

Starting with the end in sight: 1st year outcomes of a Course-embedded ePortfolio.

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ABSTRACT

This paper describes the use of an ePortfolio in the first stage of an undergraduate Course/Degree, a Bachelor of Education (Early Childhood & Primary). The unique aspect of this initiative is that it is planned to be embedded throughout the course over the four-year program.

Portfolio creation is a reflective activity, enabling the creator to produce them for different purposes – personal and professional reflection; communication with lecturers or peers; displaying of achieved skills or attributes assessment, sharing or showcasing. The creator of the portfolio needs to consider, from an archive of documented learning, what will most clearly provide evidence of specified criteria for various viewers of the portfolio. These viewers of the portfolio may range from collaborators and peers to prospective employers.

Over the period of an entire undergraduate degree an embedded ePortfolio can respond to a variety of purposes. These purposes may include: reflection, assessment, development or showcasing. This paper focuses on the first stage where the ePortfolio is designed for assessment and reflection (Stefani, Mason, Pegler, 2007)

ePortfolios are growing in use in all areas of education. These include but are not limited to providing ways for the enhancement of critical reflection; linking theory to practice; collecting evidence of informal and formal learning and skill development; the display of knowledge and understanding in personally aesthetically pleasing ways for various audiences (Botterill, Allan & Brooks, 2008). Ayala (2006) refers to ePortfolios as a recent technology wave hitting the coast of higher education. Therefore there is a need to distinguish between ePortfolio tools, purposes and processes. This paper will examine each of these areas in relation to this project.

BACKGROUND

Prior to the advent of the ePortfolio, portfolios have had a long history of usage and were hardcopy and paper-based showing text forms and visual images to demonstrate acquired skills and experiences. A classic example of paper-based portfolio would consist of a binder or folio with various sections containing

actual artefacts and hardcopy supporting documentation. ePortfolios which involve the use of new technologies now give further scope for students from wider study disciplines such as Veterinary Science; Media Studies; Nursing and Education to archive copies of artefacts and supporting documentation from their learning in digital formats, thus enabling the construction and manipulation of materials more easily. With the move over the past two decades from teacher-centred to student-centred teaching and learning (Emmett, 2003) ePortfolios have risen in use in undergraduate and post-graduate learning and teaching, particularly professional ePortfolios (Ravet, 2007). This shift in pedagogical emphasis has been a driving force as the onus is now placed on the learner to learn as opposed to believing that they should be taught. Van Weasel and Prop (2008) in discussing the use of ePortfolios for medical students identify self-reflection as an essential precondition for the profession and that learners should be able to monitor their own learning processes in order to obtain an insight into their own strengths and weaknesses. "Future doctors must be able to reflect and analyze on a meta level."

In discussing learning, Liefer (cited in Knowles) talks about the value to the ePortfolio creator of a 'triple loop' of learning. The triple loop of learning involves reflecting on how we learned something, not just acknowledging that it's been learned. This form of learning assists students to understand more about themselves. Demonstrating and reflecting upon evidence of their learning and achievement to peers, academic assessors, and the profession achieves this. Each of these viewers of their eportfolio provides a different type of feedback or review, which enables the student to modify and reflect in a progressively effective way.

It was the identification of this unique learning that led the Course designers of the B.Ed (EC&Prim) to emphasise the ePortfolio in the new undergraduate degree. ePortfolios had already been used for assessment and reflection tools in single subjects in other degree programs by a members of the academic staff with great success. For example, a postgraduate subject (EMT501) that required its participants, mostly practicing teachers, to develop a Learning Contract and ePortfolio to display the acquired learning during the subject provided evidence of students enhanced ICT skills; a wider use of multimedia forms as artefacts; sharing of the ePortfolio beyond the subject submission; and stated student satisfaction of the final outcome of their production. Therefore, a decision was made in the design of a new degree to develop an ePortfolio as a flexible archive of materials that could be manipulated and submitted for various purposes throughout the four years of study and learning.

