

# ePortfolios in Vocational Education and Training

UNIVERSITY OF SOUTHERN QUEENSLAND

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Authored By:

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## Introduction

This project examines the potential use of ePortfolios in Vocational Education and Training (VET) for Oakey State High School (OSHS) students and teachers. It draws on stakeholder feedback supporting ePortfolios as systematic electronic records of learning evidence to improve communication, student engagement and outcomes. Strategies explain the implementation process with Business and Information Technology (BIC) students in 2010 and explore the options for further extension to the wider VET cohort in 2011.

## Background

The Queensland Government Senior Phase of learning has new compulsory participation requirements which necessitate all young people to be either "learning or earning" in secondary school up until the age of 17. Many students participate in school-based apprenticeships which are a mix of paid employment, academic and vocational education and training. Young people can achieve both a senior secondary certificate and credits towards VET qualifications.

This requirement leads to a change in the concept of senior education happening within the walls of the school. It means that my BIC students participate in up to two days per week practical outside work-placement which means they often miss classroom lessons. As part of traineeship agreements, students often enrol in VET courses with outside Registered Training Organisations (RTOs).

## Context:

My curriculum needs to support on-going learning, at school, work or home. "The students' school studies, training and work must all fit together. This gives them a head-start on their career path and an important link to the world of work." (Ed Qld School-based Apprenticeships & Traineeships 2007) "Or so it seems."

However many students may experience a disjointed learning partnerships between teacher-school-employer and outside RTO. There is little communication between parties to provide each with information to link the student's education together and even less opportunity for feedback.

Often students leave school and enter full time employment. When arrangements aren't successful, students return to school to resume their education. A flexible curriculum needs to cater for students who enter, leave and re-enter the classroom. My curriculum must support on-going learning, at school, in the workplace or at home.

OSHS delivers an extensive VET program and offers more than 10 certificate qualifications in Business, IT, Hospitality, Transport, Music and Manual arts. Many

students complete more than one qualification. I find tracking and recording student's performance an extensive paper trail of files and folders collected for internal reviews and Queensland Studies Authority (QSA) audits. I could apply this time to creating more engaging learning experiences for my students.

VET assessment allows credit for Recognition of Prior Learning (RPL) for completion of school or workplace learning. Many students duplicate competencies acquired in the workplace, school and outside courses. This can lead to boredom and disinterest in course content which often leads to absenteeism. This repetition occurs through a lack of stakeholder communication.

RPL requires students track and record evidence for credit towards units of competency. Most students have little understanding and no tools to work towards RPL, so credit opportunity is lost. Mostly their school assessment and external workplace tasks are kept at each venue and feedback rarely shared between parties. To give an example of duplicated learning; one of my students completed an extensive Workplace Health and Safety (WHS) induction in their traineeship as well as WHS units for her two school certificate. This waste of student learning time through content duplication and waste of teacher assessment time could have been far more productive.

Available software for recording data is not standard and consists of a variety of expensive adapted programs which are difficult to use. IQual database for QSA record keeping was purchased at a cost of \$5500 but has limitations for storing student assessment tasks and the records are not owned by the student. To ensure security and reliability of data one person is responsible for entering information which has limitations for VET teachers.

During my VET career I have:

- Searched for cost effective, innovative ways to digitally collect records and store student assessment to simplify the auditing and review process.
- Recognised RPL for students in school, although an option, rarely exists
- Observed teachers using rigid course timetables which do not support student's fast tracking their careers through RPL.

In my role as a Smart Classroom Mentor for the Darling Downs region, I promote the integration of ICT in all stages of the learning process in all subject areas. I experience reluctance by VET staff to integrate ICT into their programs because of the "extra" work it entails. Student outcomes could be improved if this process of VET tracking and recording was more streamlined and VET teachers could then invest more time improving the quality of their teaching program using a 21st Century learning approach.

To address some of these situations, I have devised a method for creating ePortfolios which provide a cost effective means to track student assessment, assess RPL and encourage new opportunities for students to advance quickly in their chosen career path and attain a competitive edge in the job market.

### **What is an ePortfolio?**

An ePortfolio is a digital collection of information describing and illustrating a person's learning, career, experience and achievements. This portfolio can be extended to include personal reflections and snapshots of the social educational journey. The use of ePortfolio's for VET is gradually gaining acceptance as a useful tool to document learning, especially for RPL, however most studies revolve around adult learners (Curyer & Leeson 2007).

