>
<td>Skillsbook with some customisation. Art workers are supported and mentored to upload a range of evidence to their Skillsbook account including digital stories, MP3 files, videos, photos and a range of text documents. For Desart the e-portfolio system needed to be flexible, accessible to people across Central Australia, and provide for easy uploading of evidence.</td>
</tr>
<tr>
<td>Lifeline (Hobart) offers a confidential telephone counselling service, information and referral service.</td>
<td>Certificate IV in Telephone Counselling for its volunteer counselling group.</td>
<td>Lifeline is using Moodle as an e-portfolio to support RPL. The aim of using an e-portfolio system in the RPL process for Lifeline’s volunteer workers was to capture naturally occurring evidence on a dynamic basis. That is, as the counsellors are taking calls, accessing databases and recording information, they are also able to generate and identify work based evidence for RPL purposes.</td>
</tr>
<tr>
<td>Swinburne TAFE is a large RTO with six campuses: School of Engineering and Civil Aviation Safety Authority (CASA).</td>
<td>Certificate IV and Diploma in Aviation Safety Regulation: use e-portfolios to support 75 students in RPL across Australia.</td>
<td>Utilise the platform WebCT/Blackboard for e-portfolios. The model is blended assessment and RPL with learners uploading evidence and identifying when they are ready to be assessed.</td>
</tr>
</tbody>
</table>

Source: Adapted from Perry (2009, pp. 17–23)

All three case studies report the utilisation of ePortfolios for RPL in relation to VET sector qualifications where learners are situated within existing workplace contexts.
Methodology

This is a preliminary exploratory study which aims to scope the extant literature on the use of ePortfolios in RPL and for professional recognition (PR). A content analysis methodology was employed to analyse the chosen sample. The sample includes the abstracts and papers presented at the 2009 VET E-portfolios Showcase and the 2010 ePortfolios Australia conference and the Australian Flexible Learning Framework (AFLF) funded E-Portfolio implementation trials 2009 and 2010. The abstracts for the 2010 ePortfolios Australia Conference are available online as is the Book of Abstracts and Papers from the ePortfolios Australia Conference 2010. The 2009 VET E-portfolio Showcase consisted of six keynote presentations and twelve papers. The 2010 ePortfolio Conference contained five keynotes, forty papers and six posters. Only the conference papers from each conference/showcase where included in the content analysis. The AFLF has funded e-Portfolio Implementation Trials since 2009. The trials from 2009 to 2010 were included in the sample for this research. The secondary data sources are outlined in Table 4. The papers and AFLF funded trails were analysed in terms of whether they utilised ePortfolios for either RPL and/or PR. It must be noted that at times the two can be combined when informal and formal partnerships between education providers and professional bodies are formed.

Table 4: Secondary data sources

<table>
<thead>
<tr>
<th>Data sources</th>
<th>Years</th>
<th>No#</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>VET E-portfolios Showcase 09</td>
<td>2009</td>
<td>12</td>
<td>Showcase papers</td>
</tr>
<tr>
<td>ePortfolios Australia Conference</td>
<td>2010</td>
<td>40</td>
<td>Conference papers</td>
</tr>
<tr>
<td>Australian Flexible Learning</td>
<td>2009</td>
<td>3</td>
<td>Funded E-Portfolio Implementation Trails and associated reports</td>
</tr>
<tr>
<td>Framework</td>
<td>2010</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Findings and discussion

The Australian Flexible Learning Framework funded three e-Portfolio implementation trials in 2009 and 2010 respectively. Upon analysis it was found that all six trials involved the use of ePortfolios for RPL and two of these incorporated an element of PR. This included the 2009 Skills Capture — Fire Protection Association Australia, Victoria Trial and the 2010 E-Portfolios for nursing — Royal District Nursing Service, South Australia Trial. Table 5 provides a summary of the AFLF funded E-Portfolio Implementation Trails for 2009 and 2010.
<table>
<thead>
<tr>
<th>Trial projects 2009</th>
<th>Organisation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supportive recognition</td>
<td>Coonara Community House, Victoria</td>
<td>Introduced an e-portfolio system (Mahara) as a tool for creating an RPL portfolio for learners enrolled in the Diploma of Children’s Services.</td>
</tr>
<tr>
<td><strong>Skills capture</strong></td>
<td>Fire Protection Association Australia, Victoria</td>
<td>A Ning was created and trialled by FPAA as an e-portfolio system. Ten fire service technicians were invited to access the Ning to submit samples of workplace evidence to achieve the unit TAAASS404B, <em>Participate in Assessment Validation</em>, which supports service technicians who apply for an <em>Extinguishing Agent Handling Licence</em>. The Ning was called an ‘Evidence Record’ rather than using the term e-portfolio.</td>
</tr>
<tr>
<td>Skills recognition using e-portfolios</td>
<td>TAFE NSW (Sydney Institute), NSW</td>
<td>The trial tested how well the online e-portfolio system (Mahara) supported the existing skills recognition services and workplace assessment processes being offered to learners undertaking <em>Certificates III &amp; IV in Hairdressing</em>.</td>
</tr>
<tr>
<td><strong>Skills recognition using e-portfolios</strong></td>
<td>TAFE NSW (Sydney Institute), NSW</td>
<td>The trial tested how well the online e-portfolio system (Mahara) supported the existing skills recognition services and workplace assessment processes being offered to learners undertaking <em>Certificates III &amp; IV in Hairdressing</em>.</td>
</tr>
<tr>
<td><strong>E-Portfolios for nursing</strong></td>
<td>Royal District Nursing Service, South Australia</td>
<td>RDNS Education Centre obtained funding through the Framework to conduct a trial, between May and December 2010, in which PebblePad personal learning space portfolios were provided to adult Diploma of Nursing learners to enhance the collection, organisation, communication and presentation of competency evidence across the multiple dimensions of the qualification and the Australian Nursing and Midwifery Council (ANMC) Competency Framework.</td>
</tr>
</tbody>
</table>

**Incorporated both elements of ePortfolios for RPL and ePortfolios for PR**

1. AFLF: [http://www.flexiblelearning.net.au/content/2010EIT](http://www.flexiblelearning.net.au/content/2010EIT)
The second major secondary data source for this study was the conference papers from the 2009 VET E-portfolio Showcase and 2010 ePortfolios Australia conference. The 2009 Showcase had a total of twelve papers. Table 6 summarises the six 2009 conference papers identified as utilising ePortfolios for RPL and/or PR.

**Table 6: Use of ePortfolios for RPL and PR at the 2009 VET E-portfolio Showcase**

<table>
<thead>
<tr>
<th>Presenter</th>
<th>Affiliation</th>
<th>Title</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chan</td>
<td>Christchurch Polytechnic NZ</td>
<td>Using mobile phones to compile e-portfolios on social networking sites: Narratives of workplace skill acquisition and identity formation</td>
<td>Work based learners use of mobile phones and ePortfolios</td>
</tr>
<tr>
<td>Botterill &amp; Mossuto</td>
<td>RMIT University Vic</td>
<td>Using e-portfolio to evidence RPL in Certificate IV Financial Services (Accounting)</td>
<td>Online RPL process Cert IV Financial Services (Accounting) for the Association of Accounting Technicians</td>
</tr>
<tr>
<td>Noteboom &amp; Cooper</td>
<td>Challenger TAFE, WA</td>
<td>The e-portfolio landscape</td>
<td>Indigenous employees of Fortescue Metals group (FMG) in the Pilbara</td>
</tr>
<tr>
<td>Barrett &amp; Norberry</td>
<td>Australian Financial Markets Accreditation Program</td>
<td>Developing and implementing an assessment e-portfolio for a VET qualification: A case study</td>
<td>Development of online RPL process for Cert IV with RMIT in partnership with the Association of Accounting Technicians</td>
</tr>
<tr>
<td>Boyle</td>
<td>Desert Knowledge CRC</td>
<td>E-portfolios for artworkers in central Australia</td>
<td>Aboriginal art workers applying for RPL for a Cert III in Arts Administration</td>
</tr>
<tr>
<td>Ridgway</td>
<td>Sydney Institute TAFE, NSW</td>
<td>Hair E-portfolio</td>
<td>RPL for hairdressing apprentices</td>
</tr>
</tbody>
</table>


Table 7 summarises those conference papers identified as utilising ePortfolios for RPL and/or PR as per the 2010 Conference themes. Of the 40 conference papers analysed, it was found that 10 papers explored the use of ePortfolios for PR and five papers reported the use of ePortfolios for RPL. Due to the limitations of word length imposed on this paper a full list of those conference papers identified in this analysis will not be presented as was the case for papers indentified from the 2009 conference and displayed in Table 6.
Table 7: Use of ePortfolios for RPL and PR at the 2010 ePortfolios Australia Conference

<table>
<thead>
<tr>
<th>Conference theme</th>
<th>RPL &amp; ePortfolios</th>
<th>PR &amp; ePortfolios (professional standards)</th>
<th>TOTAL papers in the theme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key government educational initiatives</td>
<td>2</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Career pathways and lifelong learning</td>
<td>2</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>Work placement and employer partnerships</td>
<td>0</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Responsive learning and assessment practices</td>
<td>1</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>Implementing ePortfolios — successes &amp; sustainability</td>
<td>0</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>Streamed breakouts</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>5</strong></td>
<td><strong>10</strong></td>
<td><strong>40</strong></td>
</tr>
</tbody>
</table>

The types of PR that employed ePortfolios involved professions and professional bodies such as: Fire Protection Association; Society & College of Radiographers, UK; CPD National Health Workforce UK; Australian Computer Society; Professional Midwifery; Engineers Australia; and Registered Nurses. Further analysis across international contexts needs to be undertaken to further explore this activity within professions and professional bodies and to analyse the implications this has for life-wide learning.

**Conclusion**

This paper presents a preliminary exploratory study which aims to scan the contemporary literature and practice on the use of ePortfolios in skills recognition to gauge the level of activity in the use of ePortfolios for RPL and in attaining professional standards or professional recognition (PR). It would seem that small pockets of activity in terms of the utilisation of ePortfolios for RPL in the Australian VET sector exist, primarily through AFLF funded projects. The use of ePortfolios for PR is more prevalent and is active across a wide variety of professions. The Smith and Tillema (2003) portfolio typology provides an appropriate framework from which to further explore the research being preliminarily presented here. It may well be that further research and analysis will investigate the possible expansion of the typology and may include the development of the newly considered concepts of e-RPL and e-PR as distinct processes for recognition.

It is envisaged the research will be expanded to international developments in the practice of utilising ePortfolios for RPL and PR and will use the Prior Learning International Research Centre (PLIRC) based at Thompson Rivers University in BC, Canada, as a major conduit to the research. PLIRC comprises a group of international scholars in the field of RPL. The centre has been developing an international research agenda for RPL since June 2009 and it is hoped this research will form part of that future international research agenda.
References


Cameron, R. (2011). Australia: An overview of 20 years of research into the Recognition of Prior Learning (RPL). In M. Breir, M. Harris, & C. Wihak (Eds.), Researching the recognition of prior learning (pp. 14–43). Leicester, UK: National Institute of Adult Continuing Education (NIACE).


Roslyn Cameron

Ros teaches in human resource management and is an active researcher, having held two CRC for Rail Innovation research grants in R1.112 Attraction and Image and R1.111 Skilled Migration (2009–2010) and currently working on two new grants: P4.111 Skills Recognition and P4.114 Mentoring and Coaching. Ros is a member of the Prior Learning International Research Centre (PLIRC) based at Thompson Rivers University in BC, Canada and her research interests include the use of ePortfolios in the recognition of prior learning (RPL) and professional recognition (PR). She has authored two book chapters on RPL:


Cameron, R. (2011). Australia: An overview of 20 years of research into the Recognition of Prior Learning (RPL). In M. Breir, M. Harris, & C. Wihak (Eds.), Researching the recognition of prior learning (pp. 14–43). Leicester, UK: National Institute of Adult Continuing Education (NIACE).
Enhancing employability of final year health promotion students using iPortfolio

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Abstract

Health promotion undergraduate students at Curtin University complete the unit Professional Practice in Public Health in their final year as a work integrated learning unit. The unit requires the completion of a 100 hour placement as well as core lectures on transitioning to the workforce. An electronic professional portfolio, iPortfolio, a Curtin University developed product, is used by students for assessment tasks in this unit. Its use encourages students to reflect on their learning and achievements over their entire course of study and also to directly report on their placement experience. It also develops a student’s sense of how to present a comprehensive portfolio of evidence, including addressing Curtin University’s graduate attributes, and extracurricular activities in preparation for entering the professional employment market.

This case study will report on the evolution of the use of iPortfolio in the Professional Practice in Public Health unit over three teaching semesters. The rationale for using iPortfolio will be presented along with examples of iPortfolio entries illustrating how students responded to the task. Some of the challenges of integrating the use of iPortfolio into this unit will be discussed. This will include challenges faced by students as well as from a lecturer perspective. This includes issues of moderation and assessment. The presentation will conclude with some of the future directions the use of iPortfolio may take within this unit and more broadly in the Faculty of Health Sciences.

Biography

Jude Comfort

Jude Comfort is the iPortfolio Officer, Office of Assessment Teaching and Learning, and also a lecturer in the School of Public Health, Curtin University. Jude is interested in use of ePortfolios, employability and work integrated learning.
Employing students to promote eportfolio use:
A win–win scenario

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Hannah Jago
Curtin University

Abstract

Curtin University has developed and implemented an awarding-winning electronic portfolio, the iPortfolio, to the whole university community. Trialled in 2009, iPortfolio was implemented more broadly in 2010. It is now integrated into several units and courses across all faculties and as of April 2011, there were 23,000 iPortfolio account holders. It provides an online space designed to enable students and staff to perform a range of self-directed tasks including self-assessment of their learning achievements and professional competencies, sharing and feedback mechanisms and a showcase of achievements.

In order to support the use of iPortfolio across the university a number of strategies have been put in place. One innovative approach has been to employ iP Student Champions who are able to provide on-campus first port of call technical assistance and feedback to users. They also provide valuable feedback to the information technology team responsible for the technical aspects of the system and to the teaching support staff who are using iPortfolio. They staff a lunchtime shop front help desk that operated successfully throughout Semester 1 and will continue.

This paper will discuss the evolution of the use of these students and how the iP Student Champions operate. Advantages of this scheme, sustainability issues, lessons learnt and the experience of the iP Student Champions will be presented including the positive of providing employment within the university setting. These students have developed many new skills in this role.

As an increasing number of students are being expected to undertake iPortfolio work as assessment tasks, including a large first year cohort of 1800 students, there was a need to look at creative ways to assist students and lecturers. Future plans for increasing the task areas that can be undertaken by iP Student Champions will also be presented.
Biographies

**Jude Comfort**

Jude Comfort is the iPortfolio Officer, Office of Assessment Teaching and Learning, and also a lecturer in the School of Public Health, Curtin University. Jude is interested in use of eportfolios, employability and work integrated learning.

**Hannah Jago**

Hannah Jago is a final year fine arts student employed as an iPortfolio Student Champion at Curtin University.
Evidencing reflective practice with e-portfolios

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Susan Edgar  
University of Notre Dame Australia

Abstract

Reflective practice is recognised as a graduate attribute in tertiary level health professional and education courses. Reflective practice has been defined as an ‘intentional and skilled activity in which a person analyses and describes his or her thoughts, actions, feelings, and behaviours and makes judgements about their effectiveness’ (Australian Physiotherapy Council, 2006).

To begin to master the skill of reflective practice, physiotherapy students from the university complete reflective journals whilst on clinical placement. Journals are commenced in first year during pre-clinical hours and then during formal clinical placements in second, third and fourth year. In 2009, students commenced writing their journals in blog format. A framework for reflective practice was developed (Connaughton & Edgar, 2011) to assist students with structuring their thoughts.

Clinical educators were able to review and assess students’ e-portfolios in real time, providing feedback and comments while students were on placement. Physiotherapy students welcomed the immediate feedback and embraced the blog format for reflections. Reflections were more detailed and on assessment presented with more in-depth analysis of situations and strategies for improvement. Students were placing more value on their reflective journals, thus engaging in reflective practice as desired by the Australian Physiotherapy Council.

The framework for assessment of students’ reflections is undergoing ongoing review with current action research including graduates’ perceptions of the worth of undergraduate e-portfolios. Initial findings from this review will be presented.

Biographies

Joanne Connaughton

Joanne Connaughton has been the Clinical Coordinator of the School of Physiotherapy at the University of Notre Dame Australia since mid 2007. Over the last 30 years Jo has worked in various physiotherapy positions in the metropolitan area in major government hospitals, private hospitals, mental health facilities, community settings and private practice. Jo had worked across all age groups. She spent ten years living and working in the remote Pilbara region of Western Australia.
Susan Edgar

Susan Edgar is a physiotherapist (1992 UQ graduate) who has worked in Qld and the UK before settling in Perth in 1998. She has been involved in the clinical supervision of physiotherapy students since 2000 and joined the clinical education team at The University of Notre Dame in 2007. Susan’s special interest areas include preparing students for clinical practice, developing reflective practice skills and training of clinical supervisors. She is currently undertaking a Masters of Health Professional Education (UWA) to further her assessment, teaching and research skills.
Reflective ePortfolios for teachers: A case study

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Abstract

This presentation outlines a case study that details how overseas trained teachers (OTTs) were empowered through an introduction and training in the use of a range of emerging technologies for the purpose of creating Reflective ePortfolios.

Overseas trained teachers (OTTs) in NSW come from culturally and linguistically diverse backgrounds. They are predominantly female migrants/non-English speaking background learners, who have been experienced teachers of Language, Mathematics and Science, as well as other key learning areas, in their first homelands. In NSW, they have usually migrated to a life in suburbs that are geographically widely dispersed and hence, they often find blended learning an especially attractive option.

Both language and genres have been changing consistently as new technologies have emerged over the last few decades, so that it is often the teachers, whether overseas trained or not, who lag behind their students as regards both the use of new technologies and the specific generic features of the text types relevant to new technologies. A genre approach to teaching was thus adopted in order to introduce culturally appropriate text types and relevant technologies (*Mahara* and *Adobe Pro 9 Extended*).

The OTTs were thereby upskilled so that they could create their own accessible, updatable and portable Reflective ePortfolios: they incorporated in these ePortfolios a record of their qualifications, achievements, lesson plans, methodologies and reflections. They have since been able to use this learning experience to enhance their professional personas and self-esteem as they once again embark on a teaching career in a new country.

Keywords: language, empower, reflective ePortfolio, overseas trained teachers

Biography

Judith Cross

Judith (Judie) Leah Cross focused on multimodality and meaning in her PhD thesis, ‘Textual Realizations’. Multimodality continues to motivate Judie’s work in curriculum design, second language literacy, communication, pragmatics and the blended delivery of training for TESOL and overseas trained teachers. Judie has developed a variety of print and online curriculum materials for Communication and non-English speaking background students as well as for teachers.
Implementing mentoring circles in an MBA program with Mahara

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Abstract

For the past year the MBA (Masters of Business Administration) at the University of South Australia has been piloting the Mahara ePortfolio to facilitate mentoring relationships among the students within its program.

Mentoring is a key element of an MBA at UniSA and in recent years mentoring in the program has been conducted using mentoring circles rather than traditional one-on-one mentor–protégé relationships. Mentoring circles typically involve students entering into a professional relationship with other members of their group where they will fulfil both mentor and protégé roles at different times. There is also scope for experienced mentors to come in at different stages to work with the circle. The key aspect of the success of the mentoring circle process is effective ongoing communication within a network and this is where the functionality of the ePortfolio is highly valuable.

Specifically, the mentoring circles use the functionality within Mahara ‘groups’ to facilitate discussion and networking. The ePortfolio provides a ready space within which students can outline their interests and needs, showcase their achievements and be part of a networked communication model where forums, blogs and one-on-one messaging are all part of the mentoring process. An important development in the pilot program has been the introduction of learning leaders, experienced MBA graduates, to help facilitate communication within mentoring circles.

The main advantage of a blended approach to mentoring using ePortfolios, particularly for a cohort which is most often employed elsewhere, is that an eP can offer great flexibility of communication and the easy access to shared information. The non-hierarchical aspect of the program design allows for the relationship between members of the circle to remain fluid and flexible as the mentoring process evolves.

This paper outlines the process of using an ePortfolio for our MBA students at course level, but ultimately it argues that for an ePortfolio to be used most successfully a program wide implementation is desirable.

Keywords: ePortfolio, Mahara, MBA, implementation, mentoring circles
Biography

Stuart Dinmore

Dr Stuart Dinmore is a Lecturer with the Learning and Teaching Unit at the University of South Australia and works in academic development with the University’s learnonline project.

His particular focus is on learning and assessment in a Web 2.0 environment and ePortfolios.

Areas of interest for research include: documentary film/digital documentary, digital literacy, teaching and learning using Web 2.0, experiential learning, Australian media industries, and ePortfolios.
ePortfolios in Moodle

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Kim Edgar
Netspot

Abstract
There are a number of integrations between Moodle and ePortfolio tools. In this presentation you will see how a number of these integrations work with Moodle, how they are being used to improve the learners experience and how the learning management system activities can be used to build their portfolio. In addition, you will hear an overview of how several projects in the Australian Higher Education space are using ePortfolios in conjunction with Moodle.

Keywords: ePortfolios, Moodle

Biographies

Mark Dreschler
Mark Dreschler is the Director of Consulting at NetSpot, but is probably better known for his work in the Moodle and Mahara communities as a blogger, presenter, contributor and agitator. In his work with NetSpot, Mark has provided consulting services to numerous universities and other large organisations moving to Moodle, as well as supporting the use of Mahara in partnership with Moodle.

