

## CHAPTER SIX

### Case Study

#### An e-portfolio pilot: WIL at The University of Newcastle and University of New England

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### Introduction

In the Joint Medical Program (JMP) offered between The University of Newcastle and the University of New England, clinical experience begins in Year 1 and increases throughout the program until Years 4 and 5, where all learning is in a work integrated learning (WIL) setting. For students in Years 1 and 2, 10-20 hours are spent in a WIL setting, while in Year 3 this time increases to eight weeks, and by Years 4 and 5 WIL is full time. Placements occur in both term time and within breaks at both rural and urban settings anywhere in Australia and overseas for some components of the program.

### Context

A working party was formed to investigate whether an e-portfolio was a viable means of collecting evidence for assessment of student learning in clinical settings. From initial scoping of the project, the e-portfolio working party used the Pentagonal Model, developed by Buzzetto-More and Alade (2008), as a guide for further investigation, trialling and planning the platform.

An initial pilot commenced in the middle of 2010 with a Year 4 course whose main assessment component consisted of a paper-based portfolio. Educational

technology staff from the School of Medicine and Public Health supported this initiative alongside academic staff from both campuses of the JMP.

### **WIL as a means to enhance learning**

There are many logistical, pedagogical and ethical issues to explore if e-portfolios are to be effectively trialled in clinical settings and embedded into WIL. The e-portfolio working party adopted the use of evidence-based investigation based on scholarly research driving decision-making as a way of examining these issues in a rigorous way.

Students are continually required to gather and present evidence of learning, in particular their WIL, for assessment within a particular clinical course as part of their degree program. This process involves collecting evidence in hospital settings as they go about WIL activities. Evidence requirements for particular skills are specified beforehand, with students supported to develop technical skills which enable them to present required evidence for assessment and marking. These are aligned with specified learning outcomes and graduate profiles. Course coordinators and markers validate skills from the evidence presented. Students present part of their evidence as a reflective diary. This rigorous assessment process allows for an enhanced learning experience during practice.

### **E-portfolio solutions for WIL issues**

The e-portfolio project is in the early pilot stages with a small volunteer group of less than 10 students involved at this stage.

Students from a Year 4 course in women and children's health previously had to produce, as part of their assessment, a paper portfolio of their WIL experiences. The course required that students provide evidence of their WIL experiences according to a 'core-competency' checklist; produce various reports; compile evidence of form completions by clinicians; as well as reflect on their WIL experiences in a journal. The students had to do this over a number of rotations during the course, for each different component and elective. Students were offered an electronic alternative to undertake this assessment as part of a trial into e-portfolios. The platform chosen for the trial was the open source e-portfolio software called Mahara, offered via the Australian-based service portal Foliospaces.com. Mahara provides facilities to