IMPLEMENTATION

The main difference the creation of ePortfolios provides from other reflective learning tasks is the type of thinking involved. This is exemplified by this reflective statement by a creator of an ePortfolio (Jacobson, n.d.):

Currently, eportfolio thinking is increasingly concerned with metacognition. "How do I problem solve?" "What are the processes that I use to 'get outside the box' when I get stuck?" Eportfolios are seen as a method for capturing and reflecting on process. This is a subtle but significant shift from the early days of eportfolio

reflection because much of breakthrough learning takes place when things get confusing, when there is no clear path to the next step. Many artifacts from this stage are ugly, tangled, and unclear but it is important to capture them as part of the 'aha' moment—the before as well as the after—when something causes a person to question assumptions, to find new connections, or produce a novel solution. It is important because it teaches us more about the process of learning and it helps us to become self-propelled learners who can strategize when things get confusing.

Here the creator has looked through previously created artefacts that include products resulting from thinking through and proving ideas from their academic studies. It is an iterative process that is learner centred and supports professional practice and lifelong learning. Students need to consider their collected artefacts and other supporting documentation as possible answers to criteria to provide evidence of learning or accomplishment. They also need to assemble this evidence in a way that demonstrates their reflection, as well as presenting the materials in an aesthetically pleasing way for the individual and audience. All these are steps in a process: Sharpe and Oliver (2007) say this process 'prompts reflection, negotiation and adaption to what has traditionally been a private and tacit area of work'.

To create an ePortfolio an appropriate application, **tool**, or format is needed. The academic staff who designed the learning in the first stage of the Course needed a tool that would not be difficult to manipulate, as well as being aesthetically pleasing to use and view. The tool also needed to be flexible enough for the student to display their own artefacts and supporting documentation in response to specific criteria. In the first year of implementing the ePortfolio task the tool used was iWeb, an Apple application available to the students in a 24-hour lab; and in the second year Pebble Pad was embraced as the University ePortfolio platform. Both these tools provided the flexibility with which the students could adapt the application to their needs in response to the task criteria.

CONTENT AND PROCESS

Since the students were in their first year of study in a Bachelor of Education (Early Childhood & Primary) they were given reflective tasks about the skills and attributes they were bringing to their University study. Charles Sturt University has a published list of expected graduate attributes from any fields of study across the Faculties of the University:

Graduates of Charles Sturt University are expected to have a comprehensive understanding of relevant disciplines, professional knowledge and skills appropriate to their award, complemented by the ability to:

1. apply this knowledge in the workplace
2. learn and work both independently and collaboratively
3. write and speak effectively
4. exercise reflective and critical judgement
5. use appropriate information and communication technologies effectively, and
6. demonstrative a national and international perspective

Charles Sturt University graduates will also demonstrate:

1. a willingness to contribute to their community and wider society
2. an understanding of, and commitment to, open inquiry, ethical practice, social justice, tolerance and cultural diversity

- 3. a capacity for, and commitment to, continuing personal and professional development, and
- 4. an appreciation of the need for balance between economic development and environmental sustainability

These were adapted to the Education profession and placed as headings in a table that the students were encouraged to consider in regard to their prior learning, and then later, to prospective learning.

Portfolio information								
Charles Sturt University Graduate Attributes:	Early Childhood knowledge	Communication skills	Analytical, critical and reflective skills	Addressing unfamiliar problems	Planning my own work	Team work	National and international perspective	Values-driven practice
Examples								

Table 1 – Examples for CSU graduate attributes

In doing this, the students were able to understand that they don't come to University as 'clean slates', and, that their prior experiences were valuable attributes to be built upon and explored further in their undergraduate studies.