Kim Edgar
Kim Edgar has recently joined NetSpot in the consulting team. Kim's experience has included working with Australian Flexible Learning Framework projects and managing technology projects for Education Services Australia. She has been involved in adult education for over 20 years and has a passion for flexible learning.
GPS Learning Pathways: 3600 students using eportfolios in five weeks

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Julianne Seaman
Box Hill Institute

Abstract

Box Hill Institute has launched the GPS Learning Pathways project at the start of 2011, integrating Moodle and Mahara eportfolios. Over 4000 students have now completed this program with 2,300 being completed in February alone.

This project introduced a learning pathway approach for each of our new students which enabled them to develop a personal, education and career plan. It was an induction to BHI but also an introduction to BHI online systems including Moodle and Mahara.

The GPS Learning Pathways program allowed students time and the opportunity to reflect on why they had enrolled at BHI, on their chosen course and to identify their career pathway. This approach allowed the students to also identify their strengths and weaknesses in this new environment and to ultimately create a learning plan to optimise their future opportunities.

It also allowed the teachers within BHI to identify at risk students including potential drop-outs, students with learning challenges and those who would benefit from referral to student services. Teachers could also be confident that our new students were aware of the breadth of services available within the Institute.

Each student completed a SWOT analysis, learning styles analysis, SMART goals and resume using Mahara ePortfolios. All assessment tasks were stored within Moodle and Mahara, which was not part of the initial plan.

We will also share the challenges experienced around interoperability between the two systems and limitations identified in what we wanted to achieve.

We will discuss challenges we experienced with student engagement, assessment development and completion and Teaching Centre buy-in.

We will briefly discuss the logistics of rolling out a project of this size and the challenges we had to overcome. This will include all the pre-training and communication required to prepare the Institute for the implementation of a project of this size.
Some of the identifiable benefits of this project for the Teaching Centres have included:

- Learning styles analysis results for all enrolled students
- Students knowledgeable of the Institute systems within the first two weeks of commencing
- A record of the student goals
- A customisable training plan for each student
- Clustering with other units of competence so the program will continue to be used past our training timeframe
- Tracking and impact on student retention.

We will also discuss the future of the project and what we have planned for Stages 2 through to 5.

**Keywords**: ePortfolios, learning pathways, mahoodle challenges, strategic planning

**Biographies**

**Pauline Farrell**

Pauline Farrell has been working in the VET Sector for the past 14 years, and is currently the Executive Manager of Blended eLearning Solutions at Box Hill Institute. She is passionate about customised learning pathways for our students, improved retention rates and the ability to use learning technologies strategically across an organisation to deliver innovative projects that deliver a return on investment. The GPS Learning Pathways is a dream for her as the project has integrated all her passions into one huge project: student centred learning, learning technologies, teacher education, innovation and new systems. Pauline was the GPS Learning Pathways and StudentWeb Project Manager which trained over 3000 students in six weeks introducing them to Moodle 2.0, Mahara and an individualised learning pathway.

**Julianne Seaman**

Julianne Seaman has had extensive experience in designing and delivering professional development programs, learning design, and project coordination across her past four years at Box Hill Institute. With qualifications in education and multimedia design, Julianne has had a major role in our StudentWeb and GPS Learning Pathways projects to ensure that student led learning and assessment approaches underpin the systems and delivery strategies employed. With a focus on concept design and systems integration from the viewpoint of the student and teacher, Julianne continues to assist teaching centres to embed innovative and individualised learning approaches into existing programs.
Beyond the ‘Mahara and regional RPL’ E-portfolio Implementation Trial 2010

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Kathryn Thomson    Lillian Primerano
PolytechnicWest

Abstract

Polytechnic West (PWA), formerly Swan TAFE, is Western Australia’s leading provider of trade training and the only publicly funded training provider of applied Higher Education. PWA consists of five campuses and five specialist centres offering over 300 qualifications, to over 35,000 students.

PWA is providing a Fast Track Program through an RPL pathway for Certificate IV in Laboratory Techniques (PML40104) to current PathWest Laboratory Medicine, WA employees under a Higher Level Traineeship for Existing Workers.

In 2010, the Australian Flexible Learning Framework (AFLF) funded the PWA E-portfolio Implementation Trial (EIT), ‘Mahara and Regional RPL’, which investigated the use of an e-portfolio system (Mahara) to enable PWA trainees in remote regions to provide evidence of competency and skills they have gained through prior on-the-job training.

The PWA Mahara instance is currently being utilised by one of the trainees to facilitate assessment and validation of her on-the-job training beyond the RPL process of the Fast Track Program and EIT trial. The trainee is actively creating views and adding content such as scanned documents, photos and video evidence using point-of-view (POV) glasses. Views of embedded video evidence have been provided using both public and private settings of YouTube. Consequently, a few issues regarding access have been encountered with private YouTube video which further complicates the assessment and validation process for content of a confidential nature.

Upon consultation with the trainee’s laboratory manager it was decided that validation of views would be done through the secret URL function, and once validated the trainee would submit the view for assessment. This works well apart from occasionally access to the view being denied. This process circumvents the laboratory manager becoming a ‘Mahara competent’ user of an e-portfolio system and a ‘Friend’ of the trainee. Moreover, it greatly simplifies the RPL or on-the-job training validation/feedback process for laboratory managers who have a low level of computer literacy and/or are not familiar with the use of an e-portfolio.
The export functionality of the PWA Mahara instance has also been enabled since completion of the trial and testing has demonstrated that the significant investment of time by a trainee in developing skills in the use of an e-portfolio system and creating content for current training and assessment can be exported, transported and utilised into the future.

**Keywords:** Mahara, Recognition of Prior Learning (RPL), EIT 2010

**Biographies**

**Angela Garbin**

Angela Garbin is currently lecturing in Biomedical Science at Polytechnic West, Western Australia and has a keen interest in eLearning. Prior to entering the Vocational Education and Training sector Angela had worked in both the medical diagnostic and research industries.

**Kathryn Thomson**

Kathryn Thomson began her work in the VET sector as a Lecturer in Business and Finance at South East Metropolitan College, then Swan TAFE, now Polytechnic West in 1990, and has since worked in a variety of delivery modes including face to face, industry training, online and staff professional development. Kathryn is now E-learning Project Leader at Polytechnic West. Her role includes the implementation of e-learning, reviewing procedures, managing e-learning projects, chairing various e-learning committees/groups and monitoring progress of e-learning within Polytechnic West.

**Lillian Primerano**

Lillian Primerano began work in the VET sector as a Lecturer in Laboratory Sciences at Swan TAFE, now Polytechnic West, in 2002 and has since worked in a variety of leadership roles. Lillian is now the RPL Coordinator at Polytechnic West. Her role includes reviewing procedures, staff Professional Development, managing RPL projects, consulting with prospective RPL applicants and monitoring progress of RPL applications.
Liberal Arts at the Centre for Adult Education (CAE), plays a vital role as a ‘feeder’ course for potential learners entering higher education at tertiary level, specifically the Arts courses at LaTrobe, Melbourne University, Victoria University, Deakin University, Swinburne and Monash University.

The recording of Certificate IV Liberal Arts assessments has traditionally been a paper-based system. To be efficient and effective in the maintaining of records and transferring of results, the teachers within the Liberal Arts program will contribute to this case study. The class, VBQU321 — Research Approaches to Economy and Society, will create and submit an e-Portfolio mapped to the key indicators and elements, as evidence of competencies within the unit.

e-Portfolios are more than a resume. An e-Portfolio can become a tool to extend and develop the learning needs of individuals. Written tasks that can be assessed within the e-Portfolio can be regarded as ‘experiences’ and recorded for assessment. By using key indicators the learner individualises the achievements within the unit; in doing this each learner gains the independence to select and monitor the sample which demonstrates and supports the knowledge.

Rationale

The rationale for this e-Portfolio case study is to compare the assessments strategies from Semester 1 Liberal Arts 2011 with a holistic collection demonstrating and evaluating achievements mapped to key indicators within the competencies. The outcome will measure the implementation and challenges in creating and achieving the e-portfolio as an assessment tool with the purpose to be used in application to higher education entrance.

Evaluate

Does the e-Portfolio demonstrate and involve the learner with reflection, support the inclusion of material to demonstrate learning and successful achievements of the key indicators, whilst also providing detailed evaluation to satisfy use in applications for higher education entry?
Biography

Ann Hardingham

Ann Hardingham is the Learn@CAE Coordinator, Delivery Innovation at the Centre for Adult Education in Melbourne and has been teaching for more than 20 years. In the classroom, Ann has been able to use computer technology to engage and enhance curriculum content for learners who may have been otherwise disengaged with the school system. The use of e-Portfolios for assessment, wikis, digital technology, MP3 files, internet, student portal and blogs for classroom activities, have made the curriculum more inviting and enjoyable for both Ann and her learners.
TAFESA South’s Pebble Pad PD Pathways Project: The ripple effect

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Abstract

Challenging traditional RPL evidence gathering methods, time consuming individual interviews, and individual ad hoc approaches to Professional Development, the TAFESA South Pebble Pad PD Pathways Project developed strategies to encourage trial participants to map individual work-based learning experiences using Pebble Pad web-folios. The TAE 10 Assessors took on the role of Pebble Pad web-folio champions in showing staff an innovative approach to professional competency for the Certificate IV TAE elements by embedding Pebble Pad web-folio usage in training. The aim was to build workforce capabilities by implementing e-learning to capture Professional Development for individual continuous learning pathways and manage reporting requirements, in addition to embedding Performance Management as a continuous process for maintaining and enhancing AQTF standards across TAFESA South.

Through collaboration and a TAFESA South Pebble Pad Community of Practice, participants have maintained the momentum and have shared the skills and innovative learning strategies to further develop workforce capabilities and make a difference beyond the trial parameters. Innovative RPL and assessment practices have progressed towards being embedded as standard practice to increase communication and efficiency of capturing professional development evidence and increased opportunities for reflective learning and peer review.

By building sustainable practices, TAFESA South has made a difference in providing opportunities for staff to progress beyond meeting industry standards to pursuing credit towards the Graduate Certificate in Education as well as reducing the need for paper-based evidence.

Biography

Deborah Jeanes
Deborah Jeanes is the Teaching and Learning Project leader at TAFESA South’s O’Halloran Hill Campus.
Reflective practices are considered the underlying building blocks for ongoing professional development in many disciplines; particularly in disciplines such as Nursing and Teacher education (Moon, 1999). The adoption of social media as a constructivist platform for building professional attainment in Accounting courses, as well as other disciplines, is on the rise in recent years.

Curtin University recently adopted an iPortfolio (Curtin’s version of ePortfolio technology) as a university-wide elearning strategy to cope with comprehensive course review outcomes and other national drivers in higher education policy. A number of units from various schools have adapted their curriculum development to tie in with the pilot of iPortfolio, since studies of other forms of eportfolio had reported success in raising awareness of reflective practices in students and faculties (von Konsky, Oliver, Nikoletatos, & Wilkinson, 2010).

Accounting in general has always been a discipline that requires discreet interpretation and representation of business data, universities need to consider ‘reflection-on-action’ and ‘reflection-in-action’ practices (Schon, 1987) on a routine basis of their curriculum content delivery, so that its accounting graduates can be recognised by industry as work-ready professionals rather than novice accountants who mechanically deal with data-entry responsibilities in organisations (Tinker, 1985). Curtin Business School, School of Accounting is committed to equipping its graduates with sufficient skills to assist graduates in their employment transition. The iPortfolio platform can provide a media-rich platform to facilitate accounting students in constructing their own meta-cognition on this special profession.

Accounting Technologies 224/524 was a test bed unit for the iPortfolio initiative in accounting, and has been part of the student learning experience since Semester 2, 2009. Students were asked/encouraged to:

- Upload digital evidence to exemplify their ‘My Ratings’;
- Update journal entries on ‘My Journals’ to reflect on their learning journey throughout the semester;
- Produce a video resume onto ‘My Showcases’ to visually enhance their interview presentation;
• Keep their academic and personal artefacts up to date in their ‘Evidence Folder’.

This poster showcases the experiences and perceptions of both teachers and students in their use of Curtin’s iPortfolio website and how it facilitates accounting students’ reflections on their development of Curtin’s graduate attributes in an accounting undergraduate program.

**Keywords:**  *reflective practices, iPortfolio, accounting*

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**Biographies**

**James Jing**
James Jing is a sessional tutor at the School of Accounting, Curtin Business School and a PhD Candidate at Digital Ecosystems and Business Intelligence Institute (DEBII), Curtin Business School.

**Mellida Frost**
Mellida Frost is a sessional tutor at the School of Accounting, Curtin Business School and an accountant at Business Genie.

**Rosie Kerr**
Rosie Kerr is a lecturer and Teaching & Learning Facilitator at Curtin Business School.

**Brian von Konsky**
Brian von Konsky is a Senior Online Education Developer at Curtin Business School.

**Vincent Chang**
Vincent Chang is a lecturer and Unit Controller at Curtin Business School.
Scaffolding VCAL learners with ePortfolios

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Rosa McKenna
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Abstract

This case study will report on an Australian Flexible Learning Framework funded ePortfolio pilot using Pebblepad in the design and delivery of an integrated curriculum model for Certificates II in Carpentry, Animal Studies and Creative Industries, with students dual enrolled in the Victorian Certificate of Applied Learning (VCAL). This model is being developed by Harvester Technical College, a hybrid school managed in partnership by Victorian Department of Education Early Childhood and Victoria University to retain young learners in meaningful education pathways to employment.

The model integrates vocational skills and underpinning language, literacy, numeracy and personal development skills in inquiry based projects to generate applied learning in vocational contexts. The learners are aged from 15 to 18 with low literacy levels but with high motivation to enter a trade.

Pebblepad is being structured by teachers for learners to manage their own learning, document progress and collate evidence of competency and to generate a CV to seek employer interest in an apprenticeship on completion of the Certificate II qualification.

Biography

Ken Johnson
Ken Johnson is Manager, E-learning Projects within the Faculty of Workforce Development at Victoria University. He has been involved in e-learning since 1997 and has worked with Higher Education, Vocational Education and Further Education institutes. Ken has a special interest in the application of digital technologies to self-directed learning and workforce development.

Rosa McKenna
Rosa McKenna is a Curriculum Consultant with Communication in Education and Training Pty Ltd.
e-Portfolios to support continuing professional development for the ICT industry: Preliminary investigations

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Abstract

Underpinned by an Outcomes Based Education (OBE) model that promotes a constructivist approach to reflective learning, since July 2006, ACSEducation has provided students with several online, open source e-learning environments. These programs offer ICT practitioners of all experiential levels, the opportunity to enhance their own particular skill sets as mapped against the Standard Framework for the Information Age (SFIA), an ICT capabilities framework. The aim is to build professional career development plans and artefacts using an e-Portfolio environment. The Professional Year program is designed for overseas students, with an Australian Post-Graduate qualification, to gain further knowledge, skills and workplace experience through an internship placement, and thus be able to readily integrate into the Australian ICT workplace. ACSEducation offerings are intended to offer educational pathways for ICT practitioners seeking professional certification (CP) or continued professional development (CPD) outcomes. Taken as a case study, the ACSEducation’s Professional Year work readiness program, the authors’ determined to investigate the perceptions of program graduates regarding the e-Portfolio tool in assisting students in the career development component of their Professional Environment (PE) online module.

Keywords: e-Portfolios, Continuing Professional Development (CPD), reflective learning

Biographies

Asheley Jones  
Asheley Jones is the Academic Lead, ACSEducation, a division of the Australian Computer Society.

Margaret Granger  
Margaret Granger is Professional Year Tutor at the Australian Computer Society.
Portfolios are often used as a repository of evidence of competency, and since the advent of Web 2.0 technologies there has been a growing interest in the use of ePortfolios. Higher education has embraced the use of ePortfolios for different purposes across a number of sectors, including allied health. Allied health students have to demonstrate skills in a range of competencies set by a peak body in order to graduate as professionals and practice in their field. There is documented research on the use of ePortfolios in a number of allied health professions including medicine, nursing and radiotherapy; however, there is little published literature on the use of ePortfolios in speech pathology. This case study outlines the development of an ePortfolio template for use by speech pathology students at Edith Cowan University as both a formative and summative assessment of their development of competency throughout their four-year course. The ePortfolio documents the development of competency in the eleven units of competency set by Speech Pathology Australia, as well as the development of depth of reflection using a number of different tools. Submission forms and marking guides have been developed for each semester of the course. The ePortfolio has been used by students for over 18 months and some preliminary feedback from the users has been gathered to inform the future development of the ePortfolio.

Keywords: speech pathology, formative assessment, summative assessment, professional competency

Biography

Abigail Lewis

Abigail Lewis is the clinical coordinator and lecturer for the new Speech Pathology course at Edith Cowan University. In this role she has developed an ePortfolio template for students to document their progress in required competencies throughout the four-year course. She is particularly interested in the development of reflective practice and how ePortfolios can be used to develop this skill.
New Zealand teacher education programmes are increasingly using eportfolios as a tool for assessing graduate readiness for practice in relation to a set of professional standards published by the New Zealand Teacher Council in 2007. Eportfolios are an ideal vehicle for evidencing such achievement through their potential to support synthesis of theory and practice in self-appraisal against standards (Strudler & Wetzel, 2005), facilitate reflective practice (Stefani, Mason, & Pegler, 2007; Lin, 2008), and demonstrate professional growth and development over time (Barrett, 2005). Standards-based summative assessment, if reflecting a tick-box approach, runs the risk of measuring surface learning without reflecting adequately the deeper learning often associated with a formative process. Barrett and Wilkerson (2004) highlight the conflicting paradigms and purposes of summative and formative eportfolios for assessment and learning and argue for a balanced eportfolio system that takes account of both.

This presentation will report on a 2010 research project that considered student perspectives of using eportfolios for standards-based assessment related to a set of graduating teacher standards in New Zealand. The sample included Bachelor of Education (primary) students at AUT University, who had used eportfolio in their Professional Inquiry and Practice paper.

Philosophically, the research is located within the Interpretivist paradigm. Drawing on conceptions of naturalistic inquiry (Denzin & Lincoln, 2000) where reality is recognised as complex, operating on students both individually and within a broader social learning context, the researchers sought to collect participant views through focus groups and interviews. Data was analysed through an inductive approach of categorising and seeking themes.

Three findings will be discussed. Firstly, participants appreciated the reassurance represented by the external graduating standards as a summative measure against which they could assess their readiness for professional practice. Secondly they identified the value of reflecting on professional growth over time and related this dimension to their use of the eportfolio as a reflective tool. Thirdly, the participants viewed the eportfolio and its presentation of the professional standards as a potential tool for seeking employment.
We contribute to current debate by arguing against a tick-box approach to standards, which might signal surface learning. We argue for deep learning through a holistic approach of both summative and formative reflection against professional standards. We believe such an approach utilizes the potential of eportfolios to shift pre-service students towards greater professional autonomy in self-assessment against standards.

Biographies

Lyn Lewis
Lyn Lewis is a senior lecturer, working mainly in the Bachelor of Education programme. She has a particular interest in eportfolios, and has been involved in their introduction to students over the past four years. Lyn has experience in incorporating eportfolios into curriculum design and she is currently involved in two eportfolio research projects with Philippa Gerbic, also in the School of Education.

Philippa Gerbic
Philippa Gerbic is the Postgraduate Programme Leader in the School of Education, Auckland University of Technology (AUT) and lectures in undergraduate and postgraduate courses in education. She has extensive leadership and development experience in e-learning and blended learning, curriculum innovation and new programme development, chairs the AUT Ethics Committee and is Co-chair of the School of Education Research Committee, AUT.
North West Queensland Indigenous Resources Industry 
Initiative — Employment Passport Project: Employment 
passports for Indigenous jobseekers using VUMI ePortfolio

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Abstract

This case study demonstrates the use of ePortfolios for Indigenous people to demonstrate that they meet a set of minimum industry requirements to work in the mining industry.

The concept of an employment passport for Indigenous jobseekers was floated by resource company representatives early in the planning for the North West Queensland Indigenous Resources Industry Initiative (NWQIRII) and workshopped at a mining industry HR Managers’ Forum in February 2010. The benefits of the passport were considered as follows:

- A single place to keep all of a jobseeker’s relevant information would lead to less duplication regarding the management of jobseeker information.
- Employers would be able to easily access quality-assured and relevant information to assist them in their recruitment of Indigenous jobseekers.
- Jobseekers would be able to capture information about their training outcomes.
- The passport would assist in promotion of careers in mining and could function as a roadmap for school leavers to pursue the skills and experiences necessary to work in the resources sector.
- The passport would facilitate pathways across industries, such as between mining and construction.
- The passport will enable existing employees of resource companies to capture the information about their skills and experiences gained during employment.

The VUMI ePortfolio tool was identified to pilot the Employment Passport between August and October 2010. Staff members from Mt Isa employment agencies and Myuma Aboriginal Corporation were provided with ePortfolio training. About 30 Employment Passports were distributed to HR Managers from resource companies.

At a workshop following the Employment Passport pilot, company HR Managers endorsed the wider roll out of the concept. Resource companies requested, however, that the initiative develop a searchable database of employment passports so that they could filter candidates by criteria such as location, availability, qualifications, experience, etc. The participating resource companies committed to accessing such a database and considering
Indigenous jobseekers with Employment Passports when filling upcoming employment opportunities. Some Indigenous jobseekers included in this pilot of the Employment Passport have already been recruited into Indigenous traineeships by participating resource companies.

The new ‘VUMI-Connect’ database is currently being populated with profiles for work-ready Indigenous jobseekers. Resource companies will be able to search general jobseeker profiles that link to the jobseekers’ more detailed Employment Passport (the VUMI ePortfolio). By late 2011, the initiative plans to have dozens of Indigenous jobseekers registered on the database and several resource companies regularly using this service.

