Case Study

Embedding eportfolios in an introductory educational technology subject

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The background context

Charles Sturt University (CSU) is a regional university with multiple campuses in regional cities in New South Wales and Ontario, Canada. CSU provides a wide range of degrees both internally and externally and has a particularly large number of distance students.

The subject that is the focus of this case study (Introduction to Educational Computing) is taken by fourth year students studying in a range of undergraduate teaching degrees, both primary and secondary, and across discipline areas. This subject introduces the computer and related technologies as tools for the classroom teacher. Information and communication technologies in general are considered and evaluated for their contribution to teaching and learning. It was recently rewritten to specifically incorporate and expand on the use of Web 2.0 technologies and eportfolios as teaching and learning tools. This subject is only offered by distance mode.

The current practice

ICT in education is a rapidly evolving field, and the subject had been dealing primarily with the development of ICT-based classroom resources and strategies that tended to focus on application software as opposed to Web 2.0 and other online resources. Students were required to submit the ICT-based parts of their work as a CD "folio" of resources they had made and reflections about this work in a Word document.

The production of only application-based activities submitted on CD limited both students' thinking and creativity when attempting to design educational activities for their students to use, especially given the plethora of online tools and applications available. Having the application and the reflection documentation as separate files also produced "stilted" assignments which didn't flow well in terms of the aims and outcomes of the assignment, as well as making assessment difficult.

Activities related to the development of students' ICT skills, experiences, and knowledge of the complex issues when applied to educational settings were primarily based in the Forum tool of the university's Learning Management System which did not give students experience using a range of online tools or the opportunity to

reflect and document their learning in creative or personal ways.

The subject did not specifically address eportfolios or their use as teaching or learning tools – and this was seen as important given the growing interest and use of eportfolios in schools.

The challenge

The incorporation of PebblePad into this subject was designed to:

- Encourage effective use by students of a broad range of thinking and reflection tools that are provided in PebblePad to reflect on their development and planning of ICT based learning and teaching resources to use in their classrooms.

- Provide students with experience in the nature and use of eportfolios as a tool they could use in the future for teaching and learning as practicing teachers, while using it in a similar way themselves.
- A tool for students to collect and reflect on a range artefacts of their learning about ICT during the course of the subject, such as ICT skills goals charts, software evaluations, videos, photographs, quizzes, writing, and design.
- A more comprehensive array of evidence of students' learning of and about ICT use in educational settings by encouraging students to submit a range of artefacts in a variety of ways.
- Provide a scaffolding tool through the use of PebblePad's more structured tools to assist students to reflect on the artefacts included in their submitted work.

The purpose

There were a number of reasons for the development eportfolio aspect of this course. One aspect was that in my previous role in a high school and as an eLearning Leader, I was developing the use of eportfolios across our rather large school for students, and it was clear that many of our teachers had little, if any, knowledge or understanding of the role an eportfolio could play in their teaching and in their students' learning.

Our school-based project involved beginning with junior students and using PowerPoint as their eportfolio tool, and scaffolded using a learning program called Building Learning Power. We then progressed to using Elgg – a tool that incorporated the use of social networking tools which greatly appealed to students.

On arriving at CSU I was pleased to find that we were in the process of rolling out PebblePad and this provided an ideal opportunity to develop the use of this tool in the context of pre-service teacher education, based on what I had learnt in the "real world" of the classroom.

The other primary purpose for use of PebblePad in this subject was the need to provide a "safe" and "scaffolded" way of helping students to better reflect on their learning and experiences both within the confines of this particular subject, but also across their time at the university.

The approach

My approach was primarily based on my experience of students and teachers at the school I had recently come from. This meant a multitude of approaches was possible, but I eventually arrived at a range of key foci:

