

Mahara ePortfolio System Implementation Case Study

Auckland University of Technology, School of Education: Te Kura Mātauranga.
June, 2007.

Introduction

Rather than an evaluation of the ePortfolio system Mahara, the eCDF ePortfolio project case study reports are designed to provide other organisations a guide to the lessons learnt and challenges faced during the implementation of a typical ePortfolio system.

It should also be noted that during the pilot period, case study partners were working on a pre v1.0 release of Mahara where development and refinements to functionality was continuing.

In order to ensure relevance to other ePortfolio systems and ongoing accuracy of the case studies, where possible references to functionality or technical issues specific to the ePortfolio system Mahara and the pilot site (MyPortfolio) have been removed. Development suggestions made within the case study reports have however been captured by the eCDF project team and documented within the Mahara Development Roadmap (<http://www.mahara.org/roadmap>)

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1 Case Study Overview

1.1 Organisational Details

Auckland University of Technology School of Education Te Kura Mātauranga

The programme was Bachelor of Education (Specialty).

Student teachers were in their final year of study and were creating material that would assist them in preparation for their first year of teaching and also for their portfolios for registration with the NZ Teacher Council.

Reflective practice is embedded in all papers with specific focus in the Professional Inquiry and Practice Paper.

1.2 Programme or Purpose Description

The case study was located within the BEd (Speciality) including:

- Early Childhood
- Early Childhood Montessori
- Primary Montessori
- Primary Steiner

Graduate Profile

Graduates completing the Bachelor of Education will meet NZTC's requirements of being of good character and fit to be a teacher. In addition, they will satisfy the professional dimension benchmarks for beginning teachers established by the NZTC, under the following headings:

Professional Knowledge

Current curricula, Treaty of Waitangi, Te Reo Māori and Tikanga Māori, current learning and assessment theory, the progress of children, appropriate teaching objectives, planning and preparation, programmes, learning activities and technologies, assessment and reporting.

Professional Practice

An environment of respect and understanding, high but realistic expectations, positive management of learning and its organisation to develop a safe and nurturing physical and emotional environment that motivates children, is varied, flexible and responsive and engages children in learning and contributes in some way to the overall life of the early childhood centre.

Professional Role/Relationships

Support colleagues by co-operation and collaboration, demonstrate effective communication and model interactions, maintain accurate records that track children and permit efficient and effective reporting, act ethically and professionally at all times, identify needs and continue professional development and meet professional roles and responsibilities.

The case study was carried out within third/final year courses in the following papers:

Code	Name
297361	Programme Planning, Assessment and Evaluation – Montessori
297731	Professional Inquiry and Practice (ECE)
297331	Professional Inquiry and Practice 3 (Primary)
297333	Introduction to Research
297342	Montessori Programme Planning

297353	Curriculum 5
297340	Montessori Philosophy and Curriculum

The table below provides the initial curriculum design of the teaching team. We did not develop a single integrated activity across all our papers but instead adopted the model where the application was used discretely in each paper. Our intention was for selected assessment items to be mandatory but due to difficulties with the technology some of these became optional.

<i>COURSES:</i>	<i>e-Portfolio contribution</i>	<i>Formative Items:</i>	<i>Summative Items:</i>
Professional Inquiry and Practice III (Primary) (297331/P1) Montessori only Semesters 1 and 2	<ol style="list-style-type: none"> Theory to practice connection Demonstrates professional/personal development CV Development Possible prototype for NZTC evidence-based registration requirements 	Goals including evaluation 3 x lesson plans/reflections 3 x weekly reflections	Philosophy (speciality) Philosophy (personal BT)
Professional Practice and Inquiry III (ECE) 297331/01 Semesters 1 and 2	As above	2-3 exemplars of reflective models	
Introduction to Research 297333/04 Semester 1 and 2	<ol style="list-style-type: none"> Demonstrate students as critical consumers of resource Demonstrate students understanding of role of research in teaching practice and development 	Related to assessment 1 - reflection on teachers as critical consumers of research	Part of assessment 2 - reflection on role/value of research for their own teaching practice
Montessori Programme Planning 297342/01 (Sem 1)	Assessment 1 part B Assessment 2 programme planning during practicum	Lesson plans Proposed lesson plans	Final Plan
Montessori Philosophy and Curriculum 297340/04 (Sem 1 ECE +Primary) and sem 2 297340/05	Assessment 1 a) Intro essay on founder and philosopher b) Teaching portfolio group project	Lesson plans	Philosophy (specialty)
Curriculum 5 297353/05 Semester 1	Assignment 2 Philosophy of teaching approach	2-3 exemplars of reflective models	
Programme Planning Assessment and Evaluation 297361/P1 Semester 1	How does the availability of a social space contribute to and facilitate the development of student's collaborative/reflective approach to assessment construction?	Fortnightly submissions that 'build' into one of the summative assessments for the course	Establishing a Montessori 'unit' in a State school - Achievement-based summative project of five discreet but integrated tasks

1.3 Participants

Eighty-six students participated in this project and most of them were female. This included a significant number of mature students who were caring for children or working full-time while studying part-time. The student body also presented a wide ethnic diversity, including some Māori and Pasifika students, a large number of recent migrant students, but few international fee paying students.

In semester 1, 5 teaching staff participated in the project.

2 Implementation

2.1 Implementation Issues

It was essential that the project and the teaching team received organisational support e.g. AUT enrolment systems, and staff development with a Flexible Learning Advisor. Embedding the ePortfolio into AUTOnline and its support systems also provided valuable additional support as we were able to develop an E-portfolio Organisational space for students and staff and start to use this to support the project. ***We recommend this kind of supporting infrastructure as essential.***

Keeping up the momentum was difficult, especially continuing face-to-face meetings for planning, debriefing and reflection as the semester's other demands increased. Communication to rest of School and colleagues about the aims, benefits etc of the project and also to students was a priority. This required the team to be clear about the rationale for the project and how it was going to benefit learning and this is essential for the introduction of a new technology.

Organising the student training to ensure suitable times for students was problematic. We had to have 10 training sessions for approximately 86 students. We also needed multiple strategies for training due to different levels of ability and confidence. ***We recommend that student training receives careful consideration, especially coping with multiple levels of ability.***

Any technical issues within the system were demoralising for students. This was the case for those that were uncertain about the value of the technology, but also for the more interested students who were keen to see what they could do.

The main consequence of these technical issues was that significant amounts of time were needed to develop competence and confidence for both staff and students. We were lucky to have good support from a Flexible Learning Adviser who was able to establish "easy" ways of using the platform and to "translate" the project documentation into Guides for us and our students.

A 'Techblog' was used by the Flexible Learning Adviser to document technical issues and the Project Manager was able to use the Comments function to give detailed feedback which was then relayed to the team where appropriate. This was very useful for supporting staff and students who ran into difficulties and also as a way of detailing suggested improvements.

Students quickly understood the conceptual basis of the application but it took a much longer time from them to be able to use the application proficiently. While the project was initially received with interest from students, it took some time for teachers to get student buy-in. This became more difficult as bugs etc occurred. Currently, there is uncertainty about access after graduation. For our students, use to date has involved a lot of time and energy for a (currently) uncertain return on investment. ***In order to achieve student support for the future, the application must be available for at least the next two years i.e. until our students have completed their teachers' registration requirements.***

Students were anxious about the connection of the e-portfolio to assessment and due to technology issues, some activities were made optional. Currently, students have learning technology expectations based on their experiences with AUTOnline, which is much easier to use.

In addition to system availability and stability the continued use also requires support from teaching and learning leaders, academics and resources.

2.2 Documentation

The documentation was complete, but we had to rewrite it for students – it was too technical for staff and students. We produced two Guides on the platform generally and a further Guide for using media.

The Mahara documentation told us what the system could do, but the way in which the technology could support learning was not always clear. Some basic information on possible uses would be helpful.

3 Technical

3.1 Technical Support

Levels of technical support provided by AUT was excellent in every respect – from embedding the e-portfolio within AUTOnline, uploading student information from ARION through to supporting teachers and staff. This kind of support is essential for such projects to succeed.

3.2 Reporting

There was no documentation on reporting tools, therefore we are not aware of the reporting tools.

3.3 Site Configuration

n/a

4 Tutor Feedback

The data for this section came from the 5 teachers who used ePortfolios during semester one and from one Flexible Learning Advisor (who answered the questions she felt were relevant to her involvement). The case study evaluation questions were placed in blogs on the Mahara system and teachers were able to add as many comments as they desired over a two month period.

4.1 Teaching with the ePortfolio

Teachers involved in this case study thought that use of MyPortfolio would extend students ICT skills while providing storage and easy access to exemplars of students' work and support learning in ways that were different from the classroom:

MyPortfolio provides the potential to create a social constructivist learning environment which enables sharing of work for comment, feedback and critique.

This social aspect enables students to receive affirmations and new ideas but also challenges them and thus provides new methods of knowledge construction for individuals.

The blogs provide students with the time to read think and write which might help the students to deepen their ideas.

It [Mahara] enables them to store artefacts which provide the opportunity to look back over a number of years and see evidence of their progress.

It also provides opportunities for encouragement of deeper thinking and understanding when students communicate via a text-based medium.

It enables the teacher to get to know the students in a less formal and more relaxed context which is not possible in three hour class teaching sessions once a week.

For various reasons the teachers, like the students, found the software difficult to use. It took them quite a lot of time to become familiar with the application. Limitations, separate from the application, include that students see it as ‘coming to yet another class’ and thus an increase in their time obligation to the course. Also students who do not have a computer at home are disadvantaged due to convenience, access and time.

Teachers thought the time needed to learn and use the software adds immense pressure to an already busy student workload. Students who are not ICT savvy are disadvantaged. Text is also very mono-dimensional which does not lend itself well to the expression of physical and emotional content.

Teachers provided their perspectives of what factors influenced students’ use of Mahara. Students did not think the software was user friendly and viewed it as additional to their current workloads. Student participation was tied to assessment and if the use of ePortfolio was assessed they were more willing to participate. In the future, teachers thought that if students were not required to use an e-portfolio for assessment purposes, then its use would depend on students’ perceptions of its value and this would be coloured by its relatively new status, ease of use and students conceptions of technology.