By reflecting on their prior-to-University experiences the students were able to begin filling in a personalised table of graduate attributes that noted their own prior learning experiences and skills. This was an extremely useful exercise since it placed the expected graduate attributes firmly in sight at the very beginning of their study, rather than near the end, where anxiety can be produced in the student if occasions or opportunities have not arisen for the attributes not yet attained. The exercise also had the benefit of raising students' self esteem by making evident that prior-to-University study had benefit and bearing on University learning. They were also able to very easily identify the many gaps (naturally) expected in first year students' reflections on 'graduate' attributes. Students were then encouraged to brain-storm with each other the types of artefacts and supporting documentation they could search for, or acquire, in order to prove, or provide evidence for, these skills and attributes.

The designers of the Course had decided that the ePortfolio should be introduced into all the years of study along with a Learning Contract. The reflective exercises cited above gave the academic teaching staff the opportunity to introduce the students to the Learning Contract, as a device for self-directed learning, particularly for graduate attributes that could be sought outside their University learning. In the case of Education students this could relate to volunteer work at schools or community associations or events, or undertaking specialist courses for sports, arts, or leadership.

These reflections took place very early in the first semester of University, which gave the students plenty of time to seek out certificates, video-tape documentation, supporting letters, and other artefacts, that could be embedded into an ePortfolio. Towards the end of the semester the students were given tuition in using iWeb and Pebble Pad, and the academic teaching staff were

available for consultation and advice during the period of ePortfolio construction.

Since the students had been asked to think in very broad terms of the skills and experiences needed to work towards the University graduate attributes, the academic teaching staff began to focus on the Course learning by introducing the students to the broad overview of the expected learning outcomes of the B.Ed(EC&Prim). A table was distributed and students were asked to reflect on the learning they had been engaged in during classroom activities, professional experience, and assessment tasks. It was emphasised that they were merely one eighth of the way through their degree, however, even at this stage they could identify learning outcomes they had accomplished or were in some way working towards, even in this first semester. This reflection and evidence were also required for the ePortfolio assessment.

During class time the students were introduced to the types of artefacts and supporting documentation they might collect, and shown how they could archive these materials in the personal electronic space—at CSU this is a version of Sakai, called Interact, My Workspace. Directions were also given for them to write good and useful reflective statements to accompany the documentation they would include in the ePortfolio.

As a result of all the reflective tasks, tables, and documentation collection, the students were given a framework upon which their ePortfolio needed to be built. They were required to submit a series of seven ePortfolio pages created using either the templates in iWeb, or the webfolio tool in Pebble Pad. They were provided with an empty model and shown how they could pull images onto the pages, link to documents and other websites, and personalise their pages through colour and font changes.

Results:

The students, themselves, remarked on the aesthetically pleasing products they created, and devoted extra personal time to the construction of the eportfolios. They were easily able to individualise their submissions by choosing to use one set of templates, or by mixing them up, then personalising them by using plenty of visual artifacts, and, finally, by demonstrating their understandings, and linking their learning through reflective statements.

This is the first page of a student's ePortfolio. He has given his permission for it's inclusion:

WELCOME GRADUATE ATTRIBUTES EVIDENCE FOR GRADUATE ATTRIBUTES LEARNING CONTRACT EVIDENCE FOR LEARNING CONTRACT
COURSE OBJECTIVES EVIDENCE OF LEARNING CONCLUSION

MARCUS GOSTELOW



This is a picture from my visual essay which can be found in it's entirety on the evidence for graduate attributes page under analytical, critical and reflective skills . Click here to be forwarded to this page- EVIDENCE FOR GRADUATE ATTRIBUTES

I believe this picture is a relevant choice for this assignment in many ways. This picture was taken on a holiday in Thailand. Traveling to different countries has opened my eyes to different cultures, customs and beliefs whilst also improving my communication skills. As a teacher I know that I will encounter many different children with various cultural backgrounds and beliefs with some even having difficulty speaking English. Having already experienced such a different mix of cultures I believe I will be a teacher with a better understanding of people and their differences.

The photo also represents my journey to becoming a teacher. I can see the path to becoming a teacher yet it still seems a distance away. Looking back to where I came from will ultimately help me move forward as I can draw on the past

"Without hard work, nothing grows but weeds." Gordon B Hickey.