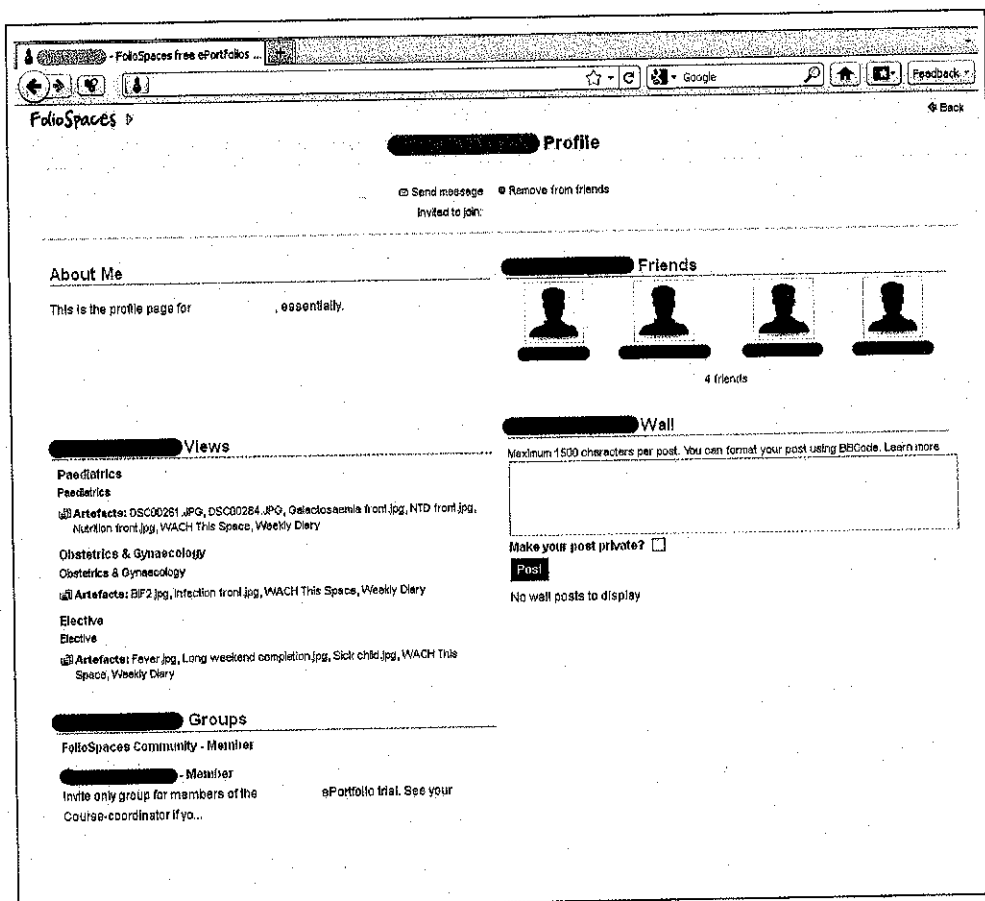


Figure 1: A student's Foliospaces profile, with links to their subject views, groups and friends.

categorise e-portfolio content into themes, which Mahara calls 'views'. The students included all their evidence of WIL experience for paediatrics, for example, into one particular 'view', while obstetrics and gynaecology were in another 'view' (see Figure 1).

In producing reflective journals on their WIL experiences, students could use Mahara's blogging tools. Multiple blogs are possible in Mahara, so students had the flexibility to reflect on specific themes for their rotation, as well as considering more general issues in a separate blog that could be seen across multiple views in their e-portfolio.

The Foliospaces.com portal offers both free and paid accounts, with the free account being facilitated by advertisements. The free option was used as part

of the trial, which provided certain restrictions to users, including only 50MB of space to store content. To alleviate any space issues, GoogleDocs was used to produce their online documents (as most of the volunteers had an existing GoogleDocs account, which comes with 1GB of space). This also allowed students to provide secure links to their content within their e-portfolios for their course coordinators to access and mark at little cost to their e-portfolio account quota.

Chapter 1 - Reflection on Taree and My Record of Achievement by [redacted]

## Chapter 1 - Reflection on Taree and My Record of Achievement

Included in this chapter are my:

- 1) Portfolio Coversheet
- 2) Weekly Record of Achievement and Experiences - A concise overview of my attendance at tutorials, clinics and private rooms, theatre, and formative assessments.
- 3) Weekly Reflective Presentations - A comprehensive insight into my thoughts and activities in the hospital. I have used a software program called Prezi, which implements the idea of one big blank canvas to write ideas on, rather than the traditional powerpoint slide approach. Simply press the 'play' symbol to load the presentation and then navigate through it. Additionally to the activities outlined in the record of achievement, the reflective presentations also review my thoughts and activities on wards rounds, teaching sessions and general patient interactions.

### Record of Achievement Week 1

Week 1.docx  
14.9KB | Sunday, 25 July 2010 | Details

#### Reflective Diary Week 1

**PREZI** ▶

### ePortfolio Coversheet

Cover Sheet.PDF  
702.5KB | Thursday, 18 November 2010 | Details

### Taree Aerial

### Manning Base Hospital

### Record of Achievement Week 2

Week 2.docx  
15.1KB | Sunday, 01 August 2010 | Details

Figure 2: A student's view showing mixed content of document links, images and media.