5 Continued Use of Mahara

5.1 System Quality

Overall how would you rate the quality of the ePortfolio system Mahara

1 = poor 3 = satisfactory 5 = excellent

2 - We think this has great potential but at the moment it is not user friendly.

5.2 Intention of Continued Use

Reasons why your organisation intends/does not intend on continuing to use the Mahara ePortfolio system.

We wish to continue with the following provisos:

- It becomes more user friendly
- A wider range of templates are made available
- Access available after graduation
- Continued institutional support from Flexible Learning Advisors and AUTOonline support staff

If your institution does plan to continue use, comment on whether it will continue to make use of the myporfolio.ac.nz URL

To be decided – it might work better if institutions could house it on their own servers. If AUT had an in-house instance of Mahara, it might lead to better control dependant on institutional needs.

6 Success of Pilot

6.1 Staff Response

How would you rate the response of staff to the pilot initiative?

1 = very negative, 3 = Neither Positive or Negative 5 = very positive

5 – The team was committed, gave the project significant amounts of their time and energy and advocated for it with their students, even when there were technical issues. The team is still committed but would like to see improvements as soon as possible.

6.2 Overall Success

How would you rate the success of the pilot initiative?

1 = Unsuccessful, 3 = Satisfactory 5 = Highly successful

4 – The collaborative approach has been a key facet of this project at AUT and it has been a great learning experience for all involved. A team approach enabled us to exchange different ideas and perspectives about the technology and its use within the programme and to build our understanding collaboratively through regular discussion and interaction. We were also able to present differing perspectives to students within our papers, but a united front on the introduction of e-portfolios and issues like “why are we doing this?”. In this way, as a team, we were able to overcome the problem that many innovations have of a “lone ranger” operating on her own. ***We would recommend that collaborative approaches be used with the introduction of ePortfolio technology in future.***

7 Additional Comments

This project team has carried out an extensive implementation of Mahara where it was used in seven papers, to support a variety of contexts and activities with 86 third year students. In addition, members of the project team have also attempted to use the Mahara platform to support this evaluative exercise.

Recommendations have been identified in the text above in bold/italics.

In this evaluation we have been specific and critical about aspects of the ePortfolio that have not worked for us. However we wish these to be interpreted in the spirit of improvement. We believe in the huge potential of this tool/approach, especially the social networking and blogging facilities, and we would like to see sufficient investment for this to become more practicable and widely available. We have been unable to assess the full learning potential of ePortfolios because of the development issues with the software, however, our intention is to continue using it in Semester 2 and in the future with a greater focus on its pedagogical possibilities for supporting learning and development.

An important distinguishing character of this case study is the scale of the implementation which is strongly reflected in our findings. Had Mahara been trialled with five to eight students, they could have been very strongly supported and there may have been fewer technology issues than we experienced with such a large test group. Some of the issues which emerged did so only because it was trialled with such a large group. With a smaller number of students the problems would have remained hidden for example finding fellow students from among the large number of similar preferred names. The real value of this implementation lies in unearthing many user issues and potential problems, which when addressed, will result in a much more user friendly and functional system.

We have found the Project Manager to be extremely responsive and supportive which has been essential while trialling this preliminary version of the software. We believe that the Project Manager and her team will achieve a highly educational and valuable piece of software once the issues mentioned in this case study are resolved.

Mahara ePortfolio System Implementation Case Study

The following questions should be completed in narrative by the ePortfolio Advocate and sent to the ePortfolio Project Manager no later than **25th May 2007**. This draft case study will be followed up with either a face to face or phone interview with the Project Manager, who may probe various aspects of the narrative for further details. Any additional information subsequently requested should then be included in your final case study and submitted no later than **22nd June 2007**. Authors of this document will also be asked to participate in a teleconference in the new year to discuss how a summary of the case studies might be prepared.

Final case studies should not exceed **10 pages** in length.

The results of the staff questionnaire (to be completed by those tutors/ lecturers/ teachers involved in the case study process) should be collated (either electronically or in hard copy) by the ePortfolio Advocate for the completion of the Tutor Feedback section.

Anonymous usage statistics will automatically be generated by the ePortfolio system and will be collated by the project team.

While these case study questions do not include or identify any individual students, the ePortfolio Project team have completed the research ethics screening process required by Massey University's Ethics Committee. As such this project has been evaluated by peer review and judged to be low risk. Consequently, it has not been reviewed by one of Massey University's Human Ethics Committees. The researcher(s) named above (ePortfolio Advocate) are responsible for the ethical conduct of this research.

If you have any concerns about the conduct of this research that you wish to raise with someone other than the researcher(s), please contact Professor Sylvia Rumball, Assistant to the Vice-Chancellor (Ethics & Equity), telephone 06 350 5249, email humanethics@massey.ac.nz.

If your organisation requires ethical approval further to Massey University's criteria, this should be considered in the context of the case study organisation's responsibility and included in your implementation process.

Meredith Henson eCDF ePortfolio Project Manager Massey University, Wellington Campus, Private Box 756 04 801 5799 ext 6454 or 027 2421 000 M.J.Henson@massey.ac.nz	Mark Nichols eCDF ePortfolio Project Chair Massey University m.b.nichols@massey.ac.nz (Or, as of 8/1/07) Bible College of New Zealand m.nichols@bcnz.ac.nz
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1 Case Study Overview

1.1 Organisational Details

Please include:

- A brief description of your organisation (e.g., University, Polytechnic, Wananga etc).
- Description of the context in which Mahara was implemented within your organisation.

1.2 Programme or Purpose Description

Please include:

- Programme (or equivalent) name and subject area and NZQA level or the purpose for which Mahara was used (such as for staff professional development).
- If applicable, a brief graduate profile for this programme of study.
- Why this programme or purpose was selected for the case study process.
- If relevant, the number and subject area of those courses (or equivalent) that Mahara was implemented across.
- A description of the typical formative and summative assessment tasks across the programme, noting mandatory and optional participation components.
- Where relevant, any courses within the selected programme where Mahara was not implemented within and why.

1.3 Participants

Please include:

- The number of students involved in the implementation pilot and if possible the proportion of part time to full time students.
- The number of teaching staff involved in the implementation pilot.

2 Implementation

2.1 Implementation Issues

Please include:

- The main *organisational, technology and student related* challenges encountered during the implementation of Mahara, and how they were overcome. These might include items such as:
 - Required policy changes.
 - Problems in providing technical, student or tutor support.
 - Integration of the technology into the curriculum.
 - Tutor or student participation.
 - Technical proficiency of participants.

- Functionality gaps.
 - Hosting difficulties.
 - System availability.
- Any challenges or issues you or your organisation anticipate with regards to the continued use of Mahara.

2.2 Documentation

Please include:

- What you found useful about the *Implementation Guidelines, Policy Documents* and the *User Guides*.
- Whether any gaps were identified in these documents and if you have any suggestions for improvement.

3 Technical

3.1 Technical Support

Please include:

- Whether the levels of technical support provided within your organisation were satisfactory and if not, how you would go about improving them.

3.2 Reporting

Please include:

- Whether the reporting tools available within Mahara met your needs and if not, what type of reports you would like to be able to generate.

3.3 Site Configuration

Please include:

- Whether your Administrator changed or requested a change to any Site Configuration settings from the default and if so, which settings were changed.

4 Tutor Feedback

4.1 Teaching with ePortfolio

Please include:

- Aspects of using an ePortfolio system that tutors perceived as being of benefit or value within their teaching.
- Aspects of using an ePortfolio system that tutors perceived as being a disadvantage or limitation within their teaching.
- The main factors affecting tutor use of the ePortfolio system.
- Features or functionality would tutors like to see in later versions of Mahara.

4.2 Student Learning experience

Please include:

- Aspects of using an ePortfolio system that tutors perceived as being of benefit or value within their student's learning experience.
- Aspects of teaching with an ePortfolio system that tutors perceived as being a disadvantage within their student's learning experience.
- What tutors felt were the main factors affecting student use of the ePortfolio system.

5 Continued Use of Mahara

5.1 System Quality

Overall how would you rate the quality of the ePortfolio system Mahara?

Poor		Satisfactory		Excellent
1	2	3	4	5
<input type="checkbox"/>				

Please comment on the main reasons for your selection.

5.2 Intention of Continued Use

Please include:

- Reasons why your organisation intends/does not intend on continuing to use the Mahara ePortfolio system.
- If your institution does plan to continue use, comment on whether it will continue to make use of the myportfolio.ac.nz URL.

6 Success of Pilot

6.1 Staff Response

How would you rate the response of staff to the pilot initiative?

Very Negative		Neither Positive or Negative		Very Positive
1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6.2 Overall Success

How would you rate the success of the pilot initiative?

Unsuccessful		Satisfactory		Highly Successful
1	2	3	4	5
<input type="checkbox"/>				

7 Additional Comments

If applicable, please provide any additional comments, feedback or lessons learnt with regards to the implementation of the Mahara ePortfolio system.

Mahara ePortfolio System Staff Questionnaire

1. What aspects of using an ePortfolio system do you perceive as being of benefit or value within your teaching?
2. What aspects of using an ePortfolio system do you perceive as being a disadvantage or limitation within your teaching?
3. What aspects of using an ePortfolio system do you perceive as being of benefit or value within your students learning experience?
4. What aspects of teaching with an ePortfolio system do you perceive as being a disadvantage within your student's learning experience?
5. What were the main factors affecting your use of the ePortfolio system?
6. What do you feel were the main factors affecting student use of the ePortfolio system?
7. What features or functionality would you like to see in later versions of Mahara?

eCDF ePortfolio System Implementation Case Study Massey University

Introduction

Rather than an evaluation of the ePortfolio system Mahara, the eCDF ePortfolio project case study reports are designed to provide other organisations a guide to the lessons learnt and challenges faced during the implementation of a typical ePortfolio system.

It should also be noted that during the pilot period, case study partners were working on a pre v1.0 release of Mahara where development and refinements to functionality was continuing.