This quote highlights my view on becoming a successful teacher.


The students were encouraged to use images from a visual essay, an earlier assessment task, as the introduction to their ePortfolio. The template allows for easy navigation along the top of the page. The student was able to insert hyperlinks within the text to other documents.

On the following page the student has used photographs and scanned artefacts of children's work to provide evidence of his learning:


WELCOME GRADUATE ATTRIBUTES EVIDENCE FOR GRADUATE ATTRIBUTES LEARNING CONTRACT EVIDENCE FOR LEARNING CONTRACT
COURSE OBJECTIVES EVIDENCE OF LEARNING CONCLUSION

GRADUATE ATTRIBUTES EVIDENCE

Early Childhood knowledge



Picture showing evidence of time spent in the long necked tribe in Thailand earlier this year. This time spent with the children in the tribe highlighted how similar young children around the world, no matter the what country or socioeconomic status. Understanding this I believe will allow me to be a fairer teacher as all children should be treated equally regardless of race.



Students took their Learning Contracts to academic advisers for assistance on proposed self-directed learning. On the following page the student included the Learning Contract as an image on the webpage:

[WELCOME](#) [GRADUATE ATTRIBUTES](#) [EVIDENCE FOR GRADUATE ATTRIBUTES](#) [LEARNING CONTRACT](#) [EVIDENCE FOR LEARNING CONTRACT](#)
[COURSE OBJECTIVES](#) [EVIDENCE OF LEARNING](#) [CONCLUSION](#)

LEARNING CONTRACT

Below is a learning contract that has been constructed through consultation with my university mentor Wyverne Smith. This contract is something that will be revised every semester as a guide to what should be learnt. These contracts overall will guide my learning to ultimately reach my final goal of becoming a confident successful educator.

Learning Contract				
Learner: Marcus Gostelow		Year: 1st- 2008	Academic Mentor: Wyverne Smith	
What are you going to learn (objectives)	How are you going to learn it (resources/strategies)	Target date for completion	How are you going to know that you learned it (evidence)	How are you going to prove you learned (verification)
Understand what it means to be literate in the 21st century.	By participating in the tutorial work, class discussion and essay research. Then combining the researched ideas into an essay.	20th March	I will know if I have learned the objective by the mark given to the essay submitted.	The objective learnt will be verified by the marking rubric and comments returned with the essay.
Understand what it means to be a teacher and display my transformations so far.	Visual essay interpreting 3 representative images.	5th May	As this was an assignment the mark returned will determine if I have met the requirements.	The objective learnt will be verified by the marking rubric and comments returned with the essay.
Construct a successful class plan	This learning objective will be taught in later semesters	NA	By the students reaction to the lesson plan.	Showing or describing different aspects of the lesson plan.
Learn how to engage with children	Observe teachers working with 3-5 year olds	End of course	Engage with children by talking with them and observing them.	Showing pictures of children in class.
Start to learn how to work	By doing the Math assignment for EML105	30 th May	Successful completion of the sundial and math report	Picture showing the completion of the sundial.

As evidence of learning projected in the Learning Contract and identified within the Course objectives this student provided a scanned assessment rubric as evidence of his achievement:

EVIDENCE OF LEARNING

Understanding what it means to be literate in the 21st century.

EML105: The Literate and Numerate Teacher 2008
Assessment item 1 - Literacy Essay; Value 50%; Due date: 20/3/08

Student name: Marcus Gostelow

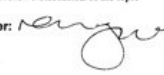
Presentation requirements:

Correct cover sheet: <input checked="" type="checkbox"/>	Essay Plan: <input checked="" type="checkbox"/>	Checklist: <input checked="" type="checkbox"/>
Spacing (1 1/2): <input checked="" type="checkbox"/>	Name &/or student number on each page: <input checked="" type="checkbox"/>	