Specialised open-source software such as Mahara is designed for creating professional ePortfolios, however Education Queensland servers are not compatible with technical specifications. Mahara is designed more for adults and may not suit secondary school students. Whatever software selected must be intuitive, appealing to teenagers and allow for information export.

Portability of digital content in Education Queensland has been problematic. Student owned data is deleted on exit from the school SIMS database. An external host would transfer data ownership to the student and remove the problems associated by leaving school. Digital copies would need to be exportable for school records. When using external hosts, parental permission are required to ensure Education Queensland security is not breached.

### **Proposal**

Following consultation with OSHS VET co-ordinator Andrew Train (Appendix 6) and fellow VET teaching staff, I propose to introduce ePortfolios to the BIC students in 2010. A successful pilot may extend usage to the VET cohort in 2011.

### **Participants**

- 25xYear 11-12 OSHS students
- High levels of digital literacy skills through entry level qualification
- Students competent using blackboard web 2.0 technologies
- Course chosen through interest in ICT ensures low risk of technology disengagement.

## Time Frame

- On-going for 2yr course.
- Six month project appraisal.
- Possible extension to VET cohort 2011.
- Students may continue as a lifelong learning process.

## Aims of the project

- To provide a systemic electronic means to track student's skills and qualifications; this will ensure a smooth transition from school to work or further study.
- To promote ongoing partnerships between home, school, employers and outside RTOs.

## Proposed outcomes

- VET students develop ePortfolios; an electronic record of learning evidence for course.
- Manage the security of personal digital verifiable information.
- Demonstrate proficiency locating, accessing and understanding VET information applicable to their certificate courses, in particular the RPL process.
- Select/apply appropriate web-based tools and technologically-mediated communication suitable for reflections, social learning, communication, collaboration and multimodal presentations. (Appendix: 3)
- Further develop communication and interactions with others through multiplicity of "global world" communication channels.
- Apply ICT knowledge and skills in acquiring, organising, analysing, evaluating and presenting information using multimedia technology.
- Demonstrate ability and fluency in new literacies which include, visual, media, critical, information, and digital literacies in the context of business information communications (Literature Futures, 2009).
- Increased learner engagement and transformation of student learning through ICT and multimedia technology.

## Software

Wordpress social software has been chosen for the pilot group. To overcome technical installation issues with Wordpress MU (multi-user) on the school server, Edublogs (same platform) hosting has been chosen for pilot group.

Reasons for this decision include:

- Small fee (approx \$100) allows teacher to remove advertising from free service.
- As co-administrator teacher enrolls class on teacher account.
  - Incorporates security for project
  - Easily evaluate student success of website management.
- Wordpress is popular, appealing, intuitive and open-source.
- Technically well supported
- Compatible with Ed Queensland server
- Wordpress MU software with security enabled can later be installed for student cohort.
- Data easily exported and re-hosted.
- Comprehensive secure online support system for Educational institutions
- Accessible through school firewall.
- Supports good web design principles with clear layout, intuitive navigation as well as clarity of text and instructions.
- Edublogs supplies tutorials and discussion forums to support setup and management.

Following pilot options:

- Wordpress MU can be installed on the school server.
- Technical assistance for installation, upkeep and security necessary.
- "Edublogs campus" option to host accounts on school server, provide technical support and help students export their data on exit. Yearly access fee of \$1000 based on numbers.
- Technical issues and costs further evaluated following successful pilot.
- Alternative possibilities explored.

## Input from stakeholders

Oakey's Vet co-ordinator and Vet teaching staff are interested in ePortfolio opportunities. They contributed the following input for a SWOT analysis for the application of ePortfolios.

### Strengths:

- aid record keeping, assist with VET audits and RPL
- comment feedback provides effective communication tools between employer/teacher/student
- streamlined recording/assessment process
- valuable skills for tracking competencies and improving literacy by writing for a purpose.
- improved student engagement with their course.

### Weaknesses

- Teachers need skills in creating ePortfolios.
- Education Queensland requires whole school data kept on servers.
- Creating quality ePortfolios beyond student's technical competencies. (BIC students have interest in IT and skills however other students may struggle.)
- Students disadvantaged if they cannot create quality ePortfolio.
- ICT access needed for all students

### Opportunities

- By 2010 ratio computers to students will improve to 1:2.