In order to ensure relevance to other ePortfolio systems and ongoing accuracy of the case studies, where possible references to functionality or technical issues specific to the ePortfolio system Mahara and the pilot site (MyPortfolio) have been removed. Development suggestions made within the case study reports have however been captured by the eCDF project team and documented within the Mahara Development Roadmap (<http://www.mahara.org/roadmap>)

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1 Case Study Overview

1.1 Organisational Details

This case study details the story of Mahara's use in the Graduate Diploma of Teaching (Primary) programme, a one-year qualification from the College of Education at Massey University.

Massey University has a student population of approximately 68,000 students located over four campuses: Auckland, Palmerston North, Wellington and extra-mural. The Mahara trial occurred at the College of Education, Palmerston North campus.

In order to properly understand the decisions made regarding this particular Mahara pilot and its results thus far, it is worth briefly describing the background context against which it has taken place.

For 2006, pre-Mahara, a decision was made to implement an ePortfolio assessment tool (iWebfolio) across almost the entire programme of the Graduate Diploma of Teaching (Primary). This was a compulsory requirement of the course. However, due to a number of practical problems (software, technical support and course over-loading) it became a stress-inducing experience that discouraged effective use of the eportfolio as a true vehicle for growth.

Despite this experience it was believed at management level that ePortfolios in principle were an excellent concept if used well. *Because* of this experience, crucial decisions were made concerning the implementation of Mahara.

It was decided to use Mahara only alongside Teacher Education (TE), an umbrella course seeking to integrate the students' learning experiences, rather than be tagged to a particular curriculum area. Effectively, however this meant a programme implementation as asked for in the case study specifications as the course reflects on all aspects of the programme. It would operate on a voluntary basis only as a formative, non-assessed tool for personal reflection and growth. These decisions were a direct result of the previous year's experiences. Students would determine the contents of their ePortfolios, being given guidelines for three reflection pieces only, and only the staff member coordinating TE would provide feedback, which would have a personalised rather than academic focus.

1.2 Programme or Purpose Description

The Programme chosen was the Graduate Diploma of Teaching (Primary), a one-year training programme for students already holding a degree in another discipline.

NZQA Level: 7

Graduate profile:

Professional attributes

- the ability to teach in a range of contexts and learning environments;
- knowledge of legal, ethical and political issues impacting upon education;

- the ability to plan, teach and assess a learning programme which takes account of relevant curriculum knowledge, skills, attitudes and values within a primary and intermediate school environment;
- the ability to plan and implement an Individual Educational Programme to meet the learning needs of individual children;
- knowledge of accountability requirements through developing and utilising systems of assessment which include reporting information to parents;
- the ability to facilitate and encourage learning and thinking in others;
- knowledge of theories, concepts and principles which underpin how children learn and develop;
- the ability to create and maintain a safe, positive, stimulating and resource-rich learning environment;
- an understanding of the social, cultural, historical and political influences on education;
- the ability to provide a bicultural and multicultural environment for learning and teaching.

Personal attributes

- to be of good character;
- the ability to think critically, creatively and analytically about the learning and teaching process and be able to improve subsequent actions if this is warranted;
- the capacity to use higher level cognitive skills;
- the willingness to continually develop their personal and professional knowledge base;
- the ability to access, select and utilise information in a variety of contexts;
- organisation and management skills;
- the ability to make reasoned, independent and well-informed judgments;
- the ability to fulfil the obligations of the Treaty of Waitangi.

Interactive attributes

- oral and written communication skills when working with children and adults at different levels of the educational system;
- collaborative skills;
- the ability to negotiate and solve conflicts within the school environment;
- the ability to analyse, explore and respect a wide range of divergent views;
- the ability to relate to children and adults from diverse social and cultural backgrounds;
- the willingness to receive and judiciously act on the advice and suggestions of professional colleagues.

Formative assessment is linked to the base school. Students visit their base school at various times throughout the year. One aspect developed this year, is goal setting in association with their mentor teacher. Goals have traditionally been identified but not tightly woven into their teaching experiences. The potential here to, on the part of the student, demonstrate reflection and, on the part of the TE coordinator, to provide feedback to feed forward through the e-Portfolio is significant.

Summative assessment is aligned to teaching experience. School reports are generated by both the associate teacher and the college appraiser where a pass/fail point is identified. College appraisers generally write the report as they observe and then share with the student and associate.

1.3 Participants

Two teaching staff were involved initially. There was a changeover towards the beginning of the semester which involved a certain amount of handover, before it became the sole responsibility of one of them. Of the twenty-two students in the programme, all studying full-time, ten indicated a willingness to volunteer as participants.

2 Implementation

2.1 Implementation issues

The initial staff member involved was the programme coordinator as she was the main person still positive about the concept of ePortfolios in the wake of the 2006 experience. When she was unable to continue a staff member not part of the 2006 pilot took over. As a result it has taken time for him to come up to speed with the rationale, pedagogical possibilities etc. At the time of writing the project was only just beginning to gather momentum again with plans being made to better use Mahara for upcoming student reflections.

Also, because of the above, and the vacancy of the elearning facilitation role from January-May 2007, all levels of student, organisational and technical support have been, in general, lacking for the period of the case study. This person in particular, it was hoped, would have provided this. More tellingly, none of the students who volunteered have received their username and password from the TE coordinator yet though they have been generated, so there has been no activity in Mahara from them in this case study so far. Lines of communication, and administration of Mahara at the chalk face has not occurred.

2.2 Documentation

The staff members who have been involved with the Mahara pilot have found the Implementation Guidelines useful for themselves, especially the decision to maintain this online on the Mahara site and the step-by-step illustrated approach which was easy to follow.

3 Technical

3.1 Technical support

In the absence of in-house support from an elearning facilitator staff have tended to refer their technical questions to the Mahara project manager who has been very prompt in replying. The lag regarding student entry to Mahara has occurred at the institutional end. In future it is hoped that the replacement elearning facilitator will assist with overall support.

3.2 Reporting

No specific comments or requests were made on this.

3.3 Site Configuration

N/A.

4 Tutor Feedback

4.1 Teaching with ePortfolio

While little can be said in this section at present there is a definite commitment on the part of the institution, management, staff and students concerned, to the ePortfolio concept in principle that is gathering momentum. Previous experience suggests it works best largely as a formative tool embedded within the programme design and structure, that is, factored inside the students' 1.3 workload, and where significant ongoing support is offered, particularly on a technical level, to all involved.

There is one request as regards a desired feature. The 2006 ePortfolio software Massey used would not talk to Word which was frustrating for students writing up reflections offline, then trying to copy and paste them into the system. All formatting was lost. Staff would therefore like to see a cut and paste capacity from Word to the Mahara ePortfolio.

4.2 Student learning experience

Despite the lack to date of access, the students who volunteered are still interested in participating as they can see distinct benefits for themselves. Three were specifically mentioned: ease of accessibility to documents if the student is applying for work overseas, let alone in NZ; a chance to remove 'double handling' of Word processed assignments; and a removing of the risk of their loss altogether if computer accessibility changes or files are damaged. One student warned, however, that the lack of effective administration to this point may have meant the concept this time around has missed the boat. Students' workloads are increasing as the semester goes on so there is less time now to familiarise themselves with a new system.

5 Continued use of Mahara

5.1 System Quality

As regards the quality of the system, after the previous experience staff, are impressed with the simplicity and flexibility of Mahara.

5.2 Intention of Continued Use

A commitment has been made at management and strategy level to seriously consider the role of ePortfolios as a compulsory and integral part of a four year Bachelors programme currently under development. Exactly what part they might play in assessment structures is yet to be finally approved but there is interest in Mahara as a platform if a guarantee of its sustainability in the medium to long-term can be given. This interest exists extraneous to the current case study.

6 Success of pilot

Given the various factors described above this has yet to be determined. So far a lack of decisive administration, clear linkages between classroom and mentoring activity and eportfolio work, informed ownership of the project, and on-site technical support (ie a helpdesk and troubleshooter) are hindering success. Good will has not been lost however so there is still time to make use of Mahara within the selected course though it will have to happen beyond the time bounds of this particular case study.

7 Additional Comments

A perceived strength of ePortfolios within a teacher education programme is their ability to place more ownership of growth in the hands of the student. In particular, this offers more opportunity for the highlighting of strengths, as currently it is more common to try to identify points for improvement. It also offers potential for the documenting of a broader range of attributes than simply meeting learning outcomes, the opportunity for staff to provide exemplars and greater personal and professional role-modelling, and more experience to the student in skills like collaboration that are so vital to the working teacher's life.

It was noted, however, that such an implementation would require a philosophical shift firstly in the mind of the lecturer who would need to be more willing to be more vulnerable in modelling the role of a reflective practitioner, and secondly in the mind of the student who would need to be less competitive and grade-oriented in their approach to their study and more able to truly value reflective practice and the learning experience per se.

Setting the scene for such a philosophical and cultural shift is still the challenge facing a successful implementation of ePortfolios. Whether ePortfolios are optional or compulsory, effective support (particularly technical), follow-up, administration, course and programme design, and the harnessing of knowledgeable and committed people at all levels are essential ingredients. Initial 'failure' needs to be seen as the opportunity for future wise development rather than a reason to abandon the concept.

Author: Rosemary Dewerse

Acknowledgements

Lindsay Brears and Ally Sewell for providing most of the information from which this case study was written.

Bill Anderson and Mary Simpson for providing reflections from a management/strategy point of view.

The students of the Graduate Diploma of Teaching (Primary).

Mahara ePortfolio System Implementation NMIT Final Case Study Report

Prepared by
David Sturrock, Flexible Learning Team Leader
Caroline Earley, ePortfolio Project Co-ordinator, Academic Staff Member Visual Arts and
Design

Introduction

Rather than an evaluation of the ePortfolio system Mahara, the eCDF ePortfolio project case study reports are designed to provide other organisations a guide to the lessons learnt and challenges faced during the implementation of a typical ePortfolio system.