**Biography**

**Michael Limerick**

Dr Michael Limerick is a barrister and consultant specialising in Indigenous governance and policy. Michael worked for the Queensland Government from 1994 to 2007, holding a range of legal, policy and management positions including Director of the Policy Research Branch in the Department of Aboriginal and Torres Strait Islander Policy. Since 2008, he has worked in private practice, focusing on policy research, program evaluation and community governance and development in Indigenous and regional communities.
The ePortfolio approach: Supporting authentic assessment for student learning

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Abstract

At QUT, ePortfolios have been recognised as an effective strategy for supporting authentic assessment tasks. The QUT Student ePortfolio is used in all discipline areas in support of assessment. The program promotes student-centred and individualistic assessment activities where students are supported to evidence their learning in a holistic manner. Adopting an ePortfolio approach to learning and assessment may foster the alignment of assessment activities and the complex nature of learning, which is currently needed in higher education assessment. It also supports the need for higher education to assess generic or graduate skills in order to produce job-ready graduates. The literature indicates that use of ePortfolios in assessment is on the increase, with both advantages and issues arising for staff and students. The QUT ePortfolio evaluation activities gather feedback from academics and students. This feedback informs the development of the program, together with support resources and strategies, to ensure user needs are being met, and learning and teaching goals are being achieved. Evidence from recent evaluation activities is given to indicate the current engagement with the ePortfolio for assessment at QUT.

Keywords: ePortfolios, authentic assessment, higher education, user feedback

Introduction

The current report provides a brief background to ePortfolio use at Queensland University of Technology (QUT) and briefly outlines significant elements of authentic assessment and the capacity of an ePortfolio approach to manage this type of assessment. The report describes examples of current ePortfolio assessment activities at QUT. The examples have been chosen as indicative of the wider use of ePortfolio to support ‘real world’ assessment tasks at QUT. Several possible issues arising from the use of an ePortfolio approach for assessment are identified from the literature. The management of ePortfolio assessment at QUT is briefly discussed in terms of managing these potential issues. Feedback from both students and academics is included to illustrate the nature of the user experience and to suggest the evidence base that informs continuing development of the QUT ePortfolio Program.
Limitations and definitions

The positive value of enabling students to develop a reflective professional approach, to make connections between their university learning, their broader life experiences, and their professional and career goals and aspirations and the capacity of the ePortfolio to enhance the learning experience for students by supporting academics to develop ‘real world’ assessment underpins the use of ePortfolio for assessment at QUT. The authors have assumed readers have an overarching understanding of ePortfolios in higher education. It is outside the scope of the current study to provide a basic introduction to ePortfolios; to detail the current application of ePortfolios in Australian higher education; to fully explore the notion of authentic assessment or to justify fully the use of ePortfolio in assessment in higher education. The following definitions inform the current study.

In 1990, Wiggins defined assessment as being ‘authentic’ ‘when we directly examine student performance on worthy intellectual tasks’ real life contexts as opposed to what he called ‘proxy tasks’, such as set test situations (Wiggins, 1990, p. 2). In 2011 Wiggins has revisited his earlier definition to emphasise the need for ‘realism of the setting — audience, purpose, constraints, and opportunities’ of the assessment task in order to meaningfully measure the students’ ability to ‘draw creatively and effectively on their repertoire when handling a novel challenge’ (Wiggins, 2011, p. 63). These dimensions of assessment are recognised in the current report as defining an authentic assessment task.

Reflection is a form of thinking applied to complicated, ill-structured ideas and largely based on further processing of knowledge and understanding that we already possess. In higher education there may be a conscious or stated purpose for the reflection (Moon, 2006). Schon (1983) defined reflective practice as the thoughtful consideration of your own life and learning experiences and the application of this knowledge in practice. Since the 1980s, the development of reflective practice skills has been adopted across higher education as one means of helping students develop ‘a legitimate form of professional knowing’ (Schon, 1983, p. 68).

Method

The QUT ePortfolio evaluation process draws information from surveys and semi-structured interviews with student and academic users, as well as system statistics and HelpDesk queries. For the purpose of the current report, evidence presented has been collected from unsolicited comments about the ePortfolio in the Learning Experience Survey (LEX), which students respond to each semester, and also from interview feedback from academics and students (2007–2011).

Background — QUT Student ePortfolio

The Queensland University of Technology Student ePortfolio Program is a way of learning. It is premised on the belief that critical reflection is central to ePortfolio learning and central to enhancing the learning outcomes for all students, regardless of background, as it draws on the individual learning experience. The QUT Student ePortfolio Program encompasses: 1) the ePortfolio tool, 2) policy directions, 3) a flexible mixed mode of engagement, 4) support from the team that consists of technical and learning staff, 5) online and print resources, and 6) workshops and training. The program guides students to reflect meaningfully on
the diverse range of learning experiences, both at university and in the broader environment in order to develop clear insights into their achievements and capabilities. Through critical reflective practice, students are supported to develop the ability to recognise and understand their knowledge and skills development and to plan for future learning experiences as a lifelong and life-wide pursuit.

The online ePortfolio tool provides students with a private and secure space in which to record, catalogue, retrieve and present activities and experiences demonstrating the development of graduate capabilities and professional competencies and standards. It is built within existing staff/student management systems so is a familiar environment for users. The tool provides structure for ePortfolio development through the graduate or generic skill set and discipline specific professional competencies and standards sets. Students have access to discipline specific skills and information based on course enrolment. This ensures that students receive relevant structure for their purpose. Graduates maintain lifetime access to the ePortfolio. This has had a positive impact on the use of ePortfolios for assessment, as academics appreciate that work started while students are studying will form a basis for future professional reflective practice.

The ePortfolio has been available across the institution since 2003. Initial activity was careers focused, as students were guided to use the ePortfolio to make the most of their QUT experience and to be successful in marketing themselves and their skills when entering the workforce. There is a need for higher education to assess generic or graduate skills in order to produce job-ready graduates (Pelliccione & Dixon, 2008). The use of ePortfolio for assessment has grown steadily over this period and is now apparent across all faculties. The ePortfolio program is not an isolated ‘student–professional’ development strategy, however. The ePortfolio program supports and integrates with wider learning initiatives. The work integrated learning (WIL) initiative at QUT supports the development of professionally aware graduates. At graduation, QUT students have had opportunities to ‘develop skills and capacities allowing them to compete effectively on the labour market’ (Queensland University of Technology, 2011). The need for students to be ‘job ready’ at graduation has contributed to recent assessment policy development at QUT. The current assessment policy encourages authentic assessment. It is focused on the holistic evaluation of student development. The aims of assessment at QUT (listed below) have encouraged academics to rethink and redesign traditional assessment tasks with many choosing to adopt an ePortfolio approach. Assessment should ensure that students experience authentic, ‘real world’ situations. It should:

- help students develop sustainable learning patterns for professional and ‘lifetime learning’
- gather ‘authentic evidence’ for summative assessment
- be ‘consistent with QUT’s real-world approach to learning and teaching’
- enable students to meet professional standards and ‘experience a range of assessment types’ (Queensland University of Technology, 2010).

‘Authentic’ aspects of assessment

Authentic assessment is a significant feature of the QUT ‘real world’ approach to learning. While lamenting the vague definition of ‘authenticity’ of assessment, Gulikers, Bastaens and Kirschner (2004) do agree that authenticity may be
achieved through interesting, real life tasks and contexts, and by offering multiple opportunities for demonstration of learning. Increasing the ‘authenticity’ of assessment has a ‘positive influence on student learning and motivation’ (Herrington & Herrington, 1998). Authentic assessment tasks should require students to ‘be effective performers with acquired knowledge’ and to rehearse the complexity of professional life (Wiggins, 1990, p. 2). Authentic assessment opportunities at QUT frequently arise in the real life environments of work integrated learning, scenario and simulation based problem solving and practical placements. The ePortfolio effects assessment of graduate, generic or employability skills and allows students to draw on the wide range of learning experiences. Academics involved in these approaches have recognised the potential of ePortfolio to facilitate their assessment goals.

Portfolio/ePortfolio assessment

The views of Birenbaum and Dochy (1996) and Darling-Hammond and Snyder (2000) are useful for an ePortfolio environment as they strongly support the need for assessment which drives students to develop the ability to ‘integrate and coordinate knowledge, skills, and attitudes, and apply them in new situations’. Students need to develop ‘meta-cognitive competencies such as reflection’. This is considered to be one focus of ePortfolio learning and development. Portfolio assessment, prior to modern technology supported environments, had been recognised as providing authentic learning opportunities. Authentic forms of assessment, such as portfolios, involve students in ‘directing, documenting and evaluating their own learning’ (Ford & Ohlhausen, 1991, as cited in Mokhtari, Yellin, Bull, & Montgomery, 1996, p. 251). With the availability of current online technologies the role has not been diminished. Electronic portfolios seem potentially useful for assessing learning from the range of real world tasks. They provide the means for ‘organized and purposeful collections of completed work done over time’ (Click & Maehrder, 2004, p. 2). A significant aspect of authentic assessment is student choice. Mathies (1994) noted the usefulness of portfolio as authentic assessment in allowing students to choose the topic for reflection. ePortfolio tasks are individual with choice of topic/experience giving students ownership of the assessment and supporting learning in a ‘real world’ way (Lambert, DePaepe, Lambert, & Anderson, 2007, p. 78). They found that ePortfolios offer advantages, such as student centeredness and creativity, over traditional forms of assessment. They highlight the capacity of ePortfolio assessment to allow students to be ‘more actively engaged in the learning process’ (p. 78).

ePortfolio assessment at QUT

Currently, the ePortfolio program is embedded across all faculties and is used to support assessment in a wide range of units. The ePortfolio examples detailed in the following section exemplify the current role of the QUT ePortfolio in supporting a number of authentic assessment tasks and providing students with enhanced learning opportunities through ‘assessment for learning’ (Martinez & Lipson, 1989). The purposeful embedding of the ePortfolio Program within units and courses ensures that students have multiple opportunities to engage with ePortfolio learning at QUT.

The ePortfolio is used to underpin assessment in Education, Nursing, Social Work, Psychology, Business, Engineering, IT and Law. Assessment activities vary according
to particular unit activities and desired outcomes. There are instances of summative and formative assessment, which can be on either a pass/fail or graded basis. The cases described below have been chosen as representative of current ePortfolio assessment activities at QUT. They illustrate both formative and summative assessments and graded and pass/fail assessments. They include discipline specific competency and standards assessment as well as graduate or generic skills assessment. Assessment tasks are both course wide and unit specific.

**Faculty of Law — Virtual work placement**

*LWB422: Virtual Law Placement* is a third year elective unit in the Bachelor of Laws. It is one of a series of five work integrated learning units designed to 'provide the experience of using and developing legal knowledge and skills in a real world placement'. The virtual context enables placement, of students, in a greater variety of situations, e.g. international workplaces and issues, than would otherwise be possible. The ePortfolio underpins assessment of the stated learning outcome ‘Learn from your experiences by documenting, evaluating and reflecting upon your own performance and development during your virtual placement, recognising gaps in your knowledge and skills and developing an action plan for future development’ (LWB422 Unit outline, 2010).

The assessment task comprises both formative and summative assessment. Students are required to critically reflect on their learning in the chosen work placement and to record development of both their generic and discipline specific skills and knowledge. They are required to reflect on the complex nature of the profession and how they apply skills and knowledge in practice. The tasks are designed to help students build professional awareness and identity, to plan their future professional development strategies and to be confident in their career focus. Students submit one reflection formatively and use the feedback to develop their ePortfolio with three reflections and artefacts for summative assessment. It contributes 20% of assessment in the unit and is marked as pass/fail.

**Faculty of Science and Technology — Bachelor of Information Technology**

Academics in Information Technology teaching areas have noted over the past several years that students embarking on the Bachelor of IT often have a narrow and clearly defined preconception of what it means to be an IT professional and about what type of job they are expecting to attain on completion. The academics within the faculty were concerned that these often unrealistic student expectations were contributing factors to the attrition from, and dissatisfaction with, the course. Since 2009, the unit coordinator for *INB103: Industry Insights* has designed and implemented a range of ePortfolio assessment tasks that involve students in developing a broad understanding of what it means to be an IT professional and to learn about the many different career opportunities available in the sector. The reflective tasks directly support learning outcomes in the unit.

The reflective tasks are developed across the first semester of study with one mid-semester submission that is graded and provides feedback to inform the end of semester summative submission, which is also graded. Each submission comprises 25% of the unit assessment.
The ePortfolio supports assessment across the Bachelor of Education course in the practical (class) placement units. The ePortfolio approach is introduced to students in the first year Introduction to Education unit, where students begin to develop critical reflective practice and start to build their ePortfolio by reflecting on issues arising from unit topics and discussion. Students choose topics of interest to explore and develop. They develop reflections on their understanding of the topic and how it affects their developing professional identity and potentially their classroom practice. The reflections are summatively assessed. In subsequent practical placement units, students are assessed as they develop reflections and collect evidence to show how they are developing skills and knowledge and beginning to meet the Queensland College of Teachers Professional Standards.

The assessment tasks are designed to help students develop a deeper or more critical approach to reflection, over time, and to develop skills related to the selection and justification of evidence chosen to demonstrate their capacity to meet the professional standards. The final ePortfolio assessment for the course involves a ‘real world’ interview such as they will undertake when seeking work either with Education Queensland or the independent school sector. The ePortfolio online space provides students with the facility to share ePortfolio collections for peer sharing or feedback.

The focus of these ePortfolio activities is not only to meet the assessment goals as described previously and to lead students to a clear understanding of their chosen professions and the skills, knowledge and attitudes they bring to the profession; it is also part of the aim to foster a positive perspective, in graduates, on the real world application of their learning at QUT.

Managing ePortfolio for assessment at QUT

The literature on ePortfolios in higher education raises many issues that have been identified by those engaged in the process. It is outside the scope of the current report to detail all issues. Those mentioned below have been raised by academics during the decision-making process of considering ePortfolio to support assessment in individual units of study and continue to inform development of ePortfolio tasks.

‘Real world’ assessment tasks should provide purpose for students. In particular in an education course, the assessment tasks should contribute to positive development in professional practice or teacher identity (Klenowski, Askew, & Carnell, 2006). It seems likely that the development of a positive professional identity is a worthwhile pursuit for all discipline areas as it gives students confidence in themselves and their abilities. The purpose of professional identity building is conveyed to students in the assessment specifications.

The ePortfolio and the process of developing ePortfolio, the habit of reflective practice is certainly the biggest takeaway that I will have from this course.

(IT Student, 2011)

By developing the ePortfolio has given me the confidence to speak and to write about what I have learnt.

(IT Student, 2011)
The evidence of tension between summative assessment and the learning and development value of reflective tasks is found in Snadden and Thomas (1998) and Gallagher (2001). More recently, Clark and Eynon (2009, p. 22) note the ‘persistent tension between a learning focus versus an assessment focus’ and the possible loss of intrinsic value of reflective practice that may happen as a result. Conversely, however, Lambert, DePaep, Lambert and Anderson (2007) found no such tension between the capacity of ePortfolio to support assessment and the perceived value of the task. Harris, Dolan and Fairbairn (2001), while realising the possible tension, found their students were more likely to apply themselves seriously to the reflective tasks when they were required for summative assessment. Driessen, Tartwijk, Overeem, Vermunt and Van Der Vleuten (2005, p. 1234) found ePortfolio tasks should be assessed to ‘ensure that it is taken seriously by students’. The QUT ePortfolio assessment examples are formatively and summatively assessed. This acknowledges the authenticity of the task as well as creating a likely environment for student engagement with the task. Student feedback is mixed ... 

*The ePortfolio tasks they are just the best assessment ever ... useful to me not just for the lecturer!*  
*(Education student, 2010)*

*ePortfolio would be better if it was only a minor part of assessment.*  
*(LEX Survey, 2010)*

Smith and Tillema (2003) and Darling (2001), point out the problems students often have with reflective writing. For many this is their first experience of critical reflection. Halstead and Sutherland (2006) surveyed students on their ePortfolio experience and found that students require and are asking for structured support and frameworks to help guide their reflection, as well as exemplars of reflection for different purposes. At QUT, student feedback about reflective writing has informed the development of reflective frameworks, formative assessment opportunities and the development of online modules that take students through activities designed to deepen the critical nature of the reflection. Most recently, the ePortfolio team has developed ePortfolio reflection exemplars to support specific tasks.

*They (the students) just did not know how to write reflections...we will need more support for this ... small group work, I think.*  
*(Unit coordinator, Nursing, 2009)*

*I appreciated having the tutorial about the portfolio to find out about how to use it ... and how to reflect.*  
*(LEX Survey, 2010)*

Students need face-to-face support as well as a range of specific resources to support ePortfolio tasks (Ritzhaupt, Singh, & Seyferth, 2008; Halstead & Sutherland, 2006; Smith & Tillema, 2003). This is evident through much of the literature. It is one of the main concerns of academics who perceive workload barriers to portfolio assessment (Wade & Yarborough, 1996). Since 2003, a range of support resources and strategies has been developed to support students and academics. Development of resources is based on feedback from users. Resources are contextualised to meet specific needs. For example, discipline specific skills and competency sets have been built into the ePortfolio to focus and structure reflections. The aim of the resource strategy is to reduce workload fears and to support users.
The lab sessions for students are so good ... vital to the way I'm using it [ePortfolio]. The level of support is just great. At this stage I wouldn't change a thing. (Unit Coordinator, Nursing, 2009)

Conclusion

The report has provided a snapshot of current ePortfolio use at QUT and identifies some of the major aspects of assessment that have led to the choice of ePortfolio to support unit assessment. Potential issues, which had been identified by academics and which may have impacted on the ePortfolio assessment activity, have been briefly discussed. Client feedback has been presented to provide an indication of the evidence base that informs the continual development of the ePortfolio Program at QUT. Data collected so far indicates mixed, but largely positive, student engagement, with the ePortfolio assessment currently underpinning ‘real world’ tasks associated with professional identity, work placement and professional development. The way forward will see continuing and deeper evaluation of the benefits of assessment using ePortfolio, in the QUT context, with a move to longitudinal tracking of students through courses of study and beyond graduation. This evaluation strategy is currently in the pilot phase, with wider activity planned from 2012.

References


Biographies

Lynn McAllister
Lynn McAllister currently works with eLearning Services at Queensland University of Technology. Lynn supports the QUT ePortfolio Program. Her areas of interest are evidence-based practice and eLearning design, in particular, development and support of reflective practice through the QUT Student ePortfolio approach, which aims to enhance students’ learning outcomes. Lynn has been at QUT since 2003 and has worked on numerous projects as well as in the Library. Her approach to professional practice has been recognised through an individual award in the 2007 QUT Vice-Chancellor’s Excellence Awards for professional staff. She has academic qualifications spanning librarianship, education and agriculture.

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Planned flexibility — the model: Making the journey from ePortfolio project to ePortfolio learning program

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Abstract

The QUT Student ePortfolio project began in 2001 with the development of an online tool designed to enhance learning outcomes for all students by providing them with the means to develop a reflective approach to learning and to make connections between prior learning and experience, their QUT learning opportunities and personal goals.

The online tool was piloted in September 2003 with a small group of library science students. The ePortfolio was released to all QUT students in June 2004. Between 2004 and 2009, the number of students initiating an ePortfolio in a unit of study has increased steadily from 495 in 2004 to over 5000 in 2010, with more than 40,000 ePortfolios active at the start of 2011.

Initial engagement with the ePortfolio in learning and teaching grew from the individual interests of innovative academics. Pockets of interest led to wider and more organised adoption of ePortfolio as a learning and teaching approach at QUT. At all stages of the pilot and release phases, support resources were designed and delivered based on user requirements. As uptake across the disciplines widened and application of the ePortfolio became embedded into the curriculum, the ePortfolio team has been available for consultation, training and resource development on a planned and flexible basis. As identified in the literature, support of both students and staff is crucial to positive, sustained engagement with ePortfolio, and the support must be appropriate to individual needs.

In January 2011, the QUT Student ePortfolio was formally acknowledged as a mainstream learning and teaching program. The move from project to program had been achieved through the targeted conversation with, and support of, engaged individuals and groups across the university over the seven years since release.

The current paper presents the engagement strategy by exploring key stages and significant points in this journey. Exploration of the ‘planned flexibility’ model answers many questions that can be identified in the literature regarding issues of implementation of ePortfolio systems in educational settings.
The importance of continued conversations, the need for collaborative development of support resources and the value of continual sharing of ideas have been identified as key strategies of sustained engagement with, and maturation, of ePortfolio pedagogy at QUT.

**Keywords:** ePortfolio, engagement, implementation, sustainability

**Biographies**

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EpCoP initiatives 2011: Making a difference through collaboration

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Abstract

In 2010 a VET E-portfolios Community of Practice (EpCoP) was launched as a means of encouraging the uptake of e-portfolios as a teaching, learning and recognition tool. In 2011 a group of EpCoP members are collaborating on the design and development of a MOOC (Massive Open Online Course) to foster a community of sharing and collaboration in the use of e-portfolio practice.

This case study will detail the background and development of the EpCop and in particular, will highlight the outcomes of the design, development and delivery process of a collaboratively built professional learning e-portfolio experience (MOOC) designed to support the ongoing use and uptake of e-portfolios within the Australian VET sector.

To date, the function of the EpCoP has been to: help people find and access e-portfolio information and expertise; develop and disseminate case studies and use cases of e-portfolio practice; showcase examples of learners’ e-portfolio work; collaboratively develop and disseminate resources and examples of e-portfolio practice and implementation; as well as influence teaching and learning practices that foster lifelong learning.

These activities have resulted in an active community website for sharing, collaborating and developing e-portfolio practice, together with a collection of e-portfolio resources that demonstrate effective pedagogy, technical/software support/solutions and e-portfolio implementation.