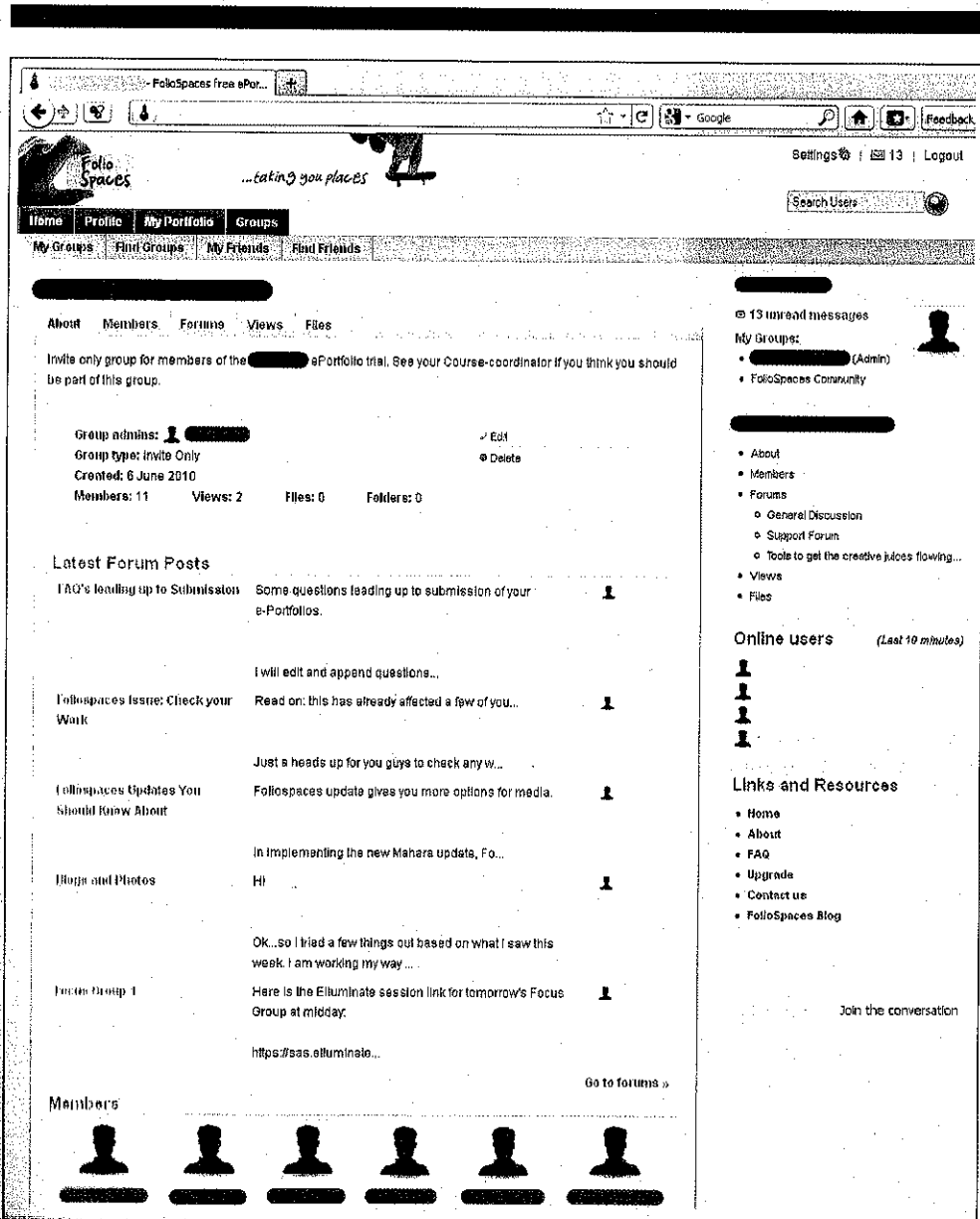


Figure 3: The group page using the forum function as a support mechanism.

Course coordinators used a feature in Mahara called 'friends' as a means to list trial participants and quickly enter the trial group's e-portfolios (see Figure 1). The 'friend' feature is a similar concept to what is offered via social media websites like Facebook. It was decided in this trial to only allow student

accounts to be set-up to accept friends, not to initiate any friend requests. Under this arrangement course coordinators and project support staff could see the e-portfolios of the students, but the students could not see each other's e-portfolios.