It should also be noted that during the pilot period, case study partners were working on a pre v1.0 release of Mahara where development and refinements to functionality was continuing.

In order to ensure relevance to other ePortfolio systems and ongoing accuracy of the case studies, where possible references to functionality or technical issues specific to the ePortfolio system Mahara and the pilot site (MyPortfolio) have been removed. Development suggestions made within the case study reports have however been captured by the eCDF project team and documented within the Mahara Development Roadmap (<http://www.mahara.org/roadmap>)

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1 Case Study Overview

1.1 Organisational Details

NMIT is the major provider of tertiary education in the Nelson/Marlborough region. Since its inception it has exhibited steady growth and is now one of New Zealand's larger regional polytechnics with a student population of around 3615 equivalent full time students.

NMIT offers more than 100 programmes at degree, diploma and certificate level in a wide range of subjects, many of which can be studied full or part time.

The institute serves a region with a population of 123,000 with campuses in Nelson and Blenheim. The largest campus is located in Nelson where about 80% of the Institute's staff and students are based. In January 2005 NMIT implemented an online learning platform to support classroom based courses and explore opportunities for online delivery of programmes. "NMIT Online" utilises the MOODLE Open Source Learning Management system.

The initial focus has been on building staff and support service capability with a group of early adopters using the basic capabilities of NMIT Online to enhance their face to face classes. Adoption of Moodle has been patchy with some Faculty Schools identifying basic use as a requirement for all courses and others having little engagement with electronic resources at all, let alone an online course area. Pilot projects exploring its wider use in a blended delivery approach have been a priority for the Flexible Learning Team.

Individual lecturers from Visual Arts and Design have used NMIT Online, but mainly as a tool to deliver content that is also paper based and for course communications. One limitation in using Moodle within the Visual Arts and Design programme more fully has been the inability for students to upload their own content into the system. Mahara ePortfolio provides a complement to Moodle, adding the more individual, student oriented platform to the whole class-oriented platform

Visual Arts and Design already uses a "portfolio based" system for assessment, so trialling within this programme was seen as a good fit with ePortfolios. It also forms a solid base to expand the debate on the use of portfolio based assessment and student-centred learning approaches at NMIT.

NMIT has not yet discussed the wider use of ePortfolios for assessment or other purposes in teaching and learning.

1.2 Programme or Purpose Description

Mahara was implemented in the School of Arts and Media. The programme selected for implementation was the Bachelor of Visual Arts and Design and Diploma in Visual Arts and Design at NZQA Level 6. The courses selected were Studio Process, Studio Practice, Drawing and Design and Visual Culture. The Programme employs three full time and five part time lecturers.

The primary use of the ePortfolio system has been for formative assessment within most of the courses listed above, with summative assessment to be completed one week before the submission of the final case study. There was a professional element for teaching staff as most had little experience with blogs and other web-based systems and their use in both their teaching and research.

Graduates who complete the Bachelor of Visual Arts and Design degree will:

- Produce visual art / design work of a high standard based on informed conceptual development
- Use design processes and visual language to generate successful and innovative visual art / design solutions and to explore and communicate ideas in visual art and design work
- Independently undertake and successfully manage visual art / design projects
- Work safely and efficiently using a comprehensive range of technologies and technical skills
- Research actively and effectively, successfully relating researched knowledge to visual art / design practices
- Have a commitment to ongoing professional development and to be critical thinkers.
- Have a comprehensive knowledge of the theoretical issues surrounding contemporary visual culture (visual art / design history and theory), and the practices of visual art and design
- Understand the historical and cultural contexts of visual art and design in Aotearoa New Zealand and be able to recognise and use the principles of cultural safety in their practice
- Articulate and communicate ideas effectively in oral and written form to a high academic standard

Graduates of the Diploma in Visual Arts and Design (Level 6) will:

- Possess the appropriate technical skills and safe work practice habits required to produce visual art / design works in their studio major of choice
- Have a set of elementary small business management skills of value in managing an independent visual art / design practice
- Have sufficient studio and design process and problem solving skills to run an independent visual art / design practice
- Possess independence and a sense of self-direction in their professional practice
- Be able to research and critically evaluate their work
- Have a broad understanding of the ethical, social, philosophical, historic and cultural issues relating to their professional practice

The Bachelor of Visual Arts and Design and the Diploma in Visual Arts and Design are new qualifications, having been redeveloped from the previously existing Bachelor of Visual Arts and Diploma in Art and Design. This is the first year for teaching the new courses. Portfolios form a significant part of the BVAD and DVAD and use of an ePortfolio system offers an excellent opportunity to add to the context of technology & individual choice emphasised in the recent programme changes.

Web-based platforms are being used more and more as a vehicle for visual artists, including students, to show their work to prospective employers, curators, graduate institutions, etc. The web is also fast becoming an important medium and venue for the visual arts. Many artists conduct the majority of their practice on their own websites as well as on social networking sites such as YouTube. Mahara provides a safe space for students to experiment with the use

of blogs and other web-based content as a vehicle for their artwork, before publishing more widely on public sites.

The ePortfolio Project Co-ordinator has been an early adopter of web-based learning within the Visual Arts and Design programmes and teaches on half the courses identified for the study.

The NMIT case study focussed on the lecturers of three Level 6 courses in the diploma and degree programmes. (Studio Process, Studio Practice, Drawing and Design 3 and Visual Culture 3). These courses were taught by 4 different lectures, three of whom team teach the two studio courses. One lecturer undertook the majority of the ePortfolio training and implementation with the ongoing support of the Flexible Learning Team. Two of the courses were studio based and one was theory based.

Typical tasks for formative and summative assessment across the courses for the level include:

- compiling portfolios of finished work
- process workbooks, which include experimental works, studies and critical notations
- written assignments
- research projects
- class presentations
- peer review

Aspects of the above tasks included both optional and mandatory use of the ePortfolio. All of the assessment that has taken place to date has been formative.

Mandatory Use of Mahara included:

VAD 604 Studio Process and Research and VAD605 Studio Practice required students to submit for formative assessment a gallery of five selected images of works completed from throughout the semester and a blog containing one of these images plus a critical evaluation as a blog entry. Students were then given online feedback from lecturers. Prior to this students created a similar 'practice' gallery and blog for peer assessment. They were assigned to small groups for online peer feedback, however most students elected to give all students in their course community access to their galleries and blog. As part their summative assessment, students submitted electronic versions of their research folder bibliography. While this was a simple word document upload and view creation, it has provided a distinct advantage for lecturers in assessing web-based student research sources. Web page urls in the bibliography appeared as hyperlinks, making reference checks easy and more time efficient.

Optional Use of Mahara included the following:

In VAD604 Studio Process and Research and VAD605 Studio Practice students were given the option to use Mahara as a "site" for art-making. This could include online documented artworks in the form of interactive web logs, links to external websites such as YouTube, etc. Students also had the option to submit contextual statements for formative assessment.

Students enrolled in VAD601 Visual Culture 3 were given the option to submit as a blog their Peer Evaluation/Review of an Exhibition Project as an ongoing evaluation and commentary conducted throughout the project from conception through to final project or as a single submission completed at the end of the project. One student intended to use Mahara for this optional purpose, but did not like the green theme of Mahara, so in the end chose not to present her work this way. She felt that the colour scheme was limited and did would not have enabled her to show her work in the best possible way. She instead created a PowerPoint

document that mimicked blog pages so she would have more control over their appearance. Anecdotal evidence suggests that art and design students tend to prefer white or neutral colours and simplified backgrounds that offer opportunities for greater creative control over the visual presentation of their work.

Students in Drawing and Design 3 did not use the ePortfolio for coursework. A change of lecturers for this course from the end of 2006 to the start of classes in 2007 created a situation where it was no longer possible for this course to be involved in the case study. All students enrolled in Drawing and Design 3 are also in some or all of the other courses.

1.3 Participants

Sixteen full-time and five part-time students were involved in the case study. Of these, seven full-time and two part-time students were enrolled in courses requiring mandatory ePortfolio participation. Five lecturers were involved in the implementation of Mahara. Due to staffing changes, only two of the five lecturers initially involved were assigned to teach the level 6 courses. One staff member has primarily been involved in implementing the project. This has been done with input from the other three lecturers teaching at this level. One of the four will be using Mahara more fully in Semester two.

2 Implementation

2.1 Implementation issues

Mahara was introduced at NMIT within a period of significant change within the programme. All courses within the trial were taught for the first time and a staffing review resulted in reallocation of teachers to different courses than those they had committed to at the start of the trial. Timetabling and room allocation clashes made it difficult to follow through with integrating Mahara in classroom sessions as much as had been planned.

No policy changes were required to implement Mahara at NMIT. Existing programme documents provide for a wide range of delivery modes including web-based.

One frustration students encountered was the addition of an extra log-on process. Students currently log-on to the institute network and the online learning site. Mahara added a third log-on to this process which most students found to be unnecessarily repetitive. Support was well resourced as part of the project funding. Problems providing student and tutor support were due to timetabling and other workload constraints.

There was a great deal of initial thought and discussion about translating current generation, collation and submission modes into e-modes. Some aspects of Visual Arts and Design teaching and learning translate more naturally into digital modes. The most relevant use was in the area of formative assessment and feedback so this is where we focused our energies. Due to internal factors lecturers, many of whom were newly assigned to the case study courses, were writing new project briefs for all semester one courses at the start of the year and semester two courses during the semester of the case study. While this presented an opportunity to build ePortfolio into courses, in reality staff changes and tight deadlines resulted in inconsistent specification of Mahara throughout level 6 VAD courses. Unfortunately Mahara was not included in the pre-moderation criteria for individual course project briefs.

It was difficult for newly assigned lecturers to be fully involved in implementing the project due to time constraints. This coincided with the first release of a moderately functional

Mahara. Lecturers underwent initial training at this late stage in order to learn about using Mahara and to determine how an ePortfolio system could be utilised within the tasks they were writing for their courses. Had either the Mahara training or course development been carried out the previous semester, lecturers would have been able to utilise the ePortfolio more fully.