The initiatives of the EpCoP are based on best and emerging practice and include regular discussions about common issues and scenarios. They also include the establishment of:

- a Google site for dissemination of information about the activities of the EpCoP
- a Google group to enable e-portfolio practitioners to join and discuss e-portfolio issues
- a series of monthly webinars on e-portfolios from a variety of perspectives and featuring international guest presenters
- an Eportfolio Month: May 2011 — set of focused webinars to highlight the impact of Eportfolios in a range of settings
- a collaborative design and development of a Massive Open Online Course (MOOC) for Eportfolios for VET practitioners.
These initiatives have been developed with the consensus of the EpCop community through an active online discussion group, as well as through desktop research, and consultations of e-portfolio leaders, implementers and developers of e-portfolio systems, and technical experts. Collaborative activities and dissemination of information has also been enabled through partnerships with CoPs in UK, North America and Europe.

**Biography**

**Carole McCulloch**  
Carole McCulloch is a Learning Technologist working independently for her business, Educational Consultancy Network. Her coaching, mentoring and e-learning strategies and news updates are located at her blog: http://coachcarole.wordpress.com/ and in her network: http://coachcarole.net

In 2010 Carole is the e-mentor for the Teachers Embedding E-learning Solutions (TEES) at Holmesglen Institute of TAFE and for e-champions in the Hume and Gippsland regions of Victoria who will lead the change in blended and embedded e-learning strategies in their organisations.

Carole is the facilitator for the VET Eportfolio Community of Practice: http://epcop.net.au
Carpentry apprenticeship assessment incorporating eportfolios

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Abstract

The traditional methods of training trade apprentices is based on a four year timeframe employed at the workplace complimented with a three year off site qualification requiring participants to attend a college one day per week. The effectiveness of this in terms of flexibility for both the employer and training of the apprentice is now widely debated. To create an effective flexible delivery, the challenge was for us was to design the training using a range of technology and onsite training to create flexible delivery of the qualification. Given that traditionally, apprentices were mentored by their employer or master craftsperson that provided most of the training on site, there was no real link between what they learnt off site within the college and what they learnt on the job. Moreover, apprentices might not have shared their work experiences or college learning with their employer or fellow apprentices. No real evidence of their work was recorded for future career opportunities upon graduation. Incorporation of an eportfolio would allow collaboration, shared ideas, records of achievements, opportunity for the employer to view their progress and work presentations. This case study highlights the incorporation of an eportfolio that forms part of apprentices’ assessment and learning in carpentry.

Keywords: assessment, eportfolio

Biography

Michael McIlwraith

Michael McIlwraith is the CEO of The Building Institute of Training and Development (BITAD) and holds a bachelor degree in training and development, as well as a post graduate certificate in Elearning. Michael is a qualified carpenter and licensed builder.
Abstract

The Australian College of Physiotherapists (ACP) is the body within the Australian Physiotherapy Association (APA) that awards the title of ‘Specialist’ to members who have undertaken the required training program.

The ACP has developed and is currently delivering the first of a two year training program for Titled Physiotherapists to become Specialist Physiotherapists, and Fellows of the Australian College of Physiotherapists. The training period is designed to develop knowledge and clinical skills in a speciality field. The candidates are required to produce a portfolio demonstrating their professional development, case presentations, and practical exemplars which leads them to their final examination. To support the program the ACP decided to use the ePortfolio software, PebblePad, to streamline and simplify the learning and assessment processes, for both the candidates and the facilitators. At the inception of the program, the ACP created cohorts of candidates, supported by facilitators within the same specialisation discipline. These cohorts are spread nationally, and need to communicate regularly within- and between-cohorts. PebblePad is being used to host discussion boards, share clinical practice videos, and allows the development of the candidate’s ‘Portfolio of evidence’ online. Furthermore, the facilitators are able to interact and share valuable insights and resources between themselves.

The APA is also using this process as a pilot study with a view to using PebblePad for its entire member base with regard to Continuous Professional Development (CPD). At present, all members must record their professional development (PD) activities for auditing by the National Registration Board of Physiotherapy. The introduction of PebblePad will encourage all physiotherapists to develop better reflective practices with the benefit of creating an ePortfolio of their PD activities. These ePortfolios could also be used to promote their services with the general public and to demonstrate their compliance with the APA’s CPD requirements.

Additionally, the APA anticipates that PebblePad will allow members to communicate with other physiotherapists within Australia who are using the software, and expand their network internationally, for example, with members of the Chartered Society of Physiotherapy in the UK who are currently using this ePortfolio software.
Biographies

Lindsey Maggs

Lindsey Maggs is an educationalist with a background teaching agriculture in Scotland. She has an interest in the student experience, particularly the impact of assessment and feedback on student satisfaction. Since moving to Australia, she has worked for the Australian Physiotherapy Association as their Manager, Learning Pathways, facilitating the professional development of physiotherapists nationwide.

Vicki Smith

Vicki Smith has had a varied career as an educationalist in the public and private sector and now with her current role in the not for profit sector. As General Manager of Learning and Development at the Australian Physiotherapy Association, this has allowed her to be innovative and to initiate the development of a new framework of learning for physiotherapists called the APA Member Lifelong Learning Pathway. This incorporates many new learning methodologies to meets the needs of busy health professionals, which includes the implementation of an ePortfolio experience at the Specialist level.
Developing tools to facilitate integrated reflection

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Abstract

Much has been said and documented about the key role that reflection can play in the ongoing development of e-portfolios, particularly e-portfolios utilised for teaching and learning. A review of e-portfolio platforms reveals that a designated space for documenting and collating personal reflections is a typical design feature of both open source and commercial off-the-shelf software. Further investigation of tools within e-portfolio systems for facilitating reflection reveals that, apart from enabling personal journalism through blogs or other writing, scaffolding tools that encourage the actual process of reflection are under-developed. Investigation of a number of prominent e-portfolio projects also reveals that reflection, while presented as critically important, is often viewed as an activity that takes place after a learning activity or experience and not intrinsic to it. This paper assumes an alternative, richer conception of reflection: a process integral to a wide range of activities associated with learning, such as inquiry, communication, editing, analysis and evaluation. Such a conception is consistent with the literature associated with ‘communities of practice’, which is replete with insight into ‘learning through doing’, and with a ‘whole minded’ approach to inquiry. Thus, graduates who are ‘reflective practitioners’ who integrate reflection into their learning will have more to offer a prospective employer than graduates who have adopted an episodic approach to reflection.

So, what kinds of tools might facilitate integrated reflection? This paper outlines a number of possibilities for consideration and development. Such tools do not have to be embedded within e-portfolio systems, although there are benefits in doing so. In order to inform future design of e-portfolio systems this paper presents a faceted model of knowledge creation that depicts an ‘ecology of knowing’ in which interaction with, and the production of, learning content is deepened through the construction of well-formed questions of that content. In particular, questions that are initiated by ‘why’ are explored because they are distinguished from the other ‘journalist’ questions (who, what, when, where, and why) in that answers to them demand explanatory, as opposed to descriptive, content. They require a rationale. Although why questions do not belong to any one genre and are not simple to classify — responses can contain motivational, conditional, causal, and/or existential content — they do make a difference in the acquisition of understanding. The development of scaffolding that builds on why-questioning to enrich learning is the motivation behind the research that has informed this paper.

Keywords: why-questioning, reflection, question generation, deep learning, scaffolding
Introduction

The focus of this paper is innovation associated with the design and deployment of e-portfolio systems. The term ‘e-portfolio’ is used here in its broadest sense of being a collection of digital artefacts and applications that are typically used for profiling an individual, group, or organisation in terms of capability or achievement — though a diversity of other definitions exist (Galatis et al., 2009; Strohmeier, 2010). For well over a decade e-portfolios and systems that support them have been explored and adopted by the education and training sector worldwide, as well as by numerous other stakeholders (ELI, 2001–2006; Love et al., 2004). Such a time span might indicate a maturing of both the tools and associated practices; however, as Hallam et al. (2008–2010) point out in their comprehensive Australian reports, the field is best characterised as ‘emergent’, particularly in educational settings.

While it is typical that an ‘e-portfolio system’ is named as an ‘e-portfolio’ or ‘e-portfolio system’ as in numerous implementations throughout the Australian higher education sector, some core functions (such as profiling) are also evident in online services that make no mention of the term ‘e-portfolio’. Thus, while the primary profiling function is common within teaching and learning contexts that support undergraduates, graduate students, or staff (for example, Queensland University of Technology), it is also common across a diversity of online services such as professional employment social networking services (for example, LinkedIn) and systems deployed by professional associations that record continuing professional development of its members (for example, the Australian Computer Society). Within the Australian education and training context a common feature is also representation of an individual’s profile in terms of ‘employability skills’ (Swinburne, 2010; QUT, 2008; Victoria University, 2007; James, Meek et al., 2008; Bowman & Kearns, 2009).

Employability skills have been defined as ‘skills required not only to gain employment, but also to progress within an enterprise so as to achieve one’s potential and contribute successfully to enterprise strategic directions’ (DEST, 2002, p. 3). They are commonly classified according to the following categories: communication; teamwork; problem-solving; initiative and enterprise; planning and organising; skills that contribute; self-management; learning; and, technology. ‘Reflection’ is not an explicit category in this list but is regarded by some commentators as the implicit core attribute of an effective individual in the contemporary workplace within the literature on ‘reflective practitioners’ (Schön, 1987; van Manen, 1995; Boud et al., 2005).

While this paper takes a broad perspective on what constitutes an e-portfolio many commentators insist otherwise. In particular, there is a widespread view that ‘the essential nature of an e-Portfolio for learning is not as a repository but as a place for reflection’ (Batson, 2009). Cambridge (2009) articulates a similar view in emphasising the importance of reflection although within a more ‘emergent’ framework of supportive technologies and other practices such as planning, synthesising, and collaborating. For Cambridge, the activity of connecting a diversity of artefacts, interactions, and activities is itself a stimulus for reflection (Cambridge, 2009, p. 41). The key point here is that reflection is considered by most advocates to be a key component of e-portfolios within contemporary educational settings (Desmet et al., 2007; JISC, 2008; Hallam et al., 2010). Moreover, a review of
e-portfolios platforms commonly used in educational settings worldwide reveals that a designated space for documenting and collating personal reflections is a typical design feature (Sweat-Guy & Buzzetto-More, 2007).

**Integrated reflection**

The term ‘integrated reflection’ used in this paper is informed by the literature on reflective practice, in particular Schön (1987), recent work of Wang (2009) as well as literature on Communities of Practice (Wenger, 1998; Wenger et al., 2002).

Schön has been credited with first using the term ‘reflective practice’, defining it as ‘reflection-in-action’ and as practice that involves ‘continuous learning’ (Schön, 1987, p. 72). Thus, in this conception ‘reflection’ can be seen as a process integral to a wide range of activities associated with learning — such as inquiry, communication, editing, analysis, synthesis and evaluation — and many more, depending upon context. This idea is consistent with the way that continuous professional development (CPD) and/or work-integrated learning (WIL) are implemented in many workplaces (Patrick et al., 2009). Scaffolding reflection-in-action has also gained attention in the development of online learning for at least a decade (Shannon et al., 2001; Lai & Calandra, 2007; Sporer et al., 2010; Lyons, 2010).

Wang proposes ‘an ontological model that specifies a generic organisational structure of eportfolios in the integrated reflection context’ (Wang, 2009, p. 449). In this model, reflection features as a dominant ontological category within a structure that includes learning subject, learning objectives, learning objects, assessment instruments, and reflection query. Wang’s conception of ‘integrated reflection’ represents much more than a collection of jottings or journalism after a learning experience and is facilitated by ‘active learning’ (Wang, 2009).

For both Schön and Wang, reflection is more than reflective journalism, but evidence suggests that within most current implementations of e-portfolio systems this is the extent of reflective practice (Swinburne, 2010; QUT ePS, 2011; Victoria University, 2007). In this paper, integrated reflection indicates a range of cognitive activities beyond the recording of reflections, including discernment, critical thinking, identification of facts and issues, checking, reconciliation, summarisation, synthesis, and pattern recognition, etc. (van Manen, 1995).

**Related research**

*The Australian ePortfolio Project*

The Australian ePortfolio Project (AeP), funded by the Australian Learning and Teaching Council, provides an excellent snapshot of recent activity (over a three-year period) within Australia across the Vocational Education and Training (VET) and Higher Education (HE) sectors. It is of interest that the final report documents ‘reflection’ as a key component of e-portfolio function for the HE sector, while the VET sector is typically more interested in pragmatic outcomes, such as assessment of competencies or employability (Hallam et al., 2009). The authors report the following observation, which is pertinent to the theme of this paper:

*The research revealed that there continued to be a low level of understanding about the actual impact of ePortfolios on student learning outcomes.*
However, there was considerable interest in the area, and although little formal research had been undertaken, there was a belief, anecdotally at least, that ePortfolios contributed to increased awareness of eLearning technologies and reflective learning, as well as employability skills ... The need for further meaningful research continues to be a priority if the potential of ePortfolios to play a significant role in Australian education, training and employment is to be achieved. (Hallam et al., 2009, p. 36)

JISC ePortfolio Implementation study (UK)

The JISC-funded ePortfolio Implementation (ePI) study (2010–2011), led by the University of Nottingham, in many ways resembles the AeP study, with one of its aims being to inform Higher and Further Education (H/FE) institutions on best (emerging) practice and strategy through identifying ‘mature’ implementations. The final report is due in mid-2011 although many case studies are already publicly available for review (JISC ePI, 2011). The study has explored large-scale implementations of e-portfolio use in UK H/FE and professional organisations.

The focus of this study was informed by earlier research into e-portfolio implementation in the UK in which a number of ‘threshold concepts’ were evident (Meyer & Land, 2003; Joyes et al., 2010). In reporting on this earlier research Joyes et al. (2010) found that:

*e-portfolio implementation is particularly complex in part due to the number of stakeholders involved, the contexts in which e-portfolios can be applied and the number of purposes they can have.*

This finding suggests that the diversity of implementation reveals significantly more ‘emergence’ in the field than ‘maturity’. Joyes et al., also found:

*This research suggests that there are threshold concepts ... related to e-portfolio implementation that are associated with misconceptions and hence represent barriers to implementation ... Once the threshold has been passed through a new and irreversible perspective is attained. This perhaps explains why those new to their implementation fail to comprehend the extensive guidance available. This threshold concepts perspective on e-portfolio implementation provides a means of identifying effective e-portfolio implementation.* (Joyes et al., 2010, p. 1)

However, in reviewing the case-studies and earlier reports, it is revealing that while ‘reflection’ is understood to be an important activity in e-portfolio use, Joyes et al. (2010) do not identify it as one of these threshold concepts. This is despite the fact that reflection is listed as one of seven core activities in e-portfolio usage: information capture, information retrieval, planning, reflection, feedback, collaboration, presentation. Instead, the authors define five threshold concepts ‘which assume a mature understanding of e-portfolio use’ — without actually making explicit what a ‘mature understanding’ actually is. The five threshold concepts identified (Joyes et al., 2010, p. 3) are:

- *Purpose is aligned to context to maximise benefits*
- *Learning activity is designed to suit the purpose*
- *Processes are supported technologically and pedagogically*
- *Ownership is student centred*
- *Transformation (disruption) is planned for*
The authors then develop a maturity framework in the form of a two-dimensional table based on these five threshold concepts mapped against the context of implementation (from localised to extra-curricular use). While straightforward in conception this framework is also simplistic in that the authors suggest that ‘completion of all cells in a particular column would represent maturity’. It is not clear whether a binary entry (yes/no) or a narrative entry is required. But if reflection is assumed to be a core process then this framework implies that implementations that support it are already adequate, or that variation in support does not impact any measure of maturity. If not, then the approach to identifying ‘institutional maturity’ of implementation is not a sufficient measure. As a managerial perspective it may seem like a robust approach but it is based upon assumption or detail not made explicit in the paper.

**Questioning and learning**

Asking questions is an important foundation to the learning process (Dewey, 1966; Schank & Cleary, 1995). The Inquiry Project at the University of Illinois, a project focused on the advocacy of inquiry-based learning, takes an even stronger stance, using as its motto: ‘learning begins with questions’. While learning can clearly take place without questioning — for example, through repetition and memorisation — it is through questioning that reflection, discourse, and knowledge construction take place. Thus, socio-cultural philosophers of education such as Freire and Faundez (1989) have argued for the need for a ‘pedagogy of asking questions’ that gives emphasis to the questioning process as something valuable in itself, where the ‘answer’ may not even be relevant:

*Thinking about questions that may not always or immediately arrive to an answer are the roots of change*  
*(Freire & Faundez, 1989, p. 37)*

More recently, Thomas and Seely Brown (2011) identify the emergence of a ‘new culture of learning’ as a consequence of innovation with ICT and make the argument:

*We propose reversing the order of things. What if, for example, questions were more important than answers? What if the key to learning were not the application of techniques but their invention? What if students were asking questions about things that really mattered to them?*  
*(Thomas & Seely Brown, 2011, p. 81)*

Consistent with this approach, Mason (2008) presents a model for sense-making in which ‘primitive’ questions (*who, what, when, where, why, how, and if*) are used as a framework for representing and understanding the interplay between community, content, and context during learning and knowing. In this paper, questions instigated by *why* are highlighted as an important consideration in the design of ICT tools — for the reason that most tools that currently facilitate the discovery and reuse of digital content privilege what Verberne (2010) refers to as ‘factoid’ questions (*who, what, when, and where*). This is despite the proliferation of ICT innovation and emergence of Web 2.0 social software as a dominant paradigm of web engagement. Elsewhere, Mason (2009) argues that the key characteristic of *why*-questions, as opposed to the factoid questions, is that responses to them require *explanatory* as opposed to *descriptive* content (Mason, 2009, p. 42). This is a key point for this current paper because it is through constructing explanatory
content (and giving consideration to why-questioning), that reflection is deepened beyond a consideration of factual material. This then begs the question: to what extent are current implementations of e-portfolio systems designed to promote and/or support why-questioning? Anecdotally, the answer would appear to be very little beyond the provision of question templates that derive from frameworks to facilitate a journal entry following a learning experience. The STARL-P Framework (Situation, Task, Action, Result/Reflection, and Learning/Planning) is representative of this approach (QUT ePS, 2011).

21st Century skills

The assessment and teaching of 21st Century Skills project argues that ‘learning to collaborate with others and connect through technology are essential skills in a knowledge-based economy’ (ATC21S, 2011). Implicitly, such a statement underscores the importance Web 2.0 social software. But investigating this project further is important because it also identifies critical thinking as an essential skill at the same level as ICT literacy and problem solving. However, in the government-sponsored literature in Australia on employability skills problem solving is a category in which the supporting documentation rarely even mentions critical thinking. While there is an extensive academic discourse around critical thinking and pedagogy (Burbules & Berk, 1999; Casey & Bruce, 2011) it is not unreasonable to understand critical thinking to be an important facet to reflection and reflective practice. Of course, there exists variation in emphasis across workplaces — for example, a news reporter would normally be required to critically appraise information sources more than an employee in a fast food outlet. It will be interesting to monitor when or whether the literature on ‘employability skills’ aligns over time to this more recent research on essential skills.

Another frontier for ICT tool development?

Following the foregoing discussion a number of opportunities would appear to exist for the development of ICT tools that support integrated reflection in the context of e-portfolio development. Such tools could be designed as embedded within e-portfolio systems or as standalone services that could be utilised by such systems. For example:

- Tools that facilitate the construction of questions from a body of content.
- Tools that extend the discovery and processing of factual information to facilitate the discovery and production of explanatory content — in short, tools that support why-questioning.
- Tools that stimulate the construction of rational argument.
- Prompting tools that suggest patterns, dependencies, or other relationships between discrete chunks of content.
- Interface design that explicitly supports the navigation of e-portfolio content via a questioning methodology.

Within the broader fields of e-learning and intelligent tutoring, a number of these tools already exist that could be customised for e-portfolio use. For example, tools to support reflection-in-action have already been developed (Shannon et al., 2001). Within the field of intelligent tutoring systems, significant research and
development is underway on automated Question Generation (Rus & Lester, 2009; Graesser et al., 2008) and dedicated software such as Rationale is specifically designed to enhance student abilities in forming rational arguments and identifying fallacies or weakly formed arguments (Rationale, 2011).

Conclusions

e-portfolios and e-portfolio systems can be conceived of in a number of ways. This paper has assumed a broad conception in which the boundaries that contain the e-portfolio are not defined solely by application software. In the same way that Learning Management Systems have had to evolve beyond the containment of learning activities to the connection of relevant learning activities the reflective activity that is currently promoted within e-portfolio systems will need to evolve from a contained toward an integrated approach. While the process of integration rests largely with the integrator there would appear to be opportunities to build tools that might facilitate this process.

If recent work conducted by projects such as the Assessment and Teaching of 21st Century Skills are to be validated then it is likely that graduates who are ‘reflective practitioners’ who integrate reflection into their learning and problem-solving will have more to offer a prospective employer than graduates who have been trained to adopt an episodic approach to reflection.

This paper has identified that ICT tools that support integrated reflection in the implementation of e-portfolio systems is currently under-developed. It has been the purpose of this paper and the intent of future work within PhD research currently underway at Queensland University of Technology to elaborate further on such tools might facilitate scaffolding opportunities arising from ICT innovation that supports why-questioning.

References


**Biography**

**Jon Mason**

Jon Mason is an independent consultant focused on emerging ICT infrastructure and services supporting e-learning and knowledge management. He has been an active contributor to international ICT standards development since 2000 and is currently completing a PhD at QUT.
Developing consensus — an e-portfolio reference model for e-learning

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Abstract

The challenge of developing international consensus within the standards setting community is never easy. Even without the politics that can take place as a consequence of competing corporate interests and jurisdictional project agendas, getting agreement on ‘best practice’ within a technical domain presents a number of problems — particularly when the domain is subject to constant innovation. This paper presents a case study within the formal standards context of Information Technology for Learning, Education, and Training (ITLET). The body with responsibility for this work is commonly known as SC36, but the full acronym is ISO/IEC JTC 1/SC36 (sub-committee 36 of Joint Technical Committee 1 of the International Organization for Standardization and the International Electro-technical Commission). Membership is restricted to ‘national bodies’, such as Standards Australia.