The students were encouraged in the early stages of their e-portfolio to be creative in the presentation of their WIL experiences. Some students used on-line tools that allowed them to pictorially represent and reflect on their experience. Prezi.com was the main tool used for this purpose (see Figure 2).

The e-portfolio also allows selected users to form a 'group' by invitation. The group can have its own set of views and file repository to further enhance the support experience within the application. This 'group' forum facility feature allowed for easy management of the student group, and was also used to post notices of on-line tools or to field and answer questions of potential benefit to all students (see Figure 3).

One facility that was not used during this small group trial of an e-portfolio was Mahara's ability to provide feedback on content, whether in a view main page or blog entry. This was due to equity issues arising from the division between students involved in the trial and those still undertaking the paper portfolio.

It is envisaged that during the next stages of development the feedback feature will be used as a means of further enhancing the capabilities of the e-portfolio. However, even in the small group trial, it was apparent that the use of such a feature would contribute to increased time pressures on the small group of academic clinicians who were tasked with marking the trial. To use this tool in a future trial, the e-portfolio working party agreed that more clinical staff would need to be recruited and further planning would need to be undertaken to determine the frequency of such feedback.

### **Project evaluation**

Ethics approval was given for the students to participate in focus groups throughout the trial. Two focus group sessions were held during the trial. These small focus groups enabled personalised interaction between the project members and the students. However, with the geographic dispersal of the students it was not possible to meet face-to-face. As a result, the first focus group was facilitated through an on-line communication tool called Elluminate.

Elluminate allows participants to communicate orally as well as via text-based chat tools while also allowing the session to be recorded (with the students' permission). Elluminate facilitated general question and answer discussion on students' experiences up to that time. The students could also use the desktop sharing feature of Elluminate to show their portfolios to the group. The students described this process as highly beneficial, as it allowed them to view the many different forms a portfolio could take using the same software. The technical staff on the project used the desktop sharing facility to answer questions students had about the tools in Mahara and to directly illustrate how a particular activity could be done.

Overall, the first focus group described the e-portfolio as a beneficial tool for students. The e-portfolio format allowed students to contribute almost anywhere there was an internet connection, which appeared to make them spend more time reflecting on their WIL experiences and provided 'date-stamping' on their contributions. The students found this spurred them on to keep the portfolios regularly updated, rather than leaving it for a later time. Some students, who were self-described 'technology illiterates', made note of the benefit of seeing exemplars of e-portfolios as well as demonstrations for facilitating self-directed help.

The second focus group was conducted via an email survey. The students were asked a range of questions including how easy it was to use Mahara; whether they supported the concept of an e-portfolio; attitudes to e-portfolios before and during the trial; if they felt it improved their learning experience; and if they would have liked to use an e-portfolio for all their courses. The students generally felt quite positive towards the e-portfolio. Students suggested that the e-portfolio encouraged them to engage and reflect more often on their learning experiences than they thought they might otherwise have done. They described the e-portfolio as easy to use (for the most part) but felt that some aspects of the Mahara software would require targeted support at the beginning and during use, such as exemplars of previous work to show a range of ideas on presentation as well as some finer aspects of formatting work. Students felt that the use of GoogleDocs was perhaps a necessary evil in the context of on-line storage space but perhaps

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a step too far in the overall process. Finally, all students would like to use an e-portfolio throughout their studies, with some suggesting it would be particularly useful if targeted at the early years of study.

### **Conclusion: Future directions**

The next stage of the project will be to get the entire cohort of students to complete an e-portfolio in the Womens, Adolescents and Childrens Health course. The focus on this part of the project will be on improving support and the use of technology for student feedback throughout the degree program.

### **References**

- Buzzetto-More, N., and Alade, A. (2008). The pentagonal e-portfolio model for selecting, adopting, building and implementing an e-portfolio. *Journal of Information Technology Education: Innovations in Practice*, 7, 46-69.