Some students don't like to use, or are less skilled in using computers. Due to equity issues arising from these imbalances, we gave students the option to hand in work using a traditional mode if they found that using the system was too stressful. At this stage, no students, given mandatory ePortfolio tasks have get opted to do this. Only a few students have used the system for optional tasks. The degree to which students used the system was directly related to lecturer involvement and the inclusion of mandatory tasks in course project briefs.

We encountered a wide range of technical proficiency within the student and lecturer groups. For some this posed a significant barrier for their active use of the system. Both staff and students with limited technical knowledge required the bulk of initial classroom and individual tutorial support. Late functionality of Mahara made it difficult for staff to gain the required confidence with the system in order to use it in their teaching. Students who grappled with the technology found it difficult to see the relevance of using Mahara as a learning tool.

Initial lack of readiness made it more difficult to "sell" the system to students, who become frustrated with aspects, which were not initially working. Initial functionality concerns were centred on the format and limitations of the view templates and the lack of a resume building capability. These were addressed by subsequent upgrades to Mahara and with the addition of a wider range of templates. As we have restricted our use of the system for fairly basic processes we have not identified any major functionality gaps. One of the prime benefits for Art and Design using ePortfolios is being able to create views for those outside the institute, such as curators, potential employers, etc. The absence of this functionality during the trial period, removed this incentive for uptake.

Viewing of media files required special exemption from ITS as there is a restriction to access video files on externally hosted sites. The late release of Mahara affected our initial lecturer and student training schedule. If this training had occurred in late 2006, staff would have been more familiar with the system and therefore would have been more likely to include its use in their project briefs. While working independently from home, one student reported that she had been timed out without receiving a warning that this was about to occur. The site reverted to the log-on page, but the student was not able to successfully log-on during the same work session. No work from the previous session had been saved. It is difficult to suggest ideal system behaviour without knowing the exact nature of the error. If the error was caused by a system outage, then a message warning users that this was about to occur, or has occurred would at least prevent increased frustration, caused by multiple attempts to re-log on without success.

2.2 Documentation

The implementation guidelines made it easy to identify aspects of the project to discuss with staff and students. Information contained in these was easily transferable to training situations. The materials also proved to be useful in identifying most areas needing consideration in carrying out the project.

The user guides in their current form are very helpful and clear. Late availability impacted negatively on staff as user guides were only completed after the initial staff training. A searchable online help file would facilitate quick and easy access to information.

3 Technical

3.1 Technical Support

As the system was provided as an externally hosted shared-access site there was little technical support required. Any specific requirements were easily handled by the existing IT and Flexible Learning support teams. The major support requirement centred on user training for both staff and students and this was where the majority of the project funding was targeted.

3.2 Reporting

Reporting tools have not been needed to date. Our use of the system has been at a fairly basic level, so the reporting systems have not yet been investigated.

3.3 Site Configuration

Not applicable as the shared myPortfolio.ac.nz external hosting option was chosen for our case study initiative.

4 Tutor Feedback

4.1 Teaching with ePortfolio

The use of ePortfolios has enabled a more systematic way of teaching aspects of the studio course. Students enrolled in studio courses are accustomed to a higher ratio of individual tutorials vs. group tutorials. Having all the students engaged in ePortfolio at the same time, however, created more opportunity for teaching aspects of written reflection in a more overt and direct manner. Because the students were blogging during these sessions they were more engaged in the task. The application of the material being taught was real and immediate. This encouraged more directed and relevant reflection. For the lecturer, when accessing the students' blogs after the exercise, the written work and accompanying images were more accessible than when presented as part of paper-based journals and feedback time to students was significantly shortened.

The ability to access student's media files has been fantastic. Students normally have to burn CDs of their work for lecturers and peers to view them. The use of ePortfolio has facilitated greater experimentation, as students are able to upload video files as they make them and have them viewed by peers and lecturers in a more informal manner. This potentially puts the process of giving feedback on work of this nature on a more equal footing with more traditional art making practices.

Art students generally work in individual studios of limited size. This often means that experimental work and finished pieces produced early in the semester get packed away in portfolios. This also happens with work produced in previous semesters. The use of ePortfolios enabled the creation of an image archive of these works, which in turn brought them into the present during tutorial sessions. In one instance a lecturer asked a student to upload images of work which had been created the previous year as it related to a discussion they were having in the present. Seeing the works in an image gallery next to current work enabled both student and lecturer to see the development which had occurred.

No disadvantages related specifically to using ePortfolios in the manner implemented in the case study were reported. The ePortfolio system was integrated into traditional modes and not the only mode employed. Significant disadvantages would occur in Visual Arts and Design

education if they were used as the only system. Lecturers were always able to view the original artworks as well as images of artworks uploaded to Mahara. The disadvantages stemmed from other systemic issues, such as lack of access to computer labs near studio spaces.

Lecturers who specified mandatory use of the system had greater student uptake of Mahara. The timetable in the first term (Feb – April) meant that one lecturer's class did not have access to training during scheduled course hours by the project coordinator. The majority of students in the course however had access to training as part of other courses in which they were enrolled.

NB: See tutor or student participation in section 2.1 Implementation issues.

It would be useful if students could create their own headings for the standard resume sections. Users also need the ability to insert additional sections with a custom heading and free text field (with HTML editor) to allow for creativity and common resume components for different professions. For example, art students need to be able to include exhibition lists, collections, artist residencies, gallery representations etc. This feature request has been included in the Mahara Development Roadmap.

4.2 Student learning experience

This question has primarily been answered in an integrated manner in section 4.1.

The main factors affecting student use of the ePortfolio system have been:

- Mandatory use specified in project briefs.
- Lecturer involvement in student ePortfolio activities.
- Benefit to students apparent.
- Students comfort with technology
- Individual student's interest in Web 2.0 applications

5 Continued Use of Mahara

5.1 System Quality

We have rated the overall quality of the Mahara ePortfolio system as satisfactory. The feature set of the system is very deep with the ability to control access to artefacts at such a granular level. This naturally results in a fairly complex conceptual model for the student to grasp and therefore a complex process to create an even a fairly simple view. This would be simplified if each user account was automatically allocated a blog, with a single entry and a corresponding blog view. This would make the conceptual model easier to grasp with an active example the user can immediately edit and play with.

5.2 Intention of Continued Use

The NMIT Flexible Learning Team has committed to provide access and support for Mahara until the end of 2007. Continued use after that date will be dependent on:

- Increased staff commitment to the use of ePortfolios within Visual Arts and Design and other programme areas.
- Further student feedback.
- Ongoing costs for hosting, technical and user-training support – we would prefer to use a shared externally hosted service as this reduces the requirement for localized technical support.

- Comparison of our usage requirements with other freely available applications. For example most of our current requirements could be provided by a free WordPress or Elgg-based community.
- Ability to align login accounts with other NMIT services (Moodle-Mahara single-sign on capability will simplify this).

During the second semester of 2007 Mahara will be used as part of a programme for staff professional development in the school of Arts and Media, expanding their use of Web 2.0 applications in teaching, learning and research. There is also interest in using Mahara within selected courses during the second semester of 2007. This is being supported by the extension of the ePortfolio Project Co-ordination role until the end of 2007. A formal decision on long term use of Mahara will be part of our 2008 service and budget planning process.

6 Success of Pilot

6.1 Staff Response

The staff response to the pilot initiative was neither positive nor negative. Some staff members have reported that they needed more time to get to grips with the ePortfolio system before deciding to use it in a classroom setting, especially for assessment purposes.

6.2 Overall Success

We have rated the pilot initiative as satisfactory. As discussed above, further work is required before establishing Mahara's long term incorporation in teaching practice at NMIT.

ePortfolio Implementation Case Study

The Open Polytechnic of New Zealand

Introduction

Rather than an evaluation of the ePortfolio system Mahara, the eCDF ePortfolio project case study reports are designed to provide other organisations a guide to the lessons learnt and challenges faced during the implementation of a typical ePortfolio system.

It should also be noted that during the pilot period, case study partners were working on a pre v1.0 release of Mahara where development and refinements to functionality was continuing.

In order to ensure relevance to other ePortfolio systems and ongoing accuracy of the case studies, where possible references to functionality or technical issues specific to the ePortfolio system Mahara and the pilot site (MyPortfolio) have been removed. Development suggestions made within the case study reports have however been captured by the eCDF project team and documented within the Mahara Development Roadmap (<http://www.mahara.org/roadmap>)

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1 Case Study Overview

1.1 Organisational Details

The Open Polytechnic of New Zealand is a national provider and a specialist in open and distance education. It has a student population of over 30,000 students from various parts of New Zealand and from overseas countries. It offers both print-based and web-based courses.

As a new teaching and learning tool to The Open Polytechnic, Mahara was implemented to help determine the answers to a number of questions relating to the use of ePortfolios. These issues included understanding how to use ePortfolios not only from both a tutor and student perspective, reviewing current documentation and research on ePortfolios, testing and learning about the Mahara ePortfolio environment and its functionalities, learning how to set up an environment for student feedback, determining which portions of a course and associated assessments could be used in relation to ePortfolios, and finally how to best promote ePortfolio use to students.

Initial introduction and examples of how ePortfolios could be used were provided to draw interest from students to participate in this pilot project. Guidance was provided about where it could be used in the course and how to get started. Students were invited to provide feedback and personal reflections about their use of ePortfolios.

1.2 Programme or Purpose Description

The ePortfolio system was selected for use in a number of courses across the OP 7010 Bachelor of Applied Science, OP6020 Diploma in Psychology and OP5271 Diploma in Communication Studies and included courses:

- 71251 Advanced Information Systems (Level 6)
- 73132 Psychology of Stress (Level 5)
- 72182 Writing for the Web (Level 5)
- 72144 Professional and Technical Writing (Level 5)
- 72280 Writing for Specific (Technical) Purposes (Level 6)

The above courses were selected by teaching staff voluntarily involved in the implementation case study as it was thought the subject matter and assessment structure of these courses could be adapted to include the use of an ePortfolio system.