During 2009 there was sufficient consensus within the committee to initiate work on a technical report that would present a reference model and inform technical implementation of e-portfolio systems within learning contexts. Its scope had the explicit goals of detailing the technical interoperability requirements that would facilitate the exchange of information between ITLET systems and enable easy integration of e-portfolios with other kinds of ITLET systems (such as learning management and student management systems). During 2010 a range of use-cases were collected and an initial draft was prepared. Throughout 2011 the draft went through a number of revisions and updates. The final document is scheduled for publication in 2012.

This paper presents a synopsis of a diverse set of use-cases from which common components and a generic model will be discerned. Some issues have caused significant debate throughout the process: such as student ‘ownership’ of their e-portfolio, whether the reference model should be focused on e-portfolios or e-portfolio systems, the role of reflection, and whether the reference model should be constrained for e-learning purposes or the broader context of ITLET.
Most debates arose because of tensions between specific implementation contexts across diverse jurisdictional requirements and the general nature of a reference model, which is something that requires broad utility.

**Keywords:** standards, reference model, consensus, e-portfolio, international

**Biography**

**Jon Mason**

Jon Mason is an independent consultant focused on emerging ICT infrastructure and services supporting e-learning and knowledge management. He has been an active contributor to international ICT standards development since 2000 and is currently completing a PhD at QUT.
Scaffolding pre-service teachers representing their learning journeys with eportfolios

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Abstract

The term ‘scaffolding’ is often used loosely to describe a broad range of interventions or devices for learners and in many instances the actual nature of the scaffold is unclear. In the true sense, for ‘scaffolding’ to take place the activity needs to be for the learner’s own intentions, i.e. a task that he or she sets for themselves. Further, the scaffold must operate within the learner’s ‘Zone of Proximal Development’, working at the learner’s level of comprehension and drawing the learning into new areas of exploration. A final characteristic of scaffolding is that the scaffold is gradually withdrawn as the learner becomes more competent.

The study described in this paper draws on previous investigations that examined the concept of scaffolding with young children using technologies and applies a similar framework to beginning pre-service teachers who are required to establish an eportfolio for their course. The eportfolio is implemented in the common undergraduate first year of teacher education at La Trobe University, Bendigo. The students use the eportfolio learning system ‘PebblePad’ to establish a space for personal learning where they can store and reflect on experiences as they journey through their course. The first year program is an innovative, integrated approach to course design and is tracked through an action research project ‘Connecting with Education: The First Year Experience’. The project is currently in the fourth iteration.

This paper describes the processes and artefacts used to scaffold the first year pre-service teachers as they conceptualise and frame their learning journal eportfolios. It also reflects on the changes implemented over the four years of the project and examines the dimensions of scaffolding implemented.

Keywords: eportfolio, scaffolding, teacher education, PebblePad, first year experience

Biography

Jennifer Masters

Jennifer Masters is a senior lecturer and an Undergraduate Course Coordinator in the Faculty of Education at Latrobe University, Victoria, Australia. She specialises in the integration of ICT across curriculum. Jennifer’s research interests include the use of computers in informal contexts, teacher scaffolding processes and children’s use of social networking. She also is interested in teacher education course design, first year transition and the use of eportfolios to represent learning journeys.
Supporting the storage requirements of learner e-portfoli0 content

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Abstract

Australian education and training organisations are becoming increasingly interested in using e-portfolios with their learners with many at the stage of selecting and implementing an e-portfolio system to suit their organisational and learner needs. It has been identified (JISC, 2006) that learners are more likely to make better use of their e-portfolio if they know they can access and use them beyond their connection with the formal learning organisation providing the e-portfolio. This has raised interest into file formats, storage capacities and localities which allow learners long term access to their e-portfolio content or the ability to migrate their e-portfolio content to another e-portfolio system. ‘Cloud storage’ options are also being considered and used to increase the capacity of learner e-portfolio systems, however, a balance between the needs of the learner and the e-portfolio provider is important.

Trials of e-portfolio implementations (Framework, 2009a) have identified an increased use of mobile devices such as smart pens, audio/mp3 recorders, digital/video cameras and point of view (POV) devices to capture ‘live’ information (e.g. recording a haircut or the completion of a manual handling exercise). However, this type of learner-generated content is heavily reliant on storage, bandwidth and the use of common digital formats that enable easy storage and retrieval.

To help educational organisations determine the storage capacity and format requirements for housing learner e-portfolio content, an investigation into the way e-portfolio service providers and implementers are managing storage requirements was undertaken in 2010. This paper details the methodology and key findings of this investigation together with presenting recommendations for future work to effectively manage storage of Australian learner e-portfolio content.

Keywords: e-portfolios, storage, lifelong, content, e-portfolio implementation, mobile devices
Introduction

The use of e-portfolios in education and training in Australia is on the increase with many organisations at the point where they are selecting an e-portfolio system to service the needs of their learners and their organisational requirements. Research undertaken by JISC (2006) and the Australian Flexible Learning Framework (Framework) (2009a) has highlighted that long term access and ease of uploading digital content into e-portfolios are key points to ensuring effective learner buy-in in using their e-portfolio for formal learning and assessment as well as for lifelong learning. To better understand how the storage of learner e-portfolio content is being managed within Australia, consultations of managers of learner information, implementers and developers of e-portfolio systems as well as technical and e-standards experts was undertaken in 2010. This paper highlights the findings of this research and makes recommendations for future work to support the ongoing storage requirements of learner e-portfolio content.

Background research and related literature

‘Guidelines on Storage, Access and Related Issues for ePortfolios’ (Guidelines) produced by JISC (2006) in collaboration with the University of Wolverhampton identifies a number of key considerations when implementing learner e-portfolio systems around: policy; portability; purpose; storage benchmarks and quotas; file type and upload limits; back-up/recovery procedures; and third party access.

These Guidelines recognise that organisational policy on the storage of learner e-portfolio content is likely to be different depending on organisational and subject area requirements. However, in order to utilise e-portfolios as lifelong learner records, the need for continued access and ownership of the e-portfolio by the learner would mean the learner would require ongoing access to their e-portfolio beyond their formal connection with the organisation supplying the e-portfolio service. Hence, the Guidelines suggest that options for allowing ongoing access by past learners should be explored as early as possible during the implementation process.

The Guidelines also recognise that learners should have the option of exporting the contents of their e-portfolio for migration into another e-portfolio system, such as that of their new employer, learning organisation or professional body. However, the Guidelines acknowledge that interoperability or portability of information between e-portfolio systems or between the e-portfolio system and other information systems (e.g. student management systems) was still an area needing attention. The Leap2A e-portfolio portability technical specification is one of the solutions developed in response to this challenge (Leap 2A, 2011).

In order to manage learner e-portfolio content, the Guidelines recommend clearly scoping and communicating the purpose of the e-portfolio system, as this has an impact on the storage requirements of an e-portfolio system, as is having procedures and technical solutions for archiving the contents of an e-portfolio when it is no longer in use.
Asking learners to provide a summary of the content they store in their e-portfolio which describes how the content matches the purpose of the e-portfolio is also identified as helping avoid unnecessary storage or mass uploads of files. Courses using multimedia are identified as needing higher storage quotas or needing access to external storage services such as YouTube (JISC, 2006).

At the time of the Guideline’s publication, the use of e-portfolios in education and training was still just emerging in the United Kingdom (UK) and so there was little to guide an organisation about how to plan for long term storage quotas. The Guidelines suggest performing a benchmark analysis of ‘server performance and file system growth over a period of at least 3 years (the length of a typical undergraduate degree course)’ as a good guide (JISC, 2006, p. 10). They also state that quotas of between 25MB and 100MB were being set by organisations at that time, and suggest that organisations instigate processes which allow regular reviews of quotas or the expansion of quotas for special circumstances. Restriction on certain file types for security reasons (e.g. executable files and web-based scripting) and educating learners about their privacy and ownership/copyright responsibilities, especially when publicly sharing their e-portfolio, is important when considering storage requirements.

The Guidelines also suggest that backup and disaster recovery strategies need to be considered as part of the wider organisational data management process, as were explicit and upfront policies for ongoing access to a learner’s e-portfolio by third parties, such as external awarding bodies in the UK. Given that some educational organisations need to keep their learners’ work for a given period of time, the Guidelines suggest that the e-portfolio may provide a digital solution to meet this need. This could also enable potential employers or course admission personnel digital access to past-learners’ course work as well as form part of their digital CV.

The Framework (2009a) as part of its E-portfolios Implementation Trials (EIT) sponsored three Australian vocational education and training (VET) organisations to implement an e-portfolio system that enabled learners to move quickly and efficiently between education and training, employment and different industries. These trials investigated the use of various mobile devices such as audio recorders, digital/video cameras and point of view (POV) devices to capture ‘live’ information (e.g. recording a haircut or completing a manual handling exercise). It emerged from these trials that this type of learner-generated content is heavily reliant on storage, bandwidth and the use of common digital formats to enable easy storage and retrieval. The EIT identified that using video to capture workplace and practical evidence required a lot of storage space within the e-portfolio environment, and that the learners needed a lot of support to produce useful video evidence, including understanding what information is best to record, as well as how to compress and/or edit large video files. This meant that e-portfolio systems managers may need to consider increasing the storage and upload limits to enable the storage of large files, especially video.

In particular, the trial conducted by TAFE NSW Sydney Institute’s Hairdressing program, which used POV and video recorders with apprentice and experienced hairdressers seeking workplace and recognition of prior learning (RPL) assessment for the Certificate III/IV in Hairdressing, found that special e-portfolio system configurations and increased individual user storage quotas changes were required
to enable the e-portfolio system to accept large video files. Learners wanting to upload one-hour long videos for assessment found that this was beyond the permissible default capability of the e-portfolio system or available external services such as YouTube at this time (Ridgway & Watt, 2010).

The trial undertaken by the Fire Protection Association of Australia, designed to gather on the job evidence by regional fire service technicians, found that learner ICT skills, software familiarity and navigation, along with individual learners’ time constraints, were viewed as barriers to enabling effective uploading of learner video files into their e-portfolio system (Krumins & Ebbs, 2010). Coonara Community House’s trial, involving childcare workers seeking RPL for the Diploma of Children Services, found that using e-portfolios required a lot of additional upfront training for assessors and learners before the e-portfolio system could be incorporated as part of the RPL process (Fitzgerald, Gibb, & Grigg, 2010).

To assist in the development of a national standards-based framework to support interoperable e-portfolio systems in the VET sector, the Framework (2009b) has produced a national strategic document called the VET E-portfolio Roadmap (Roadmap). The Roadmap contains nine goals which, when achieved, will result in national guidelines for managers of learner information; functional specifications for e-portfolio system developers and implementers; and provide strategies for educators to integrate e-portfolios into their courses, as outlined in Figure 1 below:

![Figure 1: The VET E-portfolio Roadmap — nine national goals resulting in the three key outputs](image)

The Roadmap’s ‘Storage’ goal aims to establish a shared understanding of storage issues and requirements for e-portfolio systems which ‘takes into account that some e-portfolio content will be stored in the e-portfolio system, whilst some content will be stored in other systems or on the internet’ (Framework, 2009b, p. 7). Identified implementation strategies to achieve the Roadmap’s ‘Storage’ Goal include:
• Developing guidelines on the storage of digital content in e-portfolio systems which takes into consideration a balance between the needs of learners, organisations and the requirement for ensuring the longevity of e-portfolio content

• Working with e-portfolio software developers and vendors to develop and implement e-portfolio systems which provide the appropriate software to cater for differing storage requirements

Research method

In 2010 the Framework commissioned background research into the ways that e-portfolio service providers were managing the storage requirements of learner e-portfolio content, and also into their plans for future storage requirements. This research involved both desktop research and consultations with a range of key stakeholders.

The desktop research included a review of related research, projects and studies from Australian and international sources. Collections searched included NCVER, ACER, Australian Policy Online, Education Resources Information Center (ERIC), JISC, BECTA, Australian Learning and Teaching Council (ALTC), among others. General web resources and Google Scholar were also used. The findings from the Framework’s EITs (2009a) were used to take in account current e-portfolio practice, potential usage, barriers, and strategies for moving forward in a practical way. Other e-portfolio work sponsored by the Framework was also drawn upon to set the context for much of this research, including:

• VET E-portfolio Roadmap — mentioned above.

• Managing Learner Information: Important considerations for implementing e-portfolios in VET report — a research report considering the issues of ownership, privacy, verification, access control and security for e-portfolios (Bevan, Hendrick, & Leeson, 2009).

• Accessing VET Learner Attainment Data: An investigation to enable learner-facilitating electronic access to their VET learner attainment data paper — a positioning paper which details of an investigation into providing learner-facilitated electronic access to their VET learner attainment data in association with their e-portfolio (Macnamara & Nicholas, 2011).

Consultations consisted of an online survey and telephone interviews related to the content formats of digital artefacts being stored in e-portfolios and on the storage capacity and locality of learner e-portfolio content. Consultation questions included:

• What formats are digital learner content being used to store information?

• Which digital formats are best suited for a range of e-portfolio systems?

• Which digital formats meet technical standards as recommended by the E-standards Expert Group (EEG) and Web Content Accessibility Guidelines 2.0 (WCAG2)?

• Which digital formats may require further work to help reach compliance with technical standards as recommended by EEG and WCAG2?
• How can open digital standards support longevity and better sharing of digital learner content?
• How is digital learner content storage being managed in education and training?
• How much storage is required for e-portfolio systems which support lifelong learning?
• What locality options are there for the storage of digital learner content in e-portfolio systems?
• What are the considerations for:
  – Enabling the sharing of digital learner content through RSS, both into and out of VET e-portfolio systems?
  – Accessing and/or sharing learner information which is stored on external databases such as learner record systems?
  – Using cloud storage facilities for digital learner content stored in VET e-portfolio systems?
  – Storing digital learner content on servers which are not owned by the e-portfolio service provider and/or in housed in other jurisdictions/countries?
  – Supporting the different needs for digital learner content in VET e-portfolio systems?

To assist in the validation of these questions, the expertise of the VET E-portfolios Reference Group (ERG) (Framework, 2011a) was drawn upon. As the national consultative group for the Framework’s E-portfolios business activity, consisting of representatives from industry, VET, higher education and the schools sector, this group also endorsed and reviewed the research.

The online survey was completed by 36 respondents. Respondents completed the online survey voluntarily after responding to promotions via the Framework’s traditional media and social media (e.g. Twitter, Facebook) mechanisms, and hence could be completed by anyone.

Thirty one people who were identified as having a professional interest in e-portfolios or e-standards were contacted by email and invited to participate in telephone interviews, of which 22 people agreed to be interviewed. The demographics of this select group included:
• managers of learner information and content
• e-portfolio service providers and developers
• educators
• e-standards experts.

The Framework’s E-portfolios Business Manager helped to identify and contact the people who participated in the interviews. The VET E-portfolios Community of Practice (EpCop) (Framework, 2010) membership were also engaged to help identify and access ‘thought-leaders’ for participation and discussion on the research.

It is recognised that this research is limited in that it does not have the input from learners as part of the consultation process due to the time constraints for this research and the ease of access to ask for learner input.
Instead this research relies on the voice of the educators and those managing e-portfolio and other e-learning systems.

**Findings and discussion**

This research found that portability of learner e-portfolio content was considered to be one of the most important requirements for effective storage of learner e-portfolio content. Respondents felt that learner e-portfolio content should be portable at both an individual artefact level and at a collection level (i.e. it is desirable to be able to import/export all or parts of one’s e-portfolio), and be importable/exportable in the file format in which the original artefact was created.

Use of compatible export formats such as PDF, HTML or using the IMS e-portfolio (IMS Global Learning Consortium, 2011) or Leap2A (Leap2A, 2011) portability specifications by e-portfolio system developers were considered important to allow learners to move their e-portfolio content between different e-portfolio systems. However, it was recognised that conformance alone to an e-portfolio portability specification did not guarantee that a learner’s e-portfolio content would easily migrate between e-portfolio systems.

The research found that further work needs to be undertaken on the development of portability guidelines and best practice approaches as it was acknowledged by respondents that there was insufficient information available about how and where learners can successfully move their e-portfolio content. With this in mind, this research suggests that e-portfolio system developers should monitor developments in e-portfolio portability specifications such as Leap2A to ensure their system allows learner e-portfolio content portability. Educational organisations should also ensure that the e-portfolio system they select supports a number of options for exporting learner e-portfolio content, including to PDF, HTML, and Leap2A.

The consultations found that the types of content formats learners were using to create their artefacts for storing in their e-portfolio were consistent with common content formats being used to develop e-learning content such as those recommended by the Framework’s E-standards for Training (Framework, 2011b). This highlights that educators should encourage learners to use broadly utilised content formats when creating their e-portfolio content, as many video, image and audio recording devices support multiple formats (e.g. the .jpg digital image format saves as a much smaller file size than that of the (often proprietary) .raw formats supported by some digital cameras).

For many of those surveyed, storage capacity requirements for e-portfolio systems were deemed no longer a challenge as storage costs were perceived as decreasing along with an increasing array of options such as web 2.0 storage and cloud computing services. Some of those surveyed indicated that they used services as YouTube and Flickr as viable proxy learner e-portfolio content storage options in a number of contexts, as these external services offered larger storage space to users at little or no cost. These services were particularly attractive to those e-portfolio users who considered their e-portfolio system did not offer the appropriate storage as they felt they had little or no control or input into how the e-portfolio system was managed. It was identified though, that some e-portfolio systems were unable to access these ‘cheaper’ services due to organisational policies. While such options seem (and in many cases are) attractive to users, respondents felt it inappropriate to
make carte blanche recommendations of use due to concerns about the longevity, privacy, security and ownership conditions of these service. This highlighted that organisations implementing an e-portfolio system need to regular review their storage and archiving strategies to include learner e-portfolio content. E-portfolio service providers considering external storage services for learner e-portfolio content should also review their privacy/security policies, guidelines, terms of use, as well as review their risk management strategy. Helping learners understand the implications of using external services (e.g. potential loss of intellectual property of content) needs to also be considered. From those surveyed it was evident that other areas of consideration when managing e-portfolio storage requirements included: organisational service level agreements, ICT infrastructure policies and other organisational policies related to learner content.

The consultations indicated that there is a significant variation in learner e-portfolio content storage quotas among different e-portfolio implementations depending on the purpose, course design and pedagogy, organisational processes, and ongoing access, however a number of e-portfolio implementations are simply adopting the default e-portfolio system storage quotas.

Actual storage consumption on a per user basis varied significantly, with educators tending to use more storage than their learners and actual average learner usage tending to be lower than initial storage allocations. Course type tends to influence the storage limit given to learners, such as traditionally media-rich courses, however a number of courses that are not traditionally media-rich are also starting to identify significant storage requirements, especially when using video to capture evidence. The latter however was considered to be an area that could be improved through better understanding and application of these technologies by both the learner and the educator through improved digital literacy.

Respondents also related that a lack of effective e-portfolio knowledge and associated digital literacy skills was having an impact on the e-portfolio storage requirements in different ways: for example:

- users were shying away from using the e-portfolio or mobile devices due to a lack of confidence or understanding, resulting in lower than expected storage requirements
- while poor understanding of effectively capturing and compressing video evidence resulted in overly larger files requiring more than necessary storage requirements.

The consultations highlighted that educators cannot assume that learners know how to use their e-portfolio nor have the requisite skills to use mobile devices to create their own content or evidence. Many indicated that these skills were being taught in addition to the course requirements when introducing an e-portfolio, with educators also being provided with additional training as part of the e-portfolio implementation process.

The following skills were cited as necessary when implementing e-portfolios in education and training:

- knowing how to or being supported to redesign learning and assessment tasks to incorporate an e-portfolio
- having a reasonable level of ICT, multi-media and digital literacy skills to make better use of mobile devices, e.g. video-editing, compressing files, and file management
- having better understanding of the diverse uses of mobile devices to capture examples of work or workplace evidence.

This highlights that organisations implementing an e-portfolio system should incorporate professional development for educators which supports adopting learner-centred pedagogical practice that exploits the full potential of an e-portfolio beyond an online repository. This means that educators wanting to integrate e-portfolios in their course will need to factor in the time for additional training for learners to ensure the effective collection, management and storage of content within their e-portfolio (e.g. supporting learners to develop the skills to: capture, select, format and describe appropriate content which matches the purpose of the e-portfolio).

A vast majority of respondents indicated that they did not provide their learners with information about web accessibility when developing their e-portfolio content given the limited audience with whom the learner’s content was likely to be shared with (e.g. the learner and the educator and/or potential employer). However, those managing more mature e-portfolio implementations indicated that they had started to adopt broader web accessibility guidelines within their organisation to incorporate learner-generated content. This highlights that organisations implementing an e-portfolio system should review their web accessibility guidelines and policies to include the creation and storage of learner e-portfolio content, taking into consideration the possible audiences of a learner’s e-portfolio by raising learner awareness about the importance of web accessibility when creating online information.

Many respondents stated that learners needed to have ongoing access to their e-portfolio beyond their enrolment in a course. However, of those surveyed, many organisations did not provide this ongoing learner access to their e-portfolio system after the completion of their course. A number of the e-portfolio implementations surveyed were not mature enough to determine whether this was having an impact on the way learners were interacting with the e-portfolio system.

Conclusions

Educational organisations are becoming increasingly interested in using e-portfolios with their learners and many are now at the stage of selecting and trialling an e-portfolio system that suits their organisational and learners’ needs. As part of this decision-making process, the ability to determine the storage requirements for learner e-portfolio content, as well as being able to offer learners the ability to export their e-portfolio content for use in other e-portfolio systems is a complex process requiring a number of key considerations.