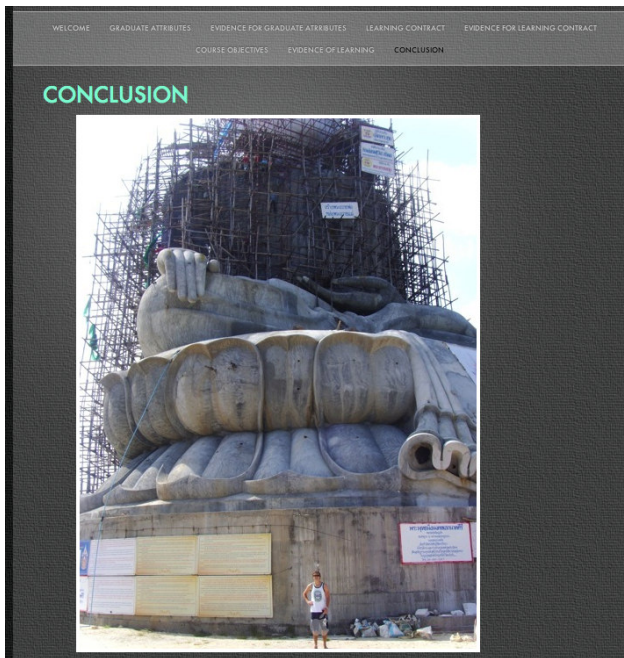
Assessment Rubric:

Specific Criteria (20/50)	HIGH DISTINCTION	DISTINCTION	CREDIT	PASS	FAIL
Demonstrated understanding of what it means to be literate in the 21 st century [1.5/10]	Demonstrates exceptional level of understanding	Demonstrates excellent in-depth level of understanding	Demonstrates thorough knowledge	Demonstrates appropriate knowledge	Demonstrates incomplete knowledge
Level of Engagement with the topic: the potential impact of a teacher's own level of literacy on school students' opportunities [3.5/5]	Demonstrates exceptional personal engagement, reflection and self-initiation	Demonstrates excellent personal engagement, reflection and self-initiation, which exceeds expectations	Demonstrates good personal engagement, self-initiation, and meets expectations	Demonstrates personal engagement and self-initiation, and meets expectations	Suggests insufficient engagement
General Criteria (30/50)					
Essay plan [4/5]	Demonstrates exceptional planning and understanding of the essay question.	Demonstrates excellent planning and understanding of the essay question.	Demonstrates good planning and understanding of the essay question.	Demonstrates understanding planning and of the essay question.	Suggests poor understanding planning and of the essay question.
Expression [Essay structure, paragraph structure, sentence structure, grammar, spelling, punctuation] [16.5/20]	Demonstrates exceptional clarity of written language	Demonstrates excellent ability to organise written language	Demonstrates sound ability to organise written language	Demonstrates the ability to organise written language	Demonstrates limited capacity to organise written language.
Referencing [5/5]	Demonstrates extensive and accurate use of references, APA referencing system applied without error	Demonstrates excellent, accurate use of references, APA referencing system applied without error	Demonstrates good use of references, APA referencing system applied with few errors	Demonstrates use of references, APA referencing system applied with some errors	Demonstrates insufficient use of references, incomplete or incorrect referencing

Comment:
Well done Marcus. You have provided a well written, comprehensive discussion of the topic supported by well chosen references.

Mark: 42.5 /50 **Signature of marker:** 

This student understood the value of images to provide deeper messages to the viewer of the ePortfolio:



Postnote:

There are now students who have completed the second year of the ePortfolio and are entering their third year. The Course is designed so that they are required to revisit their ePortfolio in one of the subjects in each year. The collection of artifacts and documentation will focus more closely on the Course learning outcomes in these latter years. During second year, professional experiences started in earnest and the students are required to document their practice with young children, as well as demonstrate their early, but growing, ability to plan for learning in the schools and centres in which they undertake their placements. Since the University has now decided to embrace Pebble Pad as its preferred format for ePortfolios across the faculties and divisions, emphasis is placed on advising students to collect artefacts and documentation into the Pebble Pad environment in order to have the most flexible use of this versatile environment and set of tools.

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