Within 71251 Advanced Information Systems there are three assessments: Assignment 1 worth 25% of the final grade, Assignment 2 worth 35% and an Examination worth 40%. The two in-course assessments are formative assessments. Each assignment consists of two portions, i.e. Part A and B. Part A requires students to submit a report based on the questions asked of a case study. This output represents the tangible output which is supposedly presented to the client in the case study. Part B requires students to capture the reflections and connections behind completing Part A. This portion of the assignment is the reflective writing portion where some internalisation and introspection is required. The reflections and connections behind any assessment would normally be considered the intangible portion behind a piece of work. However, for this paper, students are expected to externalise their thinking so that some credit can be given to the background work carried out. This section is marked based on the degree of analysis carried out (i.e. width, depth and distance of analysis).

73132 Psychology of Stress, 72182 Writing for the Web and 72144 Professional and Technical Writing and 72280 Writing for Specific Purposes each include the completion of 3 summative assessments.

1.3 Participants

71251 Advanced Information Systems – 7 students
73132 Psychology of Stress – 3 students
72182 Writing for the Web – 14 students
72144 Professional and Technical Writing – 8 students
72280 Writing for Specific Purposes – 3 students

It should be noted that there are some students enrolled in two or more of the above writing courses so the number of individual users will be slightly smaller than listed. Four members of the Open Polytechnic's teaching staff were involved in the ePortfolio implementation case study.

2 Implementation

2.1 Implementation Issues

Due to the short timeframe between the introduction of the ePortfolio system and the start of the semester, some initial problems were experienced which were mainly to do with getting a solid understanding of the project, establishing what was expected from involved teaching staff and students and sorting out the required access to the Mahara system.

Unfortunately overall, student participation was low, likely due to the voluntarily participation across most involved courses. As the subject area for most of the courses are IT/internet related, it was assumed that students had the technical proficiency and sufficient skills to explore the system however this proved untrue for most courses.

A major issue was that there was insufficient time at the beginning of the semester to prepare and get up to speed with the requirements of the project. Sign up for participation in the project for one tutor began about one week prior to the start of Semester 1, 2007. As a result the initial training sessions which were held to inform/introduce the pilot project was missed this tutors.

The task of understanding the project requirements was also left to the staff members via access to documentation however the short timeframe which was available before Semester 1, 2007 created some challenges for staff members to understand what was required and prepare the required documentation for teaching.

Other issues experienced were in terms of obtaining the required access to documentation, who to contact for questions and problems, what resources were available and what information to supply to obtain user accounts.

2.2 Documentation

In general it was thought the Student User Guide was fine, but the User Guide created by Pip Fowler was more suitable for her students as it covered only those tasks her students were required to perform and was composed the order in which they were asked to complete them. The additional helpfiles were received well by students and the Implementation Guidelines were very much of use within the institution.

3 Technical

3.1 Technical Support

Setup and administrative questions were initially directed to the project team within the institution. Support was also provided through Online Campus (Open Polytechnic online learning management system) where forums were setup to enable participants to interact and exchange thoughts about the Mahara system.

Technical support was subsequently received from the Site Administrator. Problems encountered were reported to the Site Administrator or to the Project Manager and based on the nature of the problem, they were resolved accordingly.

However to prepare for and support this experience, Helpdesk may have to offer students a structured induction and 1st level technical support throughout the course.

3.2 Reporting

None of the basic reporting functionality within Mahara was used during the pilot.

3.3 Site Configuration

Given The Open Polytechnic used the collaborative MyPortfolio environment system configuration was as per the site default.

4 Tutor Feedback

4.1 Teaching with ePortfolio

There are a number of aspects in using an ePortfolio system that are perceived as being of benefit or value within teaching. Specifically within Mahara the blogs, the View templates and the ability to build communities and groups with restricted access are useful professional development in establishing liaisons, networks and marketing purposes. From a teaching perspective they help to generate focused discussions and interests with interested parties.

In addition Mahara provides users the option of either sending private or public messages to the owner of a blog. Within a teaching environment this feature is useful as it would promote participation from students who are shy of interacting in a large group but instead prefer to interact with the tutor on a one-on-one basis without others viewing their feedback. This would also help to contribute to student learning and experience which in turn could potentially contribute to the retention rate.

The ability for users to submit their work via an ePortfolio system and subsequently receive tutor feedback is useful with regards to marking assessments as is the ability to upload various graphics to a particular view and then have it setup for the viewing of a specific audience. This is a useful feature as it not only enables the tutor to promote and draw interest from the audience, but this feature could be used in a collaborative scenario where multiple groups in a class are setup with different research tasks.

An ePortfolio system if attractive with eye-catching images, videos, blogs and templates and user friendly (i.e., no counter-intuitive commands) could be of great interest within teaching. Students can learn to create a professional looking portfolio that presents their work as a student and their curriculum online. Students can be encouraged to create a record of their formative assessments by using e-portfolios.

Evidence of collaborative learning strategies can be collected with a variety of roles, tasks, and responsibilities which can be assumed by each student in an electronic collaborative learning environment. Groups of students can be invited to resolve a theoretical dilemma and/or a practical problem in an asynchronous discussion group by means of 3 main clusters of activities: (i) management of online discussion platform, (ii) stimulating knowledge building and self-directed learning during online learning processes, and (iii) stimulating social interaction and open communication. These activities can easily be over-viewed by the tutor (i.e., tutoring, coaching, and moderating).

As far as teaching 71251 Advanced Information Systems is concerned, the limitations of using ePortfolios in teaching are minimal however within other courses some academic policies require more flexibility. For instance, it would be good if tutors could reward participating students in a more gratifying way (i.e., only 10 extra marks were given).

It is believed the factors affecting tutor use is similar to factors affecting student learning where any inconsistencies or technical problems on the system deters the user from continued use of the system. In addition to this, having good student participation, interaction and feedback provide tutors an incentive to develop new ways to contribute to the teaching learning process. As this was a pilot project, student participation and interest was low. As a result, opportunities to respond to student queries and thoughts were minimal.

Features and functionality that tutors would like to see in later versions of Mahara include a drag and drop facility where working with artefacts on the view templates. This will enable users to have better control of the screen design. In addition the ability to embed video files into Views would be useful and add interest to the user's portfolio.

It would also be useful to be able to order individual components of resume information so that the user has more control over what appears in their Views.

4.2 Student Learning Experience

There are a also number of aspects in using an ePortfolio system that are perceived as being of benefit or value within a student's learning experience. From a student's perspective, the facility of being able to submit work to a tutor in order to receive feedback through an ePortfolio Portfolio system is an attractive feature. Specifically within Mahara the work submitted is kept private between the two parties and this feature allows the student to keep all feedback received in one place. This feature is particularly useful for mobile students as it would allow them to work on their course material and refer to the feedback received at any place without having to take backups of their work.

An ePortfolio system typically provides users the opportunity to think about their strengths and about how they would like to market their skills and experience. It enables users to think about how they would like to be portrayed online, personal preferences with regards to designing their views and at the same time develops their online technical skills.

ePortfolios can also be used to structure the outputs of assignments. The ability to use various artefacts provides opportunities for students to be creative in their work and the features available in Mahara (e.g. artefacts, focused views) could be used to create meaning for assignment tasks.

As the system is designed to provide users the opportunity to promote and market their efforts, any development done on the system that promotes self-questioning, introspection and self-reflection will contribute to deeper learning.

Mahara ePortfolio was used to (i) showcase students' work, (ii) reflect their learning process, (iii) help them create blogs and create an online version of their curriculum, and (iv) help them practice at editing on the Internet. Students who used Mahara ePortfolio enjoyed to be able to showcase their work and to create a sense of online community

Mahara ePortfolio can give students the opportunity to develop necessary skills required for their future professional environment (e.g., interpersonal skills, such as negotiating, listening and counselling, communication skills, including clear written communications, confidence, self-esteem and resourcefulness). Mahara can also be used as a platform for the presentation of students' best practise examples and as a concrete evidence of practical abilities (e.g., socialisation, community building, questioning, triggering reflection, providing descriptive and constructive feedback to each other).

It is felt that if usability of the ePortfolio system is good then between the opportunity for showcasing work, the blogging, the communities and CV functionality the provision for strong academic potential is provided.

It is believed the factors affecting tutor use is similar to factors affecting student learning where any inconsistencies, errors or technical problems on the system deters the user from continued use of the system and may affect the student's learning experience and enthusiasm.

In addition time constraints will affect the student use of an ePortfolio system. If the student is not willing to commit to spending time on ePortfolios since the effort made would not contribute to any quantitative benefits as far as the course is concerned it would purely be for personal learning which may not be seen as added value.

A lack of technical skills to explore and learn from the system also proved to be a factor negatively affecting student use of Mahara.

5 Continued Use of Mahara

5.1 System Quality

Quality of the ePortfolio system has been rated as *Satisfactory*. The reasons were mainly to do with inconsistencies and the lack of clarity found in some areas of the project and system. Despite the inconsistencies and discrepancies, system availability and the project team's response to errors reported were good. The bugs were either resolved or added to the Roadmap for future development.

5.2 Intention of Continued Use

There is good potential for the use of the Mahara ePortfolio system as far as ePortfolios are concerned. It offers individuals the opportunity to market their skills and experience to respective parties. However, from an organisational perspective, the intention of continued use needs to be considered from other factors also such as:

- ease of using and navigating through the system
- presentation of its features from a marketing perspective

- flexibility of catering to the user's needs with regards to the type of artefacts that can be uploaded, usability, the level of user control in using the features, etc.
- availability of features to support, develop and enhance students' learning

6 Success of Pilot

6.1 Staff Response

The staff response to the pilot initiative is given a rating of 2 (Less than Satisfactory).

6.2 Overall Success

The overall success of the pilot initiative was given a rating of 3 (Satisfactory). Most of the issues that were experienced occurred at the beginning of the semester. As the semester progressed and as participants became more familiar with the system and had time to reflect on the case study, the tasks involved became less challenging. Despite the various challenges experienced, issues were addressed rapidly.

7 Additional Comments

Overall, it was a privilege to be given the opportunity to participate in this pilot project. For students within Advanced Information Systems, the opportunity to be involved in such a project was beneficial from a learning perspective in relation to the course, not only from a student's perspective but also from a tutor's perspective.