Portability of learner e-portfolio content is important, but further research is required to determine whether the portability of learner e-portfolio content through such technical specifications as Leap2A has an impact on the storage requirements of learner e-portfolio content. Outcomes of such research should contribute to the development of best practice storage and portability guidelines for implementing e-portfolios.
Pedagogical support for educators to effectively use the e-portfolio system (e.g. determining a clear purpose for the e-portfolio; helping learners select and manage digital evidence), can improve the storage capability of any e-portfolio system beyond that of an online repository. This includes supporting learners’ understanding of the requirements of developing online information which is web accessible by a range of audiences by updating organisational web accessibility guidelines to include learner-generated content.

Storage of learner e-portfolio content on external servers (e.g. cloud storage) or third party storage services (e.g. YouTube, Flickr) need further consideration to ensure learners’ content and privacy is secure. Developing guidelines for using these services and the impact on learner e-portfolio storage requirements needs further consideration both at an organisational and national level.

This paper highlights that further work is required to determine what information should be provided to organisations and individuals so they can provide sufficient e-portfolio storage solutions which integrate with their existing organisational systems and supports learners increased use of mobile devices which are heavily reliant on storage, bandwidth and formats to enable easy storage and retrieval. Investing in the careful consideration of the storage requirements of learner e-portfolio content will help learners make better use of an e-portfolio and ensure that the organisation’s investment in the system is fully realised. However, it is recognised that a balance between the needs of the learner and training organisation will also need to be taken into consideration.

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References


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**Biographies**

**Allison Miller**

Allison Miller has been involved in the VET sector for more than ten years as an educator and as a project leader in e-learning. Allison is currently the E-portfolios Business Manager for the Australian Flexible Learning Framework. Her previous Framework roles include the South Australian Innovations Coordinator and the Inclusive e-Learning (Youth) Project Manager. She has also been the E-Learning Development Coordinator for TAFE SA.
Jerry Leeson

Jerry is the Director of Business Solutions at Education Services Australia. In this role, Jerry is active in promoting the development and implementation of innovative technology-based solutions in education. Jerry has a particular interest in the application of standards and specifications that support the implementation of e-portfolios and e-portfolio related services that support lifelong learning in both formal and informal learning environments.
An e-portfolio solution for CPD requirements in nursing

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Abstract

In response to the new continuing professional development (CPD) registration standard for Australian nurses, YourLife RDNS (SA) has developed a CPD solution for all nurses registered with the Nursing and Midwifery Board of Australia (NMBA) utilising a PebblePad e-portfolio system.

The NMBA CPD registration standard came into effect in July 2010. This registration standard requires each practicing nurse to define their context of practice; identify and prioritise their learning needs based on professional practice standards; develop personal learning plans; participate in active learning; and reflect on each active learning hour.

As the first national audit date approaches there has been an industry response to provide solutions for nurses. YourLife RDNS (SA) has developed a solution that provides an e-portfolio, industry specific updates regarding CPD, resources designed to guide the nurse through fulfilling all aspects of their CPD requirements, help videos and printable guides specific to the YourLife CPD Solution ePortfolio.

YourLife RDNS (SA) began to use an e-portfolio through the Australian Flexible Learning Framework Implementation Trial ‘Portfolios for nursing’ to compile and present evidence to support a range of course and professional competencies. The use of an e-portfolio system helped to overcome the complexity in integrating, applying and translating evidence of competencies required under both course and professional frameworks and to meet increased professional and regulatory requirements around evidence of learning. The ease of reflection and evidence management in the e-portfolio makes it particularly relevant to the new CPD registration standard.

Biography

Bec James-Mobbs
Bec works as an ePortfolio Project Nurse in the YourLife RDNS Education Centre. She has been a Registered Nurse for 15 years and has experience in critical care nursing and education including the Diploma of Nursing within the VET sector. In 2010 Bec was team leader for the Implementation Trial ‘ePortfolios for nursing students’, and project nurse for the Better Oral Health in Residential Aged Care initiative funded by the Australian Government Department of Health and Ageing.
Providing structure and promoting personalised learning within an 18 day wilderness walk: A blend of ePortfolios and multimodal feedback

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Abstract

Outdoor Education courses at La Trobe’s Bendigo Campus provide diverse opportunities for students to develop skills to work in the outdoors. One of the final activities that students undertake at the end of their first year Outdoor Education Degree is an 18-day walk in the Australian High country: The Long Walk. Understandably, this is rather a daunting prospect for students, and also for the teachers who have to prepare them for it. The walk is designed as a transition from being a participant to a position of leadership in outdoor education activities; this transition is reflected in the assessment where the use of innovative assessment tools and multimodal feedback systems is designed as a transition from formulaic assessment results to personalised expressions of their own learning.

The learning design is based upon an evidenced based approach to learning, of which the central theme is for authentic assessment tasks linked to an individual’s ability to represent evidence of their personal learning. PebblePad provided the flexibility and utility of a web based learning system for individuals to engage in assessment activities that enabled them to adapt content required to an individualised approach, deliver rich content of their learning progression and be innovative in the representation. The multimodal feedback enabled staff to provide rich feedback on key aspects of the students work in a formative, individualised approach.

Students were required to use the PebblePad personal learning system to create an action plan to set timelines for the completion of their tasks, then a preparation and research webfolio (ePortfolio) to evidence completion of various tasks involved in preparing for the long walk. At the completion of the walk students returned to the webfolio to reflect on their experience and draw on information to create an artefact of their experience. Staff utilised video and audio feedback to engage with the students work and provide ongoing assistance in the students’ preparation.

This presentation reports on the outcomes of the students’ and lecturers’ experience of engaging in the learning design. Analysis of student feedback on the assessment tasks indicates students thrived on the capacity to represent their learning in an individualised format and that the shift from structured to free form assessment proved to be highly beneficial. Students also highlighted the use of multimodal feedback as a key aspect of improving their work and engaging in the tasks at a deeper level.
Keywords: ePortfolio, multimodal feedback, authentic assessment, individualised learning

Biography

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Brendon Munge is an Associate Lecturer in Outdoor & Environmental Education at La Trobe University.
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Abstract

In 2009 Christine Cooper and Annelieske Noteboom of Challenger Institute of Technology formed a partnership with Damien Ardagh of Fortescue Metals Group to pilot the use of eportfolios for recognition of prior learning for Indigenous employees in the Pilbara region of Western Australia. The FMG employees were skilled and experienced in landscaping and garden maintenance work but had no formal qualifications in these areas. In the pilot program individual employees used Mahara to collect, store and present a wide variety of RPL evidence for assessment by the assessor who was located in Perth.

Very early in the project we discovered that we would have to design a method of evidence collection that would suit the candidate and the assessor, as well as maintaining AQTF standards. We especially needed to avoid the very real possibility for the candidate of collecting irrelevant material for their evidence and also of not knowing how to organise or present their evidence so that it was easy for the assessor to follow. We developed a model for using eportfolios for RPL that was quite prescriptive but that suited an industry where the candidates live and work in a region that is remote from the assessor.

Our experience with this pilot led us to believe in the potential application of eportfolios for RPL assessment across a range of industry areas, with the understanding that there are many aspects of using this type of evidence collection, storage and presentation that need to be carefully considered by the assessor.

In this presentation we will use lessons learnt from this, and other, eportfolio projects to outline current and future applications of eportfolios for RPL within Challenger Institute of Technology. We will also explore potential applications of eportfolios in industry areas such as enrolled nursing, hairdressing, sustainability and more; for example, where students may be required to collect portfolios of evidence for formative assessment or are required to write reflective journals of their experiences in the workplace.
Biographies

Annelieske Noteboom
Annelieske Noteboom manages projects within the Hospitality and Human Services division at Challenger Institute of Technology, with a focus on elearning. Her current projects include the design and development of Moodle courses for the Diploma of Nursing, the Advanced Diploma of Nursing (specialising in Anaesthesia), and the Vocational Graduate Certificate in Working Globally. Annelieske also conducts professional development, mainly for Moodle, and teaches several units from the health courses.

Christine Cooper
Christine Cooper is a principal lecturer at Challenger Institute of Technology.
Nicola Parker
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Abstract

This case study reports on some of the challenges faced when introducing a university ePortfolio strategy that is focused on program-level (degree) rather than subject-level (unit, course) outcomes. A program-level focus is seen as the most effective way to collect, hold, and report on, evidence of learning outcomes. The calls for such evidence are increasing, with internal institutional quality assurance processes, external reviewing agencies (AUQA/TEQSA) and professional accreditation bodies being major drivers. However, well-developed use of program level ePortfolios for assessment and providing evidence of attainment of Graduate Attributes, professional competencies and standards has been relatively scarce (Hallam et al., 2010).

Following exploration and trialling of a number of ePortfolio environments at the [University] we have begun implementing ePortfolios across two undergraduate programs, Business and Nursing. The use of ePortfolios has been written into both new curricula, making it possible to frame ePortfolios use at a program-level. For these programs the university has chosen Chalk & Wire’s ePortfolio system. The principal feature that distinguishes this from other environments is a sophisticated assessment reporting system that, in time, promises to provide a wealth of very useful information, far beyond that provided by our current reporting processes.

Assessment for, and of, ePortfolios requires some rethinking of assessment practices: effective assessment design in the context of a program means attending to the subject learning outcomes, whilst at the same time developing students’ longer term view of learning across a degree program. Teachers’ willingness and ability to engage in this rethinking cannot be assumed: when subjects are perceived as being ‘owned’ by teachers, the introduction of program-level requirements that directly impact on assessment activities might not be readily welcomed. The perception of ePortfolios being imposed from above also requires special attention to avoid situations we have experienced (such as tutors refusing to mark online). A balancing act is required to ensure that the longer term focus is not lost sight of at the subject level in the course of assessment activities, particularly during the ‘teething problems’ that inevitably accompany the introduction of new processes and systems. Connecting the interests of learners, teachers, tutors and program leaders, each with differing ideas and understandings of ePortfolios, and
relating these to longer term strategic goals, such as the development of graduate attributes, will continue to challenge us for some time to come. The challenges we have encountered in our project will be used to illustrate a discussion about the implementation of program-level ePortfolio assessment.

**Biography**

**Nicola Parker**

Nicola Parker is a lecturer in the Institute for Interactive Media and Learning, working on learning and teaching projects, academic support, liaison with the Law faculty and developing workshops for different groups including casual academics. Her research interests focus on the student experience of information and learning and the affective dimensions of assessment, embedding graduate attributes and program level assessment with ePortfolios.

**Simon Housego**

Simon Housego is an academic developer working with staff across the university on issues relating to the appropriate use of technology for supporting teaching, learning, and assessment. With a particular interest in the design and administration of effective assessment practices using ReView, SPARK (both developed at UTS), and Blackboard, he is currently leading the ePortfolio project at UTS.
Showing the difference by being the difference:
Professional portfolios

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Abstract

Professional portfolios are important tools through which competence, knowledge, experience, expertise, learning, and development can be showcased to employers, clients, professional bodies, and further afield. It is increasingly important that these portfolios are presented through digital mediums to allow ease of transmission, inclusion of multimedia content, and demonstration of 21st century skills. Presenting professional portfolios using eportfolios is a key skill in the current workforce but it is often considered a skill that is acquired through being ‘tech savvy’ and up-to-date with technology, thus often presenting a hurdle for many who think that they are not sufficiently ‘tech savvy’ to create their professional portfolio in a ‘tech savvy’, 21st century way. Therefore, presenting a professional development course focused on creating professional portfolios using eportfolio technology presents a conundrum for the facilitator: What can be (technologically) expected of the participants? How much technology is too much technology? How can the benefits of using an eportfolio system in the creation of a professional portfolio be demonstrated while maintaining a level of security for ‘less tech savvy’ participants? How can the benefits of eportfolios be presented in a non-threatening manner to encourage their uptake as mediums for creating, presenting, and transmitting professional portfolios?

This case study presents one professional development facilitator’s view of showing the difference that an eportfolio system can make to a professional portfolio by being the difference in presentation of the course content. The expected outcomes and the constraints of the professional development course are presented as the foundation for the discussion of the decision process and final presentation of the material and content of the course. The final decision to present the scaffolded content through the eportfolio system used in the institution is also examined through the creator’s rationale and through critiquing the objectives of the course, the attitudes of previous participants, and the expected results (or obtained results as the course finishes late September). The final product is explored and demonstrates that the adaptability of eportfolios is only limited to the ways in which they can be interpreted.

The delivery of the course content through a scaffolded eportfolio and a professional portfolio template demonstrates the difference that can be made using eportfolios to present professional portfolios.

What difference does it make? All the difference.
**Keywords:** professional development, professional portfolios, education, training, case study, eportfolios, PebblePad, pedagogical leadership

**Biography**

**Trisha Poole**

Trisha Poole is a lecturer in Teaching English as an Additional Language in the School of Teacher Education, Faculty of Education at Charles Sturt University.

http://csu.edu.au/faculty/educat/teached/staff/poole_trisha.htm
Mapping curriculum for ePortfolio integration into assessment

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Abstract

This paper investigates ways in which ePortfolios, initially introduced to students in a Music Education degree program on a trial basis, are subsequently being comprehensively integrated into all subjects of the degree program. This discussion focuses on integration from staff perspectives, and covers the varying ways ePortfolio assets can be utilised in a range of subject areas, problems staff encounter in introducing ePortfolio into their subjects, methods to adapt existing assessment assignments into ePortfolio tasks, and ways in which the inclusion of ePortfolio work leads to changes in learning and teaching practices. Challenges of assessing in an ePortfolio environment will be explored and a map of the ePortfolio throughout a complete undergraduate degree program will be revealed.

The mapping process, whereby ePortfolio work was perceived as transitioning into the content of this degree program, is explained and demonstrated. The paper will explain the design of the map that significantly targets a sequential progression of developing student’s ePortfolio skills through all subjects in the degree program. For example, in a subject titled ‘Ensemble Pedagogy’ students are encouraged to make a film of themselves conducting, running rehearsals, etc. In ‘Popular Music Studies’ students film themselves teaching and/or performing in a popular music setting to demonstrate their competence in both repertoire and pedagogy.

Mapping assessment tasks is a work in progress and researchers rely on student products, formal and informal feedback to continue integrating assessment tasks in a meaningful way that engages eLearners in developing an individual ePortfolio for use inside and outside the degree program. For example, in ‘Senior Secondary Music education’ the students create an ePortfolio asset demonstrating how to teach one of the mandatory HSC topics in HSC Music 2 syllabus — Music of the Past 25 years (Australian focus). The asset is connected to an existing assessment task (based on seminar presentation) thus demonstrating how an existing assessment task can be adapted into an asset for the ePortfolio. It is not about more work or re-inventing existing solid curricula by removing and adding tasks — it is about modifying tasks to include ePortfolio as part of the students’ learning and teaching.
In 2011 the assessment task for ‘Aboriginal and Torres Strait Islander Music’ will be re-designed to include an ePortfolio component that requires students to demonstrate how they might include Indigenous perspective/s in teaching (thus fulfilling a Federal directive in Australia that all levels of education acknowledge and teach about Indigenous beliefs, histories and ideas).

Biography

Jennifer Rowley
Dr Jennifer Rowley is a Lecturer in Music Education at Sydney Conservatorium of Music, University of Sydney, where she coordinates the Music Education Professional Experience program. Her teaching and research covers Gifted Education, social and professional issues for teachers, secondary and tertiary teaching and learning, and eLearning — its design and use for enhancing teaching and learning — and the issues of professional experience (concerns of beginning teachers, NSW teacher professional standards, behaviour management, cultural diversity in schools, social justice and equity). Jennifer’s research grants include a recently awarded ALTC Innovation and Development grant to investigate ePortfolios for creative and performing artists in Australia.

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A story of documenting evidence for teacher professional standards

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Abstract

This case study will report on a two-year project in progress, the ultimate aim of which is to embed ePortfolios and ePortfolio-based pedagogy into several degree programs at Sydney Conservatorium of Music, University of Sydney. The project's main focus was to address professional standards and/or competences as a response to government imposed teacher accreditation expectations. The project introduced ePortfolios slowly into three foundation units of study in a Music Education degree program that prepares students to become music teachers in NSW schools. One issue researchers considered was how ePortfolios could be utilised to demonstrate students’ music and teaching abilities outside university contexts. Other issues that were considered were the use of ePortfolios as being capable of demonstrating student multiple identities (musician and music teacher); difficulties relating to technology; and the question of whether or not to assess ePortfolios.

The first stage of the project involved a literature review of current thought and practice surrounding portfolio-based pedagogies in music education. There was a hiatus while waiting for ePortfolio software to become available and during this time students’ thoughts and opinions about ePortfolio assessment were gathered in focus group discussions in 2009 and 2010. It was decided that because in many ways ePortfolios are a personal journey, assessment should not be based primarily on the ePortfolio itself, but rather students’ ability to create their ePortfolio in a way that represented their learning journey through artefacts collected that matched professional standards. Samples of student’s folios will be available.

The ePortfolio software (PebblePad) became available in March 2010, and since then, much work has been done to embed ePortfolio tasks (for assessment) into curriculum. Students have progressed well in their development and many have gone beyond the original task to document evidence for graduate teacher professional standards to designing wonderfully rich learning biographies of development as a music teacher. A mentor was provided offering individual sessions for students during all stages of their ePortfolio development. Several sessions have been held with the University ePortfolio coordinator to explain how ePortfolios fit with curriculum, graduate attributes and NSW Institute of Teacher standards.
Initial results are very promising in terms of student engagement and the quality of ePortfolios created. The project will be continuing for 2011, with a broader scope to encompass a curriculum rationale that has been created to embed ePortfolios into additional degree programs.

**Biography**

**Jennifer Rowley**

Dr Jennifer Rowley is a Lecturer in Music Education at Sydney Conservatorium of Music, University of Sydney, where she coordinates the Music Education Professional Experience program. Her teaching and research covers Gifted Education, social and professional issues for teachers, secondary and tertiary teaching and learning, and eLearning — its design and use for enhancing teaching and learning — and the issues of professional experience (concerns of beginning teachers, NSW teacher professional standards, behaviour management, cultural diversity in schools, social justice and equity). Jennifer’s research grants include a recently awarded ALTC Innovation and Development grant to investigate ePortfolios for creative and performing artists in Australia.

**Ruth Weeks**

Ruth Weeks is an Educational Designer (ePortfolios) at the University of Sydney.
Adopting an e-portfolio as an assessment tool: Investigating options, issues and future possibilities

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Abstract

As part of a major curriculum change associated with the advent of the Joint Medical Program, which is a partnership between the Universities of Newcastle and New England and the Area Health Services, the possibility of using an e-portfolio for assessment in clinical and non-clinical settings has been the topic of extensive investigation. By adopting a scholarly approach based on Buzzetto-More and Alade’s (2008) Pentagonal E-portfolio Model, trialling platforms and systems with students and staff we are moving towards adoption of an e-portfolio that we hope will serve students in two universities offering a five-year program where clinical training takes place in numerous settings including doctor’s surgeries, hospitals and allied health locations. Meeting the needs of students and staff in such a distributed environment where the majority of time is spent in rural and regional locations where online activities are sometimes difficult is an ongoing challenge, but advances in mobile technologies and the roll-out of the National Broadband Network (NBN) provide new opportunities and have stimulated additional investigation. Underpinning all our work is the view that our problem-based learning pedagogy (PBL) should drive the choice of technology rather than the reverse.

While they open up exciting possibilities for clinical education and mlearning, an e-portfolio also poses challenges for data security, storage and orientation of students about professional behaviour in the digital world. These are challenges to be negotiated alongside portfolio adoption. From an implementation point of view, systems integration across two institutions and their partner health services provide ongoing difficulties for managing the joint cohort as clinical years begin. We discuss our progress here and forecast work to come, including discussion of the efficacy of the Buzzetto-More and Alade model in our context. To date, we have traversed three levels of the Pentagonal E-Portfolio Model: Level 1 — Identification of Needs; Level 2 — Determination, Assessment, & Budgeting; Level 3 — System Selection and Strategic Planning; and are embarking upon Level 4 — Development, with a view towards Level 5 — Implementation and Growth.
We frame our paper by describing our journey so far, discussing lessons learned to date and the possible ways forward in our context. In doing so, we hope to challenge discussion though presenting our work to date and raising some issues for consideration with our colleagues.

**Keywords**: e-portfolio, electronic assessment, medical education, higher education

**Introduction**

Why might we adopt an e-portfolio for assessing our students? This was the initial question posed by the members of the Assessment Committee charged with examining how assessment was, and should be, carried out when the renowned 30-year-old University of Newcastle (Henry, Byrne, & Engel, 1997) PBL medical program expanded to become the Joint Medical Program (JMP). This expansion included re-visioning towards an increased rural focus and the addition of one third more student places (now 200 per year) in partnership with the University of New England and two regional and rural Local Health Networks within the New South Wales Department of Health.

Following initial scoping of the project, we adapted the Pentagonal E-Portfolio Model developed by Buzzetto-More and Alade (2008) and used this to plan phases and stages of investigation and trialling. To carry out these tasks in a cogent manner, our methodology was based in the participatory action research (PAR) paradigm (Kemmis & McTaggart, 2008) since we wished to include stakeholders and to build momentum for eventual implementation from their enthusiasm and vision. In considering core principles, philosophy and ethical considerations, we relied upon emergent literature and the work of scholarly communities worldwide (Hallam et al., 2008; Johnson, Levine, Smith, Smythe, & Stone, 2009; Moores & Parkes, 2010; Stefani, Mason, & Pegler, 2007).

Drawing on expertise of staff at both universities, we established a working party to determine the potential for adopting electronic means of gathering, storing and using evidence of learning under the following Terms of Reference:

a. determine the purpose and form of a student assessment portfolio

b. evaluate the efficacy of electronic portfolios currently in the market place

c. make recommendations regarding the processes required for the adoption of an e-portfolio, including budgetary requirements, network infrastructure, staffing and user interface design

d. devise a process for implementation of an e-portfolio system including staff and student training.