### Threats

- Teachers required to learn new ways of doing things.
- Technician's assistance needed to run whole school approach.

From the SWOT analysis most input has already been addressed. To gauge interest from other VET students, volunteers will be encouraged to create their own ePortfolio with assistance from student guides and informative lunch time classes. Teachers after school training groups will be established.

To acquire student input, volunteers from Year 11 and 12 BIC students were asked in

September 2009, to trial Wordpress through Edublogs. Six students supplied positive survey feedback which included (see Appendix 6).

- Ease of website creation
- enjoyment
- keenness to create a course ePortfolio.

Conversations with Toowomba Mayor and wife Peter and Rosemary Taylor supplied positive feedback. Mr Taylor saw student ePortfolios as valuable tools to cater to students changing needs. He saw these skills enabling students to be job ready and ePortfolios beneficial for tracking ongoing learning.

Discussions with DISCO (Downs Industry School Co-op: traineeship co-ordinators) officer Sheridan Tonscheck, agreed the traineeship program would benefit from improved communication between schools, employers and students. She saw ePortfolios useful to track performance, a tool for improved stakeholder communication and recognised the skills developing ePortfolios as valuable for job seekers.

Throughout FET8611 I collaborated with course participant Carmel Mayer, to explore and discuss the use of Edublogs for hosting ePortfolios. Carmel has experience using Edublogs with her Distance Education Students and finds their service reliable. Both Carmel and I have been encouraging the Learning Place to make available a social software program for secondary students to use for a variety of purposes. Just recently Carmel has received positive feedback from Jane Carr. I will approach Learning Place to look into making available ePortfolio software for use by Queensland students.

### **Educational Focus (Appendix:3 & 5):**

The focus for students will concentrate on the following four areas

1. Creation of ePortfolios will facilitate:
  - RPL
  - Management and provision of secure and personal verifiable information
  - Portability of information about qualifications and competencies.
2. Cater for learner engagement through providing opportunities for reflection, social learning, collaboration, multimodal presentations and ICT skill development
3. Improve students multiliteracy skills by writing for a purpose and publishing

online content

4. Provide alternative online pathways to cater for student's individual needs; provide online course content available for self paced learning, anywhere anytime. (Appendix:5)

## Organisation

- Information ePortfolio website created for student and parents. (Appendix 3)
- Course website provides course content, VET information, links to forums and student portfolios. (Appendix 5)
- Online self paced learning materials provided for trainee student's access from school, work and home.
- Education Queensland Managed Operating Environment (MOE) using operating system Windows XP pro.
- Standard MOE software includes:
  - Microsoft Office Suite
  - Audacity
  - Photo-story
  - + Adobe Web-Standard-4 suite
- Wordpress through Edublogs enables simple webpage design online

## Strategies

### Step 1

- Parents/students presented with "Technoblog" webpage introducing ePortfolios concept (Appendix: 3)
- Student permissions acquired.
- Teacher enrolls students through Edublogs as co-administrator.
- Class website created as hub for course information and links.(Appendix:5)
- Security enabled forum page created to solve simple technical problems
- Documented anecdotal records of student progress creating and using ePortfolios

### Step 2

- Demonstrated step by step procedures for creating ePortfolio.
- Links to Edublogs tutorial to extend knowledge, skills and understanding using

Edublogs.

- Students create Edublog site. Teacher/aide assistance provided.
- Students URL details emailed to teacher.
- Website security addressed with permissions to create password protected personal files.
- Students structure ePortfolio's to include course information page, resume page, "About me" and social network page to include topics of own interest. (Appendix 4)
- Application of category tags for RPL explained to sort postings to group school assessment tasks, workplace learning reflections and school life chronicles.
- Category names and links to units of competency copied and pasted into student's ePortfolios. These referenced constantly to understand the RPL process. (Appendix 4)
- Teacher and students support each other and share ideas to create a quality website.
- Classmate ePortfolio list will be compiled and available to all students to create links within their ePortfolio.
- Selected website members added to ePortfolios to enable feedback and ensure confidentiality.
- A series of lessons to support units of competencies will be structured to ensure students understand principles of good web design to ensure quality end products (Appendix 5)

### Step 3

- An "about me" page and weekly student journal entries about course and school happenings required with responses a compulsory component. These contributions form building blocks to create a strong class social network.
- "Netiquette" rules will be enforced.
- ePortfolios will display student resume, scanned qualifications, individual and group assessment tasks.
- Content adapted for web presentation in correct file formats
- Students add items of interest from home, workplace learning reflections and examples of work documents.
- Employers add feedback to students and teachers.
- Students continually support classroom learning with traineeship workplace examples for RPL.
- Duplicate digital copies exported for QSA data.