Given that this is a pilot project to evaluate the ePortfolio system, bugs are to be expected and it was pleasing to see that the availability of the system was good.

Case Study Report Contributors

Puvana Natanasabapathy, Yanelia Yabar, Pip Fowler, Dierdre Viviers and Richard Wyles

ePortfolio Implementation Case Study

Tai Poutini Polytechnic

Authored by Erik Hogan

Introduction

Rather than an evaluation of the ePortfolio system Mahara, the eCDF ePortfolio project case study reports are designed to provide other organisations a guide to the lessons learnt and challenges faced during the implementation of a typical ePortfolio system.

It should also be noted that during the pilot period, case study partners were working on a pre v1.0 release of Mahara where development and refinements to functionality was continuing.

In order to ensure relevance to other ePortfolio systems and ongoing accuracy of the case studies, where possible references to functionality or technical issues specific to the ePortfolio system Mahara and the pilot site (MyPortfolio) have been removed. Development suggestions made within the case study reports have however been captured by the eCDF project team and documented within the Mahara Development Roadmap (<http://www.mahara.org/roadmap>)

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1 Case Study Overview

1.1 Organisational details

Tai Poutini Polytechnic is a Greymouth based tertiary institution with campuses throughout New Zealand. Late in 2006 Tai Poutini Polytechnic's eLearning group, after consultation with campus directors Samuel Blight and Derek Keene, opted to trial the eCDF ePortfolio project over a small number of courses. The group decided on joining the ePortfolio project so they could evaluate the effectiveness of an ePortfolio system in our environment as well as directly contribute to the development of an eLearning system.

1.2 Programmes

Certificate in Audio Engineering (Level 4/5)

Diploma in Audio Engineering (Level 6)

The Certificate and Diploma in Audio Engineering courses are designed to introduce students into the fields of music recording, mixing and production. Formative tasks for this course include completing questionnaires based on the content of the course (for instance, the principles of speaker design or how to use various functions in audio engineering software) and summative tasks include developing music mixes on a computer.

These courses were chosen for the ePortfolio case study because it was decided that Mahara could be a useful tool for submitting and sharing recordings and mixes.

Diploma in Contemporary Music (Level 5/6)

The Diploma in Contemporary Music course involves the study of popular music and extensive training for live music performance. Formative tasks for this course include the monitoring of student performances over the year, and an example of a summative task is a 30 second radio commercial that each student has to produce.

This course was chosen for the ePortfolio case study because the tutors of this programme actively encourage their students to use the Internet as a tool for feedback, collaboration and forming social networks; and it was felt that Mahara would be a useful tool to aid this.

Diploma in Information Communications Technology (Level 5)

DipICT5 is the first year of the three year National Diploma in Business Computing qualification. The content covered in the 18 modules is designed to give a broad knowledge of the Information Technology industry.

Graduates are trained to be productive and adaptable employees, capable of specialisation with further training. This qualification recognises readiness for further study in computing and related fields at higher diploma level, as well as for initial employment in the computer industry.

Diploma in Information Communications Technology (Level 6)

DipICT6 is the second year of the National Diploma in Business Computing qualification.

This programmes' 18 modules provide more depth and some specialisation in consultation with local industry requirements. Graduating students are proficient in selected areas of business computing such as user support, computer operation, computer programming, systems analysis and design, project management, database design and administration, graphics and multimedia.

This qualification recognises readiness for further study in computing and related fields at higher diploma level, as well as for employment in the computer industry.

The Computing Industry is hard to define and students may find employment in a wide range of businesses, Local Bodies or Government Departments in a variety of computing positions that may or may not require on-the-job training and/or further upskilling.

To break into the "Computing Industry" students will most likely need to commit themselves to both DipICT levels 5 & 6.

To gain a position in a specialised area, students would need to commit to further level(s) of study covering technologies such as; web page design, object orientated programming, networking administration, specialised and specific database administration, intensive work in multimedia etc.

Ultimately Mahara was not implemented in two of the four programmes originally chosen for the trial; this is elaborated on in the following sections.

The reasons all of these particular courses were chosen for the ePortfolio case study reflects the perceived need to develop ICT capability to support student learning on many levels. They include the recognition that Mahara can be used as a tool for uploading assignment work (amongst other types of task-based student learning material) and for sharing students' multimedia productions with others including prospective employers.

1.3 Participants

Course	Staff	Students
Certificate in Audio Engineering (Level 4/5)	3	45
Diploma in Audio Engineering (Level 6)	3	21
Diploma in Contemporary Music (Level 5/6)	2	15

Diploma in Information Communications Technology (Level 5)	2	0
Diploma in Information Communications Technology (Level 6)	2	0

Most, if not all of the students involved are full time students.

2 Implementation

2.1 Implementation Issues

There were multiple problems from our end with implementing Mahara. We were not able to collect all of the student email addresses and email them to the eCDF ePortfolio manager until around the end of Term 1, by then some of the tutors felt that they had already taught their students an acceptable method of sharing their work and felt that it would be unfair to force them to learn another method at this time. As a result of this difficulty we have learned that we should collect student email addresses at the start of the year or make this part of the enrollment process.

Tutors had difficulty finding time to implement Mahara within their courses, particularly since Mahara was not already available to them by the beginning of the academic year. Some tutors had eventually decided against making Mahara a component of their courses because doing so may disrupt the assessment procedures that had already been implemented during the first term of the year.

There were also a number of issues not directly related to the Mahara software but the hosting. The 60 megabytes of storage space allocated per student during the trial is not seen as large enough for hosting media files (especially video and audio) and also our limited bandwidth allocation per student makes it more difficult to upload large media files to an off site server.

There were also concerns that the Mahara servers (along with uploaded work) would be brought down after the trial was over. Although this was not the case, it was never the less off putting for some tutors because they believed that it would not be worthwhile for students to invest time uploading their work to a system that would only be available temporarily.

2.2 Documentation

There were no problems with the documentation, which was easy to follow and frequently updated as more guides were added to the system.

The ePortfolio implementation guidelines document contained useful information. In particular, information from Section 1.1.2 “Benefits and examples” helped sell the case study project to the eLearning group. However the implementation guidelines document was not closely followed.

3 Technical

3.1 Technical Support

There was only one technical problem that we encountered with Mahara, one of the students had complained that the image size and quality was very poor compared to Myspace.

As far as we are aware, no site changes were requested and no reporting tools were used. The eCDF Project Manager has been extremely helpful for answering various technical queries.

3.2 Reporting

As far as we are aware none of Mahara's reporting tools were used.

4 Tutor Feedback

4.1 Teaching with ePortfolio

Tutor feedback on teaching with Mahara has unfortunately been very limited. The amount of tutor feedback we have received reflects the implementation issues noted in section two.

Mahara has several features (in particular, blogs and feedback) which tutors find useful for interacting with students outside of classroom hours. With Mahara they are able to share examples of their work and give constructive criticism on students work.

However, tutors also feel that using an ePortfolio system is not suitable for classroom delivery, particularly for units that require class interactivity. They also felt that the learning curve associated with an eLearning system is also restrictive.

Tutors would like to see various features added to Mahara, such as a built in media player, more customability with individual's pages, and higher quality and resolution of uploaded images.

4.2 Student learning experience

Tutors felt that potentially, ePortfolio systems could assist students with learning and help to cultivate collaboration and open discussion between students. They also thought that an ePortfolio system could be extremely useful for helping students present a collection of their work to potential employers.

However tutors felt that using an ePorfolio system as part of the curriculum would also have some disadvantages. The learning curve associated with using an ePortfolio system,

curriculum during 2007 due to the mix-match between the academic year and the implementation of the pilot cycle.

6.2 Overall success

Unsuccessful

Satisfactory

Highly Successful

1

2

3

4

5

We do not feel this pilot has been successful since none of our programmes have used it as a teaching tool and it was not implemented at all in some of our programmes.

eCDF ePortfolio Project Implementation Case Study



Introduction

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It should also be noted that during the pilot period, case study partners were working on a pre v1.0 release of Mahara where development and refinements to functionality was continuing.

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*'Kei te pū te wana, nō te tangata te tahō.'*¹

Abstract

Te Wānanga-o-Raukawa Māori and Administration Studies (MAS) Department participated in the eCDF ePortfolio Project from February to June 2007. My Portfolio is powered by Mahara, and is described as a 'fully featured open source electronic portfolio, weblog, résumé builder and social networking system, connecting users and creating online communities'

Mahara is a web based software application designed to enable users to create e-portfolios for both personal and professional learning and development. My Portfolio therefore provided our users with the tools to create a personal learning and development environment.

Case Study Overview

1.1 Organisational Details

The organisation involved in this Case Study is Te Wānanga-o-Raukawa, a tertiary education provider situated in Ōtaki with satellite delivery sites in various locations around Aotearoa (the North Island).

The context in which Mahara was implemented within our organisation was as an aid for students to achieve specific learning outcomes within their specialist study area. The objective was for students to successfully complete these outcomes for the year of study in which they were enrolled.

1.2 Programme Description

All participants in this case study are enrolled in the Bachelor of Māori and Administration Studies (MAS) Year 2 or Year 3 programme. All papers within this degree are NZQA approved. These papers were last reviewed and approved in 2002 and the department NZQA audited in 2005.

Graduates of the three-year Bachelor of Māori and Administration programme will be equipped with the following skills:

1. An ability to administer effectively in order to provide optimum asset management;
2. An ability to operate as an administrator in a bi-lingual and culturally diverse environment;
3. Have enhanced employment possibilities;
4. Have enhanced personal growth; and
5. Have the ability to introduce administrative skills to whānau in order to protect and develop assets.

The subject areas for this Mahara study involved the first two papers delivered for both Year 2 and Year 3 students and are as follows:

Year 2

- ADM 2/1 - Māori Corporate Enterprise and
- ADM 2/8 - Decision Making & Problem Solving

Year 3

- ADM 3/3 - Computer Studies & Information Systems and
- ADM 3/9 - Macroeconomics & a Detailed Analysis of Microeconomics

The following paragraphs describe the typical formative and summative assessment tasks across the Māori and Administration Studies courses.