So far, we have completed items a) and b) and are well on the way to finalising item c), which highlights the technical challenges of compatibility, interoperability and access given that the partners do not share any common systems, yet. As the discussion in this paper unfolds, it will become evident that we still have work to do but the upshot of our journey so far is that we have made progress, passing through or jumping over some of the stages of the Pentagonal E-Portfolio Model during our action research. We have detailed our pedagogical needs (Cotterill, Bradley, & Stacy, 2008); devised criteria to evaluate e-portfolio products and sought commercial and
in-house products to evaluate; trialled products with colleagues and also with students who volunteered to become involved; conducted an extensive literature review and interacted with communities of practice grappling with similar needs, desires and dreams! Although we have not moved swiftly, we feel that we may perhaps be wiser now and in a stronger position to ‘get it right’ when we do move to implementation.

**Our conceptual framework**

Why is a conceptual framework useful to underpin a scholarly approach? In order to undertake our investigation we needed a way to chart a decision-pathway through the maze of purposes, products and ideas on offer and to make meaning of our findings in an environment of uncertainty (Savin-Baden & Howell Major, 2010). Rather than attempting to use one theory alone as a basis for our work, we took the notion of the conceptual framework as a set of general ideas and principles taken from relevant fields of enquiry and used to structure a subsequent investigation (Punch, 2009; Smyth, 2004). It was obvious that we were investigating a phenomenon that involved theoretical, practical and conceptual knowledge and had a strong connection to *phronesis* – practical and context-dependent deliberation about values (Greenwood & Levin, 2008). Therefore, it became important to make these elements explicit rather than having them remain implicit in our work. Making this decision meant that the choice of an action research methodology was epistemologically consistent both with our PBL philosophy and the nature of our inquiry. Further, a PAR approach allowed us the greatest flexibility to include stakeholders in each phase of investigation, trial and review, as well as holding the promise of transformation leading to the potential for successful adoption.

We approached our task from the position that the longstanding PBL philosophy of the Newcastle medical program should guide its redevelopment and expansion using educational technology. This philosophy supports an integrated curriculum that fosters independent learning, reflection and learner development with a focus on professional behaviour, problem-solving, growing autonomy; and the development of wisdom. Here, student learning and enquiry are best stimulated by immersion in the health challenges faced by members of the communities with which the student doctors engage. This helps to ensure that student effort is well targeted to the continually evolving landscape of barriers and enablers to health maintenance, disease prevention and treatment (Henry et al., 1997). Assessment of this learning requires opportunities for formative feedback, which we believe could be fulfilled by an e-portfolio that supports our focus on criterion based practice in line with our international colleagues (Norcini et al., 2011).

In summary, the Newcastle philosophy is the first core element of our conceptual framework and the element closest to Aristotle’s *phronesis* or getting of wisdom. This philosophical stance is at the heart of learning design. Given educational change theorising over more than 40 years (Hargreaves, Lieberman, Fullan, & Hopkins, 1998) we were aware that large scale curriculum change is a fraught process with many failures and few enduring successes. Thus, the second core element of our conceptual framework is educational change theorising. From Fullan’s (1998; 2007) longstanding work and the view of Sergiovanni (1998) that the most likely way to achieve successful educational change was to adopt a well planned community-based or participatory approach, we decided that our approach should
exemplify these principles. Thus, we searched extant literature for an appropriate model to use as the basis of our investigations, our third core element. We were lucky that Buzzetto-More and Alade (2008) had not long published their Pentagonal E-Portfolio Model so we determined that it could be adapted to guide our work because it was philosophically and epistemologically consistent with our goals and intention to use PAR as our investigative approach. In addition to the aims outlined above, the principles we desired were also embodied in the detail of this model, further highlighting its suitability:

To assist students, e-portfolio systems should include a full suite of software, templates, a means for students to bring in materials built elsewhere, and reflective student commentaries that serve as meta-documentation


We hoped to achieve an e-portfolio that would enable:

- Accessibility from all JMP partner sites and registered broadband/mobile devices.
- Upload/download files of any type, including video, to external sources and mobile devices.
- Tracking views where students can monitor progress towards completion of assessment, competencies and clinical tasks.
- Output facility so that a portfolio can be downloaded and/or transferred to relevant external databases upon graduation, thus providing evidence of employability.

In addition, we felt confident that we could assure quality and authenticity by planning for:

- Digital verification/signature for assessments.
- Automated assessment validation and processing according to preference for on-screen or print marking.
- Linking to secure data base to record grades for summative and/or formative tasks and possibly update attendance and completion of competencies.

These aims remain, although we are now more aware that their achievement is dependent on many other factors related to the ‘jointness’ of our program and challenged by the separateness of the stakeholders and systems involved. This is where the NBN has the potential to support our work, particularly where students are attached to clinical schools in five rural and regional centres not all served well by broadband infrastructure or located within the Department of Health network. As noted earlier, access and interoperability of systems are significant challenges impacting on achievement of our vision. A most recent exploration of the possibility for mlearning using iPads from 2014 (Scanlan, 2011) increases pressure to solve such limitations.

**Using the Pentagonal E-Portfolio Model**

Although it is our reference point, we have not slavishly tried to follow the Pentagonal E-Portfolio Model step by step. We can, however, chart our journey against its five global stages.
Level 1: Identify

The first level in the adoption process is the development of performance based student learning outcomes, the identification of measurable performance indicators, and the determination of the purpose(s) for the portfolio (Buzzetto-More & Alade, 2008, p. 51)

Our primary need for the e-portfolio is provision of evidence for assessment, including graduate employability. The implementation of the JMP is focused on curriculum renewal so an opportunity was created for us to be forward thinking about learning outcomes, assessment, student engagement with the curriculum, and the adoption of technology as an aid to learning. Evidence-based practice means that log books, case write-ups, paper portfolios and other evidence gathering activities are in use so it seemed logical to consider whether an electronic portfolio system would act as an integrating device and add value to these activities through emphasising their collective contribution to student learning over time. Work has begun on revisiting performance-based learning outcomes within some courses and looking at how these may be utilised to support evidence gathering in an e-portfolio and using mobile devices. In complementary activities, measureable performance indicators are being developed from mapping of clinical and other skills and knowledge in line with our primary purpose of supporting effective assessment which enables students to demonstrate their developing wisdom.

Level 2: Determine

The second level of the portfolio adoption model involves selecting the features desired in the portfolio system to be adopted, assessing the current technology structure that will support portfolio adoption, determining the type of portfolio to be adopted, and budgeting (Buzzetto-More & Alade, 2008, p. 51)

So far in our journey, the selection of desired features, the type of portfolio to be adopted and budgeting have been relatively easy given the limited funding we have available. The assessment of technology infrastructure to support the e-portfolio is, however, quite complex because we have two separate universities and five clinical sites involved, and although one university may host the portfolio software, access to it and provision of the peripheral support devices required to enable it across non-integrated networks is challenging. Our ultimate dream also requires interoperability between student management, curriculum and assessment databases ... no mean feat.

One activity that we have found most useful is engagement with colleagues and communities of practice undertaking similar journeys. By presenting our project at two consecutive medical education conferences in 2009/10 we have been able to ground our investigation in the wider world of e-portfolio implementation and development, leading to informed critique from our colleagues and insight which has enabled us to move forward (Horton, Smyth, Studdert, & Griffin, 2009; 2010). Similarly, our engagement with the AeP network led to our mapping of the aims and objectives of our project against the Australian Flexible Learning Framework (Galatis, Leeson, Mason, Miller, & O'Neill, 2009), which reassured us that we were reasonably aligned to accepted practice.
Level 3: Select and plan

Here we have learned from the experiences of educational change theorists and taken the advice given in the Pentagonal E-Portfolio Model:

*The third level of the portfolio adoption model being presented involves system selection and the development of an implementation plan with a realistic timeline. This is an area that is often overlooked and/or rushed; however, it is crucial, with ramifications that will set the stage for the emerging portfolio project* (Buzzetto-More & Alade, 2008, p. 53)

Indeed, this connection with change theorising is one we have made within our conceptual framework and which we believe strengthens and supports our use of the model. The steps involved in implementation outlined in the model (Buzzetto-More & Alade, 2008, p. 53) can easily be aligned to aspects of Fullan’s (2007) extensive work. It may even be possible that we can enhance the model by including aspects not explicit but yet critical in change theorising. Vision-building is a key element of successful change which is not explicit in the model and which we are attempting to instigate. The notion of evolutionary planning is explicit in the model and is also consistent with our participatory action research methodology as are resourcing, training and stakeholder support. To date, our investigation (Redman, 2010), and experience, have shown that technological support by committed educational technologists is essential for user take-up and confidence (Smyth, 2009; Smyth & Vale, 2011). Fostering these values is essential if we are to translate vision into motivation to continue, especially as there will always be technical glitches beyond our control as new devices emerge, especially in the mobile domain.

Level 4: Develop

*The fourth level of the adoption process involves the establishment of resources, building the portfolio into the academic curriculum, and creation of the rubric and means that will be used to evaluate student portfolios* (Buzzetto-More & Alade, 2008, p. 54)

Alongside our pilot testing, evaluation of products and consolidation of purpose, we have kept an eye on resource needs and the place that an e-portfolio might have in curriculum renewal. Our ideal is full integration between a curriculum mapping system and the e-portfolio interface where students have a one-stop view of their course requirements and progress. Here is where planning for integration of systems underpins work on the portfolio interface and design and supports pedagogical needs. We have found this to be the most complex area of our investigation to date and it has become known colloquially amongst the working party as the quick sand. This is particularly so now that student learning with mobile devices is mooted.

Level 5: Implement and grow

*During the fifth level, and final stage, of the portfolio adoption process the institution will need to pilot test the system, prepare student for implementation, engage in full implementation, and begin the cycle of continuous assessment and improvement* (Buzzetto-More & Alade, 2008, p. 55)
This is one area where we have adapted the model. Given its pentagonal nature, we have taken the view that the model is not intended to be linear or segmented and so we have used aspects of this level to inform pilot testing in specific courses and with specific cohorts of volunteer students. It is not the final stage for us, yet. Our use of the PAR methodology has allowed us to engage with stakeholders to aid our learning, to develop strategies suitable for implementation and to begin to build a vision of how an e-portfolio could look, feel and perform in the JMP. Here again we have combined the change elements from our conceptual framework with the advice from the model to develop our own process aligned to the Newcastle philosophy, the emerging JMP values and emerging technology contexts.

**What have we learned about the efficacy of the model?**

The Pentagonal E-Portfolio Model has been helpful as one of our core conceptual elements. It has provided structure and a process consistent with our values and goals. It has also aided in the presentation of our ideas and progress to colleagues for review and to build collective vision. That its intent is well aligned to change theorising enhances its importance in our view, strengthening our resolve to move forward. If we have one criticism it is the use of language in the model. Each of the five global stages is called a ‘level’ implying an hierarchical or linear approach and yet the model is depicted as a pentagon with each section abutting the next in a circular manner.

**Compatibility of methodology**

A participatory action research methodology is by its nature collaborative. In our case, we aim to involve different stakeholders in various activities and phases of the investigation. In the sense that we are all participants as well as researchers driving the investigation, we have a deeper engagement in the process than would be achieved if we were the subjects of a research project. To this extent we hope we are consistent with Kemmis and McTaggart’s philosophy, which enables change:

> Focusing on practices in concrete and specific ways makes them accessible for reflection, discussion and reconstruction as products of passed circumstances that are capable of being modified in and for present and future circumstances  

*(Kemmis & McTaggart, 2008, p. 279)*

We see ourselves engaged in the social process of examining our understandings, skills and values related to assessment practices and educational technology; interpreting them in the light of interaction with colleagues and interested communities of scholars to achieve practical ends such as more effective assessment of student outcomes and evidence of graduate employability. We hope our investigation will lead to innovation based on critical reflexivity as we pass through action research cycles and phases of the Pentagonal E-Portfolio Model; leading to transformation in assessment (theory and practices); and perhaps emancipation from outdated ideas and beliefs.
Practical action

From the initial formation of the working party with the aims detailed above, we devised a plan of action based on the phases of the Pentagonal E-Portfolio Model. This included detailing our pedagogical requirements (Cotterill et al., 2008); a scope of products available; analysis of the landscape of the JMP as it rolled into its third year and planning of a series of manageable trials. Our limitation has been that these investigations are part of a larger series of projects associated with the implementation of the JMP being carried out by a core group of staff who also have significant teaching, administrative and research functions. Our working party has a core comprising two educational technologists, three academic staff members, an academic developer and an administrative support officer, who meet regularly by videoconference. As needed we co-opt others with relevant expertise or experience.

What have we learned?

From our scope of products, we found an increasing range of products, functionality, services and costs, which were often difficult to compare. In the end, our decisions were governed by pragmatic considerations such as available funding, staff and so on.

From mid 2009, we began planning a considered set of trials. In the first instance, we gained Human Ethics Research Committee approval to conduct online surveys and focus groups with students. As a first step, we interviewed four students currently using paper portfolios in a core Year 4 unit, asking about the usefulness of these and the possibilities for them to become electronic given the clinical settings in which they were compiled. We learned that convenience, useability of the interface and easy access to peripherals (scanners, etc.) were high on these students’ wish list. Subsequently, we set up the first trial and sought student volunteers from a Year 4 clinical course to be involved and interviewed. The outcomes from a thematic analysis were that the eight participating students valued the following aspects:

- Ease of accessibility so e-portfolio acts as an incentive for recording blogs on a weekly basis.
- Having the feeling of someone watching their progress which acts as a motivator for the student to keep their page up to date.
- Reflecting weekly which helps the students engage in what they are doing and acts as an incentive to work harder. Generally, participants felt this would be better than submitting a paper-based portfolio.
- Opportunities offered for improved formative feedback. Students lacking confidence feel it would be more valuable to stick with e-portfolio instead of the paper-based portfolio in this regard.
- Sharing their e-portfolio page, each showing different styles and ideas. Participants felt sharing assisted struggling students with more ideas or suggestions.
Areas of improvement suggested by students included the following:

- Setting up online tutorials, e.g. uploading images, hyperlinks.
- Using mentors for those without IT knowledge and little confidence — to provide one-to-one support.
- Providing an example format for future students, by showing the steps to set a page up before starting, e.g. producing ‘Top 10 Tips’ on how to get started.
- Showing future students an existing e-portfolio submitted by a student previously.

These reflections align well with our pedagogical principles derived from our PBL philosophy so help us to feel as if we are progressing in ways which students will find helpful. Discussions amongst staff involved in marking the e-portfolios in the trial also indicated that e-portfolios had provided opportunities for students to be creative in presenting information in novel ways which had not been envisioned by the assessors. The way in which students were able to shape their reflections in line with their individual identities, in some instances using popular imagery provided wonderful examples of student centred learning. This resulted in assessors not only enjoying many aspects of their marking of the task, but also becoming better acquainted with each of the students and their experience of the journey to become doctors.

We are yet to take advantage of the potential of e-portfolios to enable students to share experiences and reflect on each other’s learning routinely. Nevertheless, we believe this could serve to provide students with greater opportunity to learn about medicine as a shared group experience which could be well aligned with constructivist learning principles, the JMP philosophy and potential move into mlearning in a supported learning environment.

**Next steps**

We are building on our trial by incorporating the vision of previous users in the next round of e-portfolio implementation in our current Year 4 clinical courses. Training incorporated the recommendations from the trial about using exemplars and greater online support.

Embedding the e-portfolio within the curriculum will require ongoing integration with current learning activities and practices, with development of templates and interfaces based on need and recommendations, and development of mentoring for staff and students. This will be particularly so as the curriculum moves into the next phase of renewal and possibly mobile technology. We acknowledge that will need to monitor the effects of the e-portfolio on student learning and continue to seek insights and feedback from the broader e-portfolio user community. We will also continue to explore the potential for e-portfolios to track student experiences whilst interfacing with curriculum maps and databases.
**Conclusion**

Our investigation and development to date of an e-portfolio for our medical students has been influenced by the lessons previously learned by others as revealed by our scholarship, and also informed by the fresh and sometimes unpredictable findings of our own students’ trialling of one platform and the changing landscape of curriculum renewal within the JMP. Our initial driver for exploring e-portfolios was the need for a mode of assessment which could indicate over time how well students were transitioning to the role of health professionals who could demonstrate their employability. Both the literature and our networking with colleagues supported the legitimacy of these original aims, and the importance of commencing with a clear statement of priorities. Members of the e-portfolio user community also recommended that assessment underpins the use of e-portfolios to provide added incentive for students to engage with the technology. Subsequent discussions will link the use of technology with assessment of professional behaviour as well as the development of wisdom in a mlearning context.

E-portfolios not only provide a repository for each student’s work, but also opportunity for students to share experiences and to give each other fresh insights to aid in their understanding and interpretation of events. Students in our trial highlighted the value of feedback from staff on their recorded experiences and reflections, suggesting that e-portfolios can potentially strengthen bonds between learners and mentors by promoting dialogue around real events and incidents of meaning for students.

It has been satisfying to build an understanding of how this form of technology can support educational development which is driven by sound pedagogical principles. The potential for e-portfolios to enrich learning in ways that are responsive to student needs as well as to program accreditation requirements is very exciting. We witnessed much creativity as individuals in our trial made the most of their e-portfolios by recording and reflecting on their own experiences in unique ways. This reinforced to us that this journey of discovery is shared by learners at all levels of experience.

**References**


**Biographies**

**Robyn Smyth**

Dr Robyn Smyth is a Senior Lecturer working as the Academic Developer for the Joint Medical Program (JMP) based in the School of Rural Medicine (SRM) at University of New England. She specialises in curriculum design, using rich media technology in higher and medical education for student centred pedagogies. Robyn has been an active researcher using and investigating the pedagogy of higher degree supervision, practice and theory; curriculum design in complex contexts; and video and related communications, their pedagogies and potential for use as tools to support student learning. Principally her research is focused on pedagogy and educational change management, including the potential of rich media technologies to enhance interaction for distance learning in higher education, including for higher degree research supervision. Robyn recently led a sector-wide investigation into the sustainability, viability and scalability of rich media technologies in Australian universities funded by the Australian Learning and Teaching Council.

In addition, Robyn is the Director of Medical Education for JMP, chairing the Monitoring and Evaluation Committee (which is responsible for gathering student feedback on their learning experiences); the e-portfolio working party investigating possible implementation of electronic portfolios for assessment; the FRS Working Party investigating lecture quality issues; and is a member of numerous SRM, JMP and University of New England committees relevant to teaching and learning.

**Graeme Horton**

Graeme Horton is a Senior lecturer in Medical Education and General Practice. Current roles include Program Convenor of the Bachelor of Medicine — Joint Medical Program of the University of Newcastle and the University of New England. He chairs the Joint Medical Program’s Written Assessment Committee and is a regular participant at item writing workshops for the Australian Medical Council examinations. He has presented on e-learning and other innovations in medical education at two ANZAME conferences and at the AMEE conference in Prague. His
publications in peer-reviewed journals include a number of articles on the links between preventative health advice and environmental sustainability, and he is currently completing a PhD on student attitudes to environmental health topics in medical education.

**Catherine Studdert**

Catherine Studdert is Project Manager of a cross-institutional Occupational Therapy ALTC Research Project led by the University of Newcastle (UoN) creating web resources to develop students’ graduating competencies, and teaches Media Production within the Bachelor of Communication program at UoN, where she has been a Sessional Academic for the past five years. She most recently held a Lecturer position at Southern Cross University coordinating a cross-institutional assessment benchmarking project and developing academic online self-study modules. As a member of the Joint Medical Program (JMP) e-portfolio working party at the University of Newcastle and University of New England, which is investigating the potential use of an e-portfolio in the undergraduate medical program taught between the two universities, she presented the e-portfolio project work at ANZAME09, ANZAME10 and recently at the UoN ALTC Project ‘Facilitating work integrated learning through skills-enabled e-portfolios in the Construction and Nursing Disciplines’ Symposium, ALTC, Sydney.

**Brett Griffin**

Brett Griffin, IT Project Officer, has a Computer Science degree and an Associate Diploma in Biology. He is currently an IT Project Officer at the School of Medicine and Public Health working on the Curriculum Mapping Project while also running an Online Communication Trial using Elluminate, the e-Portfolio project and evaluating collaborative tools and software. Brett worked for a number of years as a Web Developer in an educational technology unit at the University of Newcastle, and was a Senior Project Officer for the Hunter New England Area Health’s online course delivery development project. His interests include technology in education and user interface design.

**Ian Symonds**

Ian Symonds is current Dean of the Joint Medical Program (NSW) and Professor of Obstetrics and Gynaecology. Before moving to Newcastle he was the course coordinator for Obstetrics and Gynaecology at Nottingham University. During that time he helped to develop programs of inter-professional learning, primary care based learning, distance learning and overseas study. He was closely involved in the setting up of a new Graduate Entry Medical program, based at Derby in the UK and in the establishment of the JMP. He has edited or co-authored three undergraduate textbooks on obstetrics and gynaecology and has a Masters degree in clinical education.
Nursing assessment for learning

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Abstract

This case study explores the development and implementation of assessment for, and of learning in, a blended learning environment for 150 enrolled nursing students. The online learning environment consisted of a learning management system (Moodle), an ePortfolio system (Mahara) and a number of participative media such as Voicethread and YouTube.

Learning communities connecting students and teachers both within a class and across the state were established for students to share their work, collaborate on tasks, discuss topics of common interest and support each other with ICT issues.

Assessment ‘tagging’ was used by students in Mahara to indicate which of the 10 National Competency Standards for the Enrolled Nurse were being evidenced. Students participated in forums and wrote reflective journals, which they were encouraged to share with their peers and a mentor for feedback. A range of formative and diagnostic assessment tools in Moodle were used to complement those used in Mahara and some other online services.