## Discussion

By introducing ePortfolios I hope to tap into the internet participatory culture in which teens are actively engaged. This culture "encourages artistic expression, engagement, informal mentoring and support to create and share multimodal presentations." Jenkins et al (2006). Wordpress web 2.0 technologies provide contexts for writing in a networked world and provides an environment to showcase students work.

Research shows that over 50% of teenagers have published content on the internet. By creating ePortfolios students will write for a purpose, an audience and with an intentional focus so will be more engaged with course content (enGage 2008). Marsh (2007) believes schools should be offering students opportunity to "become competent and effective analysers and producers of a range of multimodal texts and artefacts". In the process of creating their ePortfolios students will develop the ICT technical skills as well as literacy skills to enable them to be critical and creative digital writers.

Students promote active communication by sharing their creative ideas in ePortfolios. Online feedback and collaboration between classmates/teachers/parents and employers, can lead to higher order thinking with deep reflection. This helps develop student's competency in similar workplace learning situations.

Students will take the necessary steps to add online security to personal digital verifiable information. This will prepare them for the real world and the need for business internet security. Links to the teacher Internal Review page will streamline the VET validation process. Copies of students exported ePortfolios can be uploaded to the IQual database for QSA storage.

Wordpress enables all posts to be linked with category tags. This will essentially sort all content into groups. School tasks, workplace learning, employer feedback along with reflections can be sorted into units of competency so they can be recognised for the purpose of RPL. Students will become proficient at linking evidence to course competencies which are referenced in the ePortfolio.

By using category tags the ePortfolio can also become a personal learning environment where students enter reflections and snapshots from their senior years at secondary school. The school life categories will become a separate section within the ePortfolio. I see this will bridge the gap between school, work and home to make creating ePortfolios a more engaging and popular tool.

I envisage this tool will enable my teaching practices to be flexible and well planned. The teacher class website will provide access to course material online so students will no longer miss out on lessons while on traineeships. In doing so I will satisfy the Qld

Smart Classroom Develop Framework ICT indicator and use "ICT to transform what students learn, how they learn and when and where that learning takes place". I can tailor the certificate courses to suit the needs of my learner by providing a variety of multimodal presentations for use at school, at home or at work.

Feedback will be collected through surveys distributed to stakeholders to measure the effectiveness of the project. The teacher will compile anecdotal records on students management and usage throughout the trial phase.

## Conclusion

This project uses one method of creating ePortfolios to streamline VET data collection and improve student outcomes. Success will be appraised by the quality of student ePortfolios, student engagement and how effectively ePortfolios meet the needs of stakeholders and produce outcomes. After six months a group including the Principal, Vet Co-ordinator and Vet Teaching staff will evaluate the project to decide whether to extend the use of ePortfolios to the wider student cohort. During the term of the project alternate software will be evaluated to ensure the best emerging technology is selected for a whole school approach.

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*Edublogs - teacher and student blogs*. Web. 25 Oct. 2009. <http://edublogs.org/>

## Appendix

### Appendix 1: Proposal

General focus area:

- Investigating the use of ePortfolios in Vocational Education and Training (VET) for secondary school students.
- Explore the effective use of Wordpress software and facilitation strategies to create ePortfolios that can be a reflection of both their learning journey and social journey through the final two years of secondary school.

What am I going to do?

Because I teach VET at secondary school, I am keen to pursue the idea of creating ePortfolios for my Business and IT students. By using Wordpress software students are acquiring word publishing skills without the need for programming, which can be adapted to create small business websites.

- I am keen to engage them in creating an ePortfolio using the simple blogging software Wordpress. By creating both a learning and social ePortfolio, the tool becomes more engaging, becomes a reflection of their final years of schooling, encourages them to write for a purpose and present their best. I hope for this tool to improve literacy and cater for learner engagement through reflection, social learning, collaboration, presentation and information communication technology (ICT) skill development.