- To gently introduce to students "yet another" online tool to learn and use. (Given they were enrolled in an introduction to educational computing course)
- To then develop a number of activities that exploited the structure of the PebblePad tools that would encourage students to use a range of tools for a range of purposes. This was in order to give them an opportunity to find the tools that suited both their original discipline area (for example maths, or visual arts) and the way they themselves preferred learning. An example of this was the use of the action plan tool to develop what was previously called a "goals chart" that students completed when they first begin the subject, and then at the end of the subject. This charted the learning goals of the student in relation to their developing skills in the use of ICT in an educational context.
- I also wanted students to submit work in an electronic way, which allowed for better feedback and to remove the need to be mailing CDs and wads of paper-based assignments.
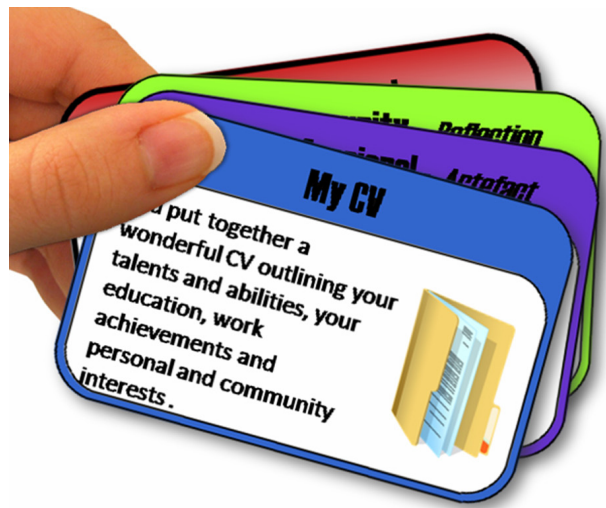
Concurrently, as a new academic, I had to complete an induction program that was based around the development of a project based on an area of my work. The area I chose was a subject revision for this subject, and the focus was on the development of an approach to the use of eportfolios. The end result of this process was the production of an eportfolio board game, called "Graduate", which was based around the idea of collecting a range of artefacts, reflections and communications which fed into an eportfolio, and the winner of the game was the one to

collect enough of the right sort of artefacts to collect enough points to then "Graduate"!

The process of turning the eportfolio process into a "game" was quite illuminating and meant that I had to think hard about the point of an eportfolio in the wider university context, what sort of things went into an eportfolio and why, and what the value of each of those types of artefacts was.

An overview of the game and eportfolio approach can be found at http://www.slideshare.net/jtinkler/playing-the-eportfolio-game.

The issues

There were few barriers or difficulties. Any difficulties on my part were swiftly dealt with by our eportfolio support team and online support tools. Students who had difficulty were primarily students who had slow dial up internet connections, or those who wanted to upload video.

A few found using the gateway tool a little difficult, with a couple of students emailing me often asking if they could just email their work to me instead. My stubborn refusal paid off when they too were able to submit their work through the gateway. This problem was primarily caused by impatience and the inability to persevere with technology difficulties and want the easy way out – and of course this is a vital skill in any situation that requires the use of technology – hence my insistence on its use. In the process of teaching this subject I have begun developing my own help sheets for students to guide them through these sorts of difficulties.

Another issue manifested itself in one of the tasks, where they were required to use a blog to reflect on the learning resources they had developed. Academic writing went out the window – some forgetting to reference and others paying scant attention to this aspect of academic writing. Spelling and grammar also seemed to be more in the "online style" and this made me consider whether to structure this section of the assignment differently, make standards more explicit, or to use a different tool (such as the webfolio tool).

The result

Nearly all students found PebblePad easy to use and could easily see the multitude of uses in their new teaching careers – both as a teacher for themselves, and for their students as a tool for teaching and learning.

> " I am now beginning to integrate PebblePad into my other educational technology subjects – both as content (about eportfolios as educational technology) and as a tool for their own teaching and learning. "

The use of PebblePad has enabled me to better understand my students' learning and understanding, and has given them a variety of options to demonstrate their learning in this subject. Most students were enthusiastic about the prospect of implementing an eportfolio program at their schools in the future, as it was not difficult for them to see the benefits for their own future students. A next step will be to begin introducing the idea of using the eportfolio tool across the Wagga faculty – to enable all students to use the tools across and after their time at the university.

The learning

I learnt that students are much more competent in the use of the eportfolio tool than I expected. This may have been due in part to the fact that the students were enrolled in an educational technology subject and were therefore more open to the idea, as well as the fact that their eportfolio work was an integral part of two of their assessment items.

Overall, students needed little extra support. Students who had difficulties primarily needed confidence to keep trying and a small amount of technical support. I think the main thing to learn is to be clear and focused about what you are trying to achieve with the use of the eportfolio and ensure your students are clear about this intent.

I made sure I encouraged students to use the tools that suited them and the way they worked and learnt in the section of the eportfolio where I allowed them some open and creative activities. This also meant encouraging students to use images, videos, websites, and other creative artefacts in their eportfolio. For the more scaffolded activities, I had to ensure I had chosen the right tool for the job – what did I want them to demonstrate, and was this the best tool to allow them to do that?

In brief

- Plan thoroughly and have a clear purpose for the use of PebblePad.
- Allow students the opportunity to explore and "play" with the tools and the idea of an eportfolio. Encourage creativity!
- Ensure students are clear about the purpose of the use of an eportfolio and they are clear about expectations of academic standards of writing where appropriate. Have tech support available – even if it is in the form of self-help "how-to" sheets, tutorial videos, etc.
- I imagine a new and much wider sphere of teaching and learning opportunities will be available when an eportfolio is integrated across a course or at least less subject specific.

Acknowledgements