The case study describes the evaluation of processes and support developed for enrolled nursing teachers and students, many of whom had not previously participated in a collaborative learning community or kept a reflective journal.

Keywords: ePortfolios

Biography

Roger Stack
Roger Stack is the Flexible Learning Facilitator at Tasmanian Polytechnic.

Current role: State-wide strategic planning and implementation of flexible and eLearning across the Tasmanian Polytechnic, a post-Year 10 vocational education institution.

Current projects and interests: Virtual campus, ePortfolios, gamification, immersive learning, self-directed learning, spirituality in education.

Current professional goal: Implementation of the 4th bottom line in a learning organisation.
Students and staff collaborating to make a difference

Sandra Stewart
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Abstract

In 2009, Charles Sturt University introduced PebblePad, an ePortfolio/personal learning system, to the university community through a ‘viral’ rollout, beginning in courses where staff were already familiar with the concepts and pedagogies underlying the use of these tools. As is often the case with new technologies, at times there was an inclusive learning process for both staff and students as they tackled the advanced complexity and flexibility of the system. PebblePad’s design can be a challenge for new users, but this flexibility also allows students to explore and develop its use to suit their own needs, often resulting in exciting individual, personalised learning.

One year later, at the suggestion of a post-graduate student, the university created a discussion forum to assist in promoting, encouraging and supporting student use and engagement with PebblePad. This supplemented a suite of help resources and faculty/course level student mentoring programs that already existed. The forum was particularly important, as the system was available to all students. Increasingly students were hearing about it from their peers, and wanting to explore it for their personal use, even though it wasn’t currently being used within their course. A team of staff as well as student mentors monitor the forum on a regular basis, responding promptly to student queries. Log-in problems, technology and higher level skills are handled by staff, but questions about uploading assets, types of assets to use or how to set up an ePortfolio are most often answered by student mentors.

On the 23rd of February, 2010 the first forum posting was simply: ‘Hello ... a new forum ... what is pebble pad exactly???’ This quickly had two replies from students who were already PebblePad users. At the time of writing, there had been almost 1000 posts and 180,000 distinct reads of those posts, suggesting that students may be gaining answers to their questions from previously posted information.

The PebblePad forum is a well-used university asset. The joint involvement of staff and students provides students a full range of support, with student mentors able to draw on their PebblePad experiences to provide empathy, instruction, clarification and examples of PebblePad use from non-related subject areas.

For the students involved in mentoring, it has given them the chance to expand their PebblePad and ePortfolio skills and to learn more about the resource so as to better support others. The PebblePad forum is an example of staff and students working together to make a difference for learners by supporting and showcasing the potential of ePortfolios to transform the process of learning.
Biography

Sandra Stewart

Sandra Stewart was a K-6 and ESL teacher for 28 years. She became passionate about ePortfolios in 2009 after exploring their usefulness beyond assessment. Sandra was part of the student panel at the Australian ePortfolio Conference in 2010 and also presented, as a case study, her ePortfolio story. She commenced her Masters in Education at Charles Sturt University this year and is completing pre-research subjects with a view to researching ePortfolio use by teaching graduates beyond university and has almost completed a literature review for this topic. Also this year she has been part of the design team for the EpCop Mooc and has learned much from this collaborative project. Sandra’s aim once this semester is over is to use more digital story telling while she is updating all, or at least, some of her ePortfolios.
All joined up: Easing the transition from claimant to student with an RPL ‘add-on’

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Abstract

An analysis of the RPL process at a major teaching university identified that the existing process was slow, costly and cumbersome — three descriptors that have no place in the emergent economic climate and the era of the dynamic and responsive university. In response, the university decided to develop an electronic process that:

1. was more efficient for tutors
2. was more informative, supportive and consistent for learners
3. provided successful applicants with a head start in developing a personal learning space (from which multiple portfolios could be constructed over time).

The first point demanded notifications, feedback ‘banks’ and the use of familiar tools. The second could be addressed through an informative website, a simple application process with supporting materials and the opportunity to develop applications in response to iterative feedback. The final requirement arose from an institutional entitlement to a personal learning space.

With a broad set of aims in mind the project team drew together experienced RPL experts from key academic areas, registry and the learning enhancement unit. Working closely with the eportfolio team a prototype was developed within two weeks of the start of the project. The prototype was then tested with a ‘convenience’ sample of academic and support staff acting in the role of applicants. Feedback from the group was fed directly back to the development team and within five weeks of the project start a completed product was successfully tested with students.

This session will demonstrate the process that RPL applicants take, namely using the tool to:

- self-register for an eportfolio and RPL account
- make an initial application and receive feedback on it
- make any necessary changes and add supporting evidence
- receive further feedback and support to develop a successful application
• receive an offer of credit
• transfer to the university and continue to build upon the ‘portfolio’ of evidence.

The RPL tool is independent of the ‘eportfolio system’ using OAuth to negotiate accounts between both tools and web services to convey data and updates. Evidence is saved as Leap2A objects.

Keywords:  RPL, eportfolio, transition

Biographies

Shane Sutherland
Shane Sutherland is Operations Director, Pebble Learning in the United Kingdom.

Colin Dalziel
Colin Dalziel is Operations Director, Pebble Learning, UK and has extensive experience with learning technologies dating back to 1996. Previous areas of work have included computer aided assessment, LMS development, interactive whiteboards, classroom voting systems and online skills profiling.

In his role as operations director for Pebble Learning, Colin supports the development of the PebblePad eportfolio system and its use in an increasing number of institutions around the world. As part on this development activity Colin has recently been project managing the integration of PebblePad with Blackboard Learn 9.1, Moodle 2.0 and Turnitin plagiarism detection software.

Alison Felce
Alison Felce is Co-ordinator of Work-based Learning, The Institute of Learning Enhancement, University of Wolverhampton.
The personal learning space: So much more than just an eportfolio

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Abstract

‘We need an eportfolio!’ is the current catch-cry of many education institutions, often quickly followed by ‘which eportfolio system should we use?’ But .... what if this is actually the wrong question to be asking? What if the focus on ‘eportfolios’ is preventing the exploration of broader, more exciting possibilities?

Drawing upon extensive action research and case studies from over 20 institutions, a picture is emerging of a technology that shares some characteristics with the institution virtual learning environment (VLE) and others with the individual personal learning environment (PLE). Represented as a Venn diagram this technology occupies the ‘space in the middle’.

Typically institutional technology is provided by the institution; content within it is both created and controlled by agents of the institution. Further, the institution controls who has access to the system and the content it contains. The PLE is an idiosyncratic collection of tools and services notionally owned by the learner, as is the content which is broadly under the learner’s control.

The technology in the middle, referred to here as a personal learning space (PLS), is provided by the institution to serve certain purposes for which both the VLE and the PLE are unsuitable. The institution has some control over who can access the system, but not to the content on the system that is owned and controlled by the learner; eportfolios fit naturally within this space and for most institutions are the primary purpose behind providing this technology. However, eportfolios are but a small component of the PLS picture.

Unfortunately, the continued focus on eportfolios is preventing many institutions from recognising and making use of the wider benefits and opportunities the PLS has to offer.

This presentation will provide an overview of the PLS, describe how it can be used to generate learning, as distinct from simply evidencing and presenting learning, and offer a series of real world learning designs that demonstrate how the PLS is so much more than just an eportfolio.
Biographies

Shane Sutherland
Shane Sutherland is the Operations Director, Pebble Learning, United Kingdom.

Alison Poot
Alison Poot is the Australian Director of Pebble Learning. She works with education institutions and professional bodies across Australia and New Zealand to support the implementation of the Personal Learning Space, PebblePad. Alison has been involved in the Higher Education sector for more than 20 years in a variety of roles including student counselling, coordination of first year and retention programs, evaluation and quality assurance, and project management.

Colin Dalziel
Colin Dalziel has extensive experience with learning technologies dating back to 1996. Previous areas of work have included computer aided assessment, LMS development, interactive whiteboards, classroom voting systems and online skills profiling.

In his role as operations director for Pebble Learning, Colin supports the development of the PebblePad ePortfolio system and its use in an increasing number of institutions around the world. As part on this development activity Colin has recently been project managing the integration of PebblePad with Blackboard Learn 9.1, Moodle 2.0 and Turnitin plagiarism detection software.
Lessons learnt — implementing e-portfolios into VET staff training

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Abstract

This project was carried out with staff at the Great Southern Institute of Technology in Albany, WA. With an original proposal to use e-portfolios as a tool to help induct new teaching staff into the Institute a lack of new staff quickly turned the project into a rewarding PACD experience for a mix of both new and experienced staff.

The proposed plan was to invite four or five new lecturing staff into a project where with the guidance of a mentor, they would use the e-portfolio program Mahara to complete the Institute’s induction process. Along the way pair would record their progress, post reflections and highlight any issues. The inductee would then enter their teaching and teacher training with an e-portfolio recording their progress into the organisation and once teaching, reflections on what they do, fears and doubts and successes can be recorded in their portfolio.

Events evolved and this plan was never put into place and the project became one where new and experienced staff were still involved, but without the emphasis on the induction process, rather one of let’s see what we can do with e-portfolios in a regional VET setting.

After initial training from WestOne Services, we thought that through regular meetings and a little homework that we could teach ourselves how to use Mahara. Full of enthusiasm, we had the software hosted and linked to Moodle and set about learning Mahara with the view to possibly using it with our own students in Semester 2. A number of questions have been put to me as the facilitator along the way.

I have learnt that group members want to know ‘why would we use this and not Moodle?’ Mahara can do a lot as an e-portfolio, but is that maybe at the cost of simplicity and thus user friendliness. If we are getting lost amongst the tabs, pages, views and templates, what would it be like for the average VET student? How much ‘upfront’ training would be required to have one of our students using an e-portfolio as part of their learning and assessment program? VET students have very clearly defined competencies they must meet — is using an e-portfolio an ‘extra’ they are being asked to do? Where is the ‘pay off’ for students and lecturers using an e-portfolio?

We are yet to have answers for all these questions. Fortunately, we still have a few of weeks of the project to run, but one thing I have learnt is that all group members continue to attend our meetings and each session tends to be a mix
of confusion followed by excitement as the page was found, the view got to its
destination and all members ended up in the course group as ‘planned.’

As the group’s facilitator I remain positive that e-portfolios have a role to play
in the VET sector, and that role is more than just a record of ‘what I have
done’. A structured ‘personal learning environment’ offering the support and
guidance a VET student needs, but with the resources, relevance and
motivation of ‘their’ world might be the key, rather than the narrow confines of
a workbook.

**Biography**

**Ray Tuckey**

Ray has worked in the VET sector as a trade lecturer, manager and for the past
15 years as a Principal Lecturer. In this current role he works with both individual
and groups of lecturers to help them to broaden their delivery and assessment
strategies. Ray has a strong interest in how people learn and the lecturer’s/teacher’s
role in that process.
Encountering ePortfolios: Developing a framework for pedagogical change

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Abstract

This case study will describe the process of the implementation and integration of ePortfolio (along with a new LMS) at program level in the Faculty of Business and Law at Deakin University. Deakin University has chosen to replace its Learning Management System (LMS) Blackboard/Vista with Desire2Learn (D2L) and implementation has begun in Trimester 1, 2011. D2L provides a number of new features and pedagogical possibilities to improve learning and teaching along with an integrated ePortfolio tool. As well the LMS implementation, the Faculty of Business and Law is applying for international accreditation of its flagship course, the Bachelor of Commerce (BCom) with the Association to Advance Collegiate Schools of Business (AASCB). This accreditation includes and assurance of learning process and the Faculty is keen to exploit the functionality of the new LMS to provide data to support this reporting process. The BCom consists of 10 core units and has nearly 30 major sequences. It is taught by approximately 200 full-time staff and approximately 200 casual staff, and has enrolments of over 4,250 EFTSL students. All the units will have a presence in the LMS and all students will have access to their ePortfolio. The project outcomes would include the development a framework and models to support ePortfolio adoption as well as integration into the teaching program.

The Faculty has formed an ePortfolio Working Party and will undertake a project to support the implementation and integration of ePortfolio into the learning and teaching program of the Faculty and particularly in the BCom. There is an aspiration to use the LMS and aspects of the ePortfolio to help provide course/program scaffolding for students so that they have a holistic understanding of the course and develop a clear concept of themselves as a beginning professional. Currently, the LMS does not offer a ‘space’ where students can gain an overview of their course or discipline studies. This framework in the new LMS will provide links into the ePortfolio and enable programs such as work integrated learning, professional practice and undergraduate internships to support student collection of evidence and attainment of attribute, skills and competencies. The project will also help to articulate how ePortfolios can be used to support teaching and student learning through innovative use of learning activities and assessment.

The project will include interested academics across the Schools who are keen to review their learning design with a view of using the ePortfolio to support their practice.
This research will provide teachers with an opportunity to investigate and ‘test’ their practice outside the regular sphere of teaching, and provide support to determine how ePortfolios can develop and enhance pedagogy as well as establish effectiveness of student outcomes.

**Biography**

**Colin Warren**

Colin Warren has been working in tertiary education for 15 years supporting the use of technology to provide authentic learning and teaching experiences. He is currently the e-Supported Learning Systems Coordinator in the Faculty of Business and Law at Deakin University. He is interested in enabling teachers to understand the potential applications of the new social software tools available for collaboration, communication and content creation. His current research is investigating the implementation of ePortfolios (alongside a new learning management system) and how ePortfolios might be integrated into and across a degree program.
Transition pedagogy and assessment in ePortfolios: Teaching and learning in Pebblepad in first year teacher education

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Abstract

Transition pedagogy recognises the importance of intentional first year curriculum design that carefully scaffolds the tertiary learning experience. This case study discusses a particular student and teacher experience (good, bad and ugly!) of how three interconnected principles of transition pedagogy were used to create a supported learning experience using ePortfolios.

Design: The first year curriculum design and delivery for literacy learning was explicitly designed to be student focused, relevant and appropriately scaffolded. The course materials were embedded into a Pebblepad webfolio, giving students complete ownership and facility for self-paced learning.

Engagement: An engaging and involving curriculum to enable active, collaborative learning was carefully developed. The weekly Pebblepad webfolio directed students to relevant textbook readings and links to stimulating resources. A linked worksheet was completed before tutorials to support team-based learning in face-to-face tutorials. This established a rigorous, productive habit of weekly reading and class preparation and provided experience in using the ePortfolio tools.

Assessment: The assessment tasks were designed to be interesting and accessible and increased in complexity each week. After each tutorial, a short cumulative assessment task was completed in a blog. Students received regular, formative evaluations of their work to aid their learning and provide timely feedback to staff on student progress and need. The weekly assessment tasks and feedback was a strategy embedded to monitor all students’ engagement in their learning and to identify and intervene in a timely way with students at risk.

The key outcomes of this first year curriculum design project have been the increased ownership of learning by students, the deepening of ICT skills in the use of ePortfolios and the incremental development of academic literacies. Having small-scale assessment integrated into the learning process from the very start has alleviated anxiety and encouraged risk taking and independent thinking. From a teaching perspective, this interconnected learning design has enabled the explicit, early development and collection of evidence/artefacts of professional competencies for teacher education. This case study examines examples of staff learning design and student assessment to show how future teaching staff can develop this foundation, and how completed assessments can be repurposed and refined by students over time.
Examples of the exploring, testing and adapting of Pebblepad assessment and presentation tools by the staff and student will show the specific learning of new ICT skills in digital reading and writing practices, and the use of supportive technologies such as audio, video and voice recognition software.

**Keywords:** transition pedagogy, first year, ePortfolios, assessment, scaffold, academic literacies, Pebblepad

**Biography**

**Wendy Warren**

Wendy Warren is a teacher educator in literacy and humanities at RMIT. Many years of exploring the use of ICT in learning and teaching has led to the current venture of using ePortfolios with teacher education students. Being involved in the change process of teaching and learning with new technologies continues to be most illuminating, challenging and inspiring.
Don’t put the ePortfolio cart before the proverbial academic horse: Developing staff and student capacity for effective ePortfolio use

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Abstract

As the scholarly literature suggests, there are a range of benefits and opportunities afforded through the use of ePortfolios, including the ability to demonstrate progress towards the achievement of graduate attributes and professional competency standards. In Nursing and Midwifery, this has become particularly relevant, as the introduction of the Nursing and Midwifery Board of Australia’s (NMBA) Continuing Competence Framework means that practising nurses and midwives are now required to maintain a portfolio as part of their continuing professional education (CPE), and to submit this portfolio as evidence of their ongoing professional development (Andre, 2010).

In late 2009, this University commenced discussions with ePortfolio providers and ultimately agreed to trial the Desire2Learn ePortfolio platform. After a condensed lead-time, ePortfolio was implemented in undergraduate nursing education in Semester 1, 2010, but not without some teething problems for staff and students. Typical problems included technical issues, data storage problems (particularly for large file sizes), and data retrieval difficulties for academics working remotely.

Ongoing challenges include improving staff ePortfolio knowledge and capabilities, and assisting staff in knowing how to assist students to identify which experiences to include in ePortfolio to evidence graduate attributes and professional standards. This process requires familiarity not only with the standards but also with the ePortfolio concept, as well as an understanding of the technology and its purpose in learning and teaching — that is, the pedagogy. It necessitates the need for staff to integrate ePortfolio into their teaching in a way that is meaningful and adds value to the students’ learning.

This paper explores the University’s beginning efforts to implement ePortfolio into a large undergraduate curriculum against a backdrop that cautions against implementation that inadequately takes into account the enhanced engagement, learning outcomes, and employability prospects extolled by ePortfolio proponents. Introducing an ePortfolio ought not be about the technology per se — rather, the pedagogy that underpins the technology.
Universities contemplating introducing ePortfolios would be wise to explore the value-add of ePortfolio: if the implementation plan is not driven by a good teaching and learning model, the same mistakes will be repeated.

The paper discusses the pitfalls surrounding the introduction of ePortfolio based on recent experience and offers a number of recommendations about professional development for academic staff who teach and assess through ePortfolio — particularly in relation to professional standards — and looks at strategies to increase student familiarity and capability with ePortfolio and its benefits.

Keywords: ePortfolio, nursing, pedagogy, competence, continuing professional development

Biographies

Paula Williams
Paula Williams is the Faculty eLearning Coordinator for the Faculty of Health Sciences at Australian Catholic University. Paula has been exploring personal learning environments since 2005 and is interested in the use of ePortfolios to support the acquisition and demonstration of professional standards for allied health disciplines.

Natalie Gamble
Natalie Gamble is the Learning and Teaching Enhancement Project Officer for the Faculty of Health Sciences at Australian Catholic University. Natalie is interested in the use of ePortfolios to facilitate reflective learning and graduate attribute acquisition, and as a tool to enhance student learning outcomes.
Encouraging the use of ePortfolios in adult and community education

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Abstract

The use of ePortfolios for training and assessment has proven to be very beneficial for our organisation.

Two projects have been delivered using ePortfolios to provide evidence for assessment in Nationally Accredited Courses. They were the flexible delivery of TAA40104 Certificate IV in Training and Assessment, and a course that has been titled Reflect and Connect but which is mapped to CHCORG428A Reflect on and improve own professional practice. We hoped to make a difference in the way trainers used e-learning in their classes and ePortfolios to assess students work. Typically, the uptake of e-learning and ePortfolios in small adult and community education organisations is quite low.

In the first project the aim was to enable future trainers with e-learning skills so that they were better equipped to deliver training using e-learning and assess students work using ePortfolios themselves. So part of the requirement of the course was to develop an ePortfolio to present the evidence for a unit of the course. We used Mahara for this.

The second project was the delivery of Reflect and Connect, totally online in Moodle. This was a natural progression from the first project in that we intended to deliver this unit as part of the Certificate IV in Training and Assessment. The hope is to further extend trainers e-learning skills and embed the practice of using ePortfolios as a means of assessment.

Whilst Reflect and Connect focuses on Web 2.0 tools and reflective practice, it places much more emphasis on the use of Mahara to create an ePortfolio than the first project.

The projects have not been without challenges. Many participants found the process of creating ePortfolio views in Mahara quite difficult to begin with and required a lot of support. The concept of an ePortfolio was new to many as well.

However, once they got started some great work was done. We have permission from several of the participants to use their ePortfolios as exemplars for others to view.

The benefits of ePortfolios for training and assessment are quite significant. Students can present their work from a remote location in a very neat package that can then be kept for future uses, including:
• another course of study
• recognition for another qualification
• applying for a job.

Biography

Pauline Wilson

Pauline Wilson joined YNH Services as Administration Officer in 2006 and discovered a passion for adult education. She moved up to the role Training Coordinator in 2009 after completing Certificate IV in Training and Assessment. In addition, she tutors in Business, IT, social networking, and Training and Assessment. She is excited by all things ‘e’ and is involved in several e-learning projects, the latest being the EpCop MOOC and ACFE Ementors Project. Other qualifications include Diploma of Community Education and Diploma of Project Management.
Student attitudes towards the use of ePortfolios: Experiences from the University of the South Pacific

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Abstract
Electronic portfolio (ePortfolio) offers multiple benefits in both formal and non-formal learning environments. It has gained major traction in higher education and increasingly being used to support learning and teaching processes. The University of the South Pacific (USP) adopted Mahara as its ePortfolio system in 2010 and it was piloted on a first year generic undergraduate course, UU100, in Semester 2, 2010, where the major assessment component of the course included the creation and development of student ePortfolios throughout the semester. A study was carried out at the end of the semester to evaluate the use of ePortfolios by the UU100 students. This paper reports on the findings from the evaluation of student attitudes towards ePortfolios in the pilot phase, in particular, student attitudes towards using ePortfolios as a learning tool and for assessment purposes. The findings suggest that a majority of the students viewed ePortfolios as a very useful learning tool (78%), and considered it to be an important assessment component in a course (72%). The paper concludes by recommending areas for further investigation and improvement.

Keywords: ePortfolios, USP, student attitudes, learning, assessment

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