I plan to investigate the following areas:

- Use of ePortfolios in VET
- How the creation of an ePortfolio in this way will impact on how students engage with the content of the course. How this is related to learning theories and current research.
- How an ePortfolio can bridge the gap between school, work and home and assist the process of RPL.

- Use of Wordpress software
- How the design and structure of Wordpress software can impact on how students will engage with course content.
- How it can be installed.
- How security issues can be address.
- How this can be used to build a dynamic learning community.
- Strategies for effective facilitation of ePortfolios

How am I going to do it?

- Research available literature and readings about the use of ePortfolios
- Consult with other VET teachers who are looking for a way of recording students competencies for feedback.
- Research Wordpress software, do a SWOT analysis and determine how it can be adapted for this purpose.
- Investigate the technical and security aspects of installing this software on my Educational Institution's site or the use of an external host.
- Create a course website to demonstrate how Wordpress can easily be used to store course information and become a hub for the students ePortfolio.
- Create a webpage for presentation to staff and parents to show the educational benefits of Eportfolios and blogs.
- Ask a small group of students to create a Wordpress blog and gather feedback to ease of use and interest.

What will I produce?

- A written essay.

Who will I work with?

- Individually with feedback from colleagues and a test group of students in the VET field

## Appendix 2: Feedback from Peter Evans



Re: My Proposal for A2

by [Peter Evans](#) - Sunday, 23 August 2009, 09:35 PM

Jan,

It is a pity that you can't look at Mahara but I understand the realities that you are working within.

· Explore the effective use of Wordpress software and facilitation strategies to create ePortfolios that can be a reflection of both their learning journey and social journey through the final two years of secondary school.

How do you intend to help students use one blog for two different purposes e.g. their learning journey and their social journey and assist in processes of RPL

How an ePortfolio can bridge the gap between school, work and home and assist the process of RPL

I think this is a great theme and you might even be able to elicit some information from students and parents

As much as possible it would be good if the result was a practical howto guide or demonstration rather than a literature review. This will make the document much more useful to the school and also to you in future.

I am happy with your proposal and you can consider it approved and I look forward to seeing how it develops

Peter

**Appendix 3: School Technoblog information website for parents and students.**

<http://clewett.net.au/usq/blogging>

**Appendix 4: Edublog example of Student Website using the category tags and links to units of competency.**

<http://janclewett.edublogs.org/>

**Appendix 5: Class course website**

<http://clewett.net.au/usq/FET8611/>

**Appendix 6: Student feedback survey results**

[http://clewett.net.au/usq/FET8611/docs/Student\\_survey\\_results.pdf](http://clewett.net.au/usq/FET8611/docs/Student_survey_results.pdf)

**Appendix 7: Email from Oakey Vet Co-ordinator.**

**From:** Andrew Train [mailto:atrain1@eq.edu.au]  
**Sent:** Tuesday, 11 August 2009 8:47 AM  
**To:** 'Home'  
**Subject:** RE: ePortfolio

Hi Jan

Couldn't look at this yesterday... school network issues... :) Where do you get the time to create these tools? Jan this is a wonderful concept. I will leave it in your hands to come up with a proposal. Best to start small, maybe BIC. We will look on and provide feedback.

Send through your proposal when completed.

**Andrew Train**  
**Vocational Training Coordinator**  
*"Building better apprentices through Industry Partnership"*

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**From:** Home [mailto:jan@clewett.net.au]  
**Sent:** Monday, 10 August 2009 7:52 AM  
**To:** 'TRAIN Andrew'  
**Subject:** ePortfolio

<http://clewett.net.au/usq/bloggng/>

Hi Andrew,  
Attached is what I am planning to do with my kids next year for a Masters Project. This information will be added to a letter for permission from parents.  
Jan

## Appendix 8: Carmel's email from Jane Carr-Learning Place

Hi Carmel

Thanks for the info... we have used Edublogs and installed at the ICT LIC. We were constantly bombarded by bots and vile rubbish (millions per week)

We'll investigate again though given they now have a campus pack. I'll also contact the Vics and see how they set it up.

We understand seniors have a greater need for freedom and more ability to understand the dangers. Your solution is a good work around. Hopefully we'll be able to resolve and set something up for everyone.

Best wishes

Jane

**Jane Carr** | Manager eLearning: Services  
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