Te Wānanga-o-Raukawa is a tikanga Māori institution, therefore our view is that it is not appropriate to criticise our elders. Students are however encouraged to participate in student / teacher formative assessment tasks to enhance, recognise, and respond to the learning. These assessments include post residential reports completed by all tutors, and mihi or acknowledgement sessions between teachers and students that allow them to reflect on their experience. With Moodle, our students can also provide feedback to tutors via forum discussion and we encourage our students to actively participate. To add to this, Te Wānanga-o-Raukawa has formulated a Retention and Completion plan, the purpose of which is self-explanatory. Our reaction to these assessments is to refine or reformat our teaching process with the intention of promoting student attainment.

The summative assessments begin initially with the return of assignments which are due for marking three weeks following the residential seminars. Then follows the department Returns to the Academic Office which is a formal reporting structure. The Moodle eLearning environment also allows tutors to summarise the development of our Year Two and Three students at any particular time.

The purpose of the 'Te Wānanga-o-Raukawa Administration and Management Degree Experience Questionnaire' is to collect student's perceptions of their degree courses at Te Wānanga-o-Raukawa. The information gained from this is analysed and weaknesses identified to build on our formative assessments and aid to retentions.

There are a number of reasons ePortfolio was selected. The MAS Department within Te Wānanga-o-Raukawa is actively committed to using e-learning technologies. These currently include deliveries via Video Conference technology and the implementation of a learning management system named 'Moodle' that can be described as an active learning environment. It was envisaged that Mahara could be integrated as a reflective learning tool to complement those technologies already in place.

1.3 Participants

In total there were 58 participants involved in this case study. All students involved were studying fulltime. This was made up of the following groups:

- Year Two Students – 40
- Year Three Students – 12
- Teaching Staff – 6

Prior to implementation of the Case Study, the decision was made to exclude first year diploma students. The rationale for this is that many students enrolling in their first year of studies at Te Wānanga-o-Raukawa are not computer literate and furthermore, most are adult or 'second chance' learners. Although computer training is compulsory for all first year students it was envisaged that the workload may be too great for these students, especially given that the study would begin before this training had commenced.

In contrast, Second and Third Year students would be familiar with the Wānanga study environment and it was agreed that the Case Study would have less impact on their ability to complete the learning outcomes required.

All teaching staff involved in the study are academic members of the Māori and Administration Studies Department.

Implementation

2.1 Implementation Issues

It was expected that we would encounter organisational, technology, student and staff related challenges during the implementation of Mahara. A summary of these issues is included below.

In terms of required policy changes, the implementation of Mahara sat comfortably within the framework of our Guiding Kaupapa (Principles) and as such, no changes were required in the implementation stage for this Case Study. The software however may need to be revisited if the decision is made to continue to use the Mahara system. This would ensure that Mahara is structured from the ground up and tested against our kaupapa to sit appropriately within our framework.

There were issues in providing technical, student or tutor support. From a project coordinator perspective, technical support was reliant upon email and telephone conversations to deal with issues that arose. Although most issues were resolved within 2-3 days, this was not an ideal situation. Technical issues need to be resolved as quickly as possible to ensure the continued functionality and availability of this tool. If Te Wānanga-o-Raukawa adopted the software, the control would pass over to an onsite system administrator who would have the ability to deal with these issues promptly.

All deliveries for MAS are conducted off campus in residential seminars at one of our satellite locations. Due to the remoteness of these locations it is not practicable to travel to these sites to overcome any technical or support issues. For the duration of this study, most of the above issues have been solved via telephone although a few users have used the Mahara feedback post to request help. Ideally the support system would be integrated into our current I.T. support helpdesk.

Tutor support was reliant upon the time and availability of the individual tutor, and their knowledge of the Mahara software. Although one days training was carried out with tutors to become familiar with the software, this was not sufficient for tutors to

be able to provide adequate support. I would recommend a minimum two full days training for all users to become more conversant with this software.

The Mahara software was successfully integrated into our curriculum however the timing of the integration caused problems with student training and implementation. Training had to coincide with scheduled residential seminars for which the timings and content had been pre-allocated, however no allowance had been made for additional training. Consequently, training time was allocated from the existing scheduled delivery and as a result was rushed and not as comprehensive as it should have been.

Both tutor and student participation was good to satisfactory with positive feedback from the training sessions. Student use of Mahara varied, with one student creating five views containing artefacts, and others content to create one. While accurate reporting on individual use is not possible without access to administrator privileges, the following results from our users were recorded:

- Of the 21 registered Year Two Kawerau students, 18 created at least two views with the other 3 being unavailable for training.
- Of the 19 registered Year Two Kereru students, 5 created at least one view with the other 14 being unavailable for training.
- Of the 12 registered Year Three students, 8 created at least one view, and 4 created two views with 4 being unavailable for training.
- Of the 6 teaching staff, 5 created at least two views.
- Of the total 58 registered users, 36 created at least one view, and 27 created two views with 21 being unavailable for training.

The participants in this case study showed varying degrees of technical proficiency. All students had at least 12 months experience researching assignments and completing these using Microsoft Office applications. This also included the use of email applications, however the similarities ended there.

With regard to internet use and familiarity, some users were extremely conversant with the technology whilst others had little or no experience. This variance was illustrated during the Mahara training sessions where those with little internet experience were less confident and therefore less inclined to use and explore Mahara.

Through monitoring some individual users, the profiles of those who were less proficient had not changed since the initial training. This indicates the need for more comprehensive training and familiarisation that should include helpdesk support and further individual training where required.

In general Mahara was functionally stable, however some issues occurred after initial release and this was to be expected. It is noted however that all problems were resolved after reporting to the System Administrator.

From the outset, Mahara has been a work in progress. The site development has been constant since its release to our users and this shows the potential of Mahara. While the site is functional and generally user friendly, there are areas that can be improved.

During the period of the Case Study, hosting and server arrangements have been managed by the ePortfolio Project Team. There have been no issues with hosting. If Te Wānanga-o-Raukawa decides to continue with the Mahara software, we have the capacity and expertise to host, implement and manage the service.

With regard to system availability, apart from minor delays in service due to system changes and updates, the system has been consistent and reliable.

2.2 Documentation

There is ample documentation to support students and staff within Mahara. The Staff User Guide proved beneficial as a support to the initial staff training and also later as the Student User Guide was added to support students online. The use of screen captures added a further level of convenience for users. With the addition of the View Creation and Quick User Guides, student feedback has been positive.

The Implementation Guidelines was an extremely useful document in that it clearly illustrated the requirements for students, tutors, and administrators as well as the necessary technical requirements. We see this document as integral to our own supporting documentation should Te Wānanga-o-Raukawa proceed to implementation of the software.

One drawback is the .pdf format used for this documentation. Once downloaded, the user needs to scroll through the document to find the area of help required and this takes time. These are also slow to load for those students with dialup access, as is the situation with the majority of our users.

To overcome this, a 'Help' section could be created in the main menu built in HTML with hyperlinks to specific help areas. This would speed up access and provide a direct link to the section required without having to fully load a separate document. As the Help documentation is mainly text, HTML hyperlinked coding also has the benefit of speeding up access for those users on dialup.

Technical

3.1 Technical Support

The level of technical support provided within Te Wānanga-o-Raukawa was sufficient, however this was limited to some degree as the Project Coordinator did not have access to administrator privileges and was therefore reliant upon the ePortfolio Project Team system administrator for higher levels of support. If Te Wānanga-o-Raukawa adopts the Mahara system, full support would be provided onsite. Training and familiarisation would also be required for a site administrator to provide service at this level.

3.2 Reporting

Reporting tools available within Mahara at Project Coordinator level were minimal. The only tool available was the Activity Record that generated either an activity log or email from users within specific communities.

Being familiar with Moodle, this is the type of reporting facility that is required as it is comprehensive and configurable. If Mahara were successfully integrated into

Moodle, the expectation would be that this reporting structure would become available.

3.3 Site Configuration

N/A

Tutor Feedback

4.1 Teaching With ePortfolio

MAS tutors were asked to provide information on specific areas of Mahara. The results of their feedback are as follows.

There were some aspects of Mahara that tutors perceived as being of benefit within their teaching. Being web based was very beneficial in enabling tutors to access Mahara anytime and anywhere. This was important as our tutors generally deliver off campus at marae or other remote locations; therefore with access to a telephone line Mahara was available. This was also valuable in that all Mahara students training took place in these locations.

Mahara was seen as an additional teaching tool and aid compatible with other Learning Management Systems such as 'Moodle' that we could add to our kete.

Tutors commented on the benefits of additional communication between themselves and students. Being able to upload and share resources between student and teacher was a further benefit.

Our tutors also saw value in the ability to upload student reports, as well as being able to provide download links relating to student learning outcomes.

Some of the aspects of Mahara that tutors perceived as being a disadvantage within their teaching were as follows. The tutor needs a clear understanding of the purpose of this tool to use it effectively. Tutors found that without this understanding the teaching would be ineffective. There was an issue with the length of time it took in getting to the information required. This issue was related to navigation and site configuration and comments where it took too long to get there.

Tutors commented on the main factors affecting their use of the ePortfolio system. They found they were unable to monitor student progress and relied upon current systems to gain this information. They also commented that the time to access information within Mahara was a laborious task they had not adequately budgeted this time into their current workload.

The site would also benefit from a cosmetic facelift to portray the kaupapa of Te Wānanga-o-Raukawa as a tikanga Māori institution.

4.2 Student Learning Experience

There are many aspects of Mahara that our tutors saw as being of benefit and value to our students learning experience. The focus of MAS is to enable our students to fulfil all learning outcomes required to successfully complete their studies.

With this in mind, the views created within our communities were based on the first two residential seminars for the year. These views contained not only requirements from the student prospectus, but also additional information relating directly to the paper studied. This information included downloadable files as well as hyperlinks to web information relating to the paper. This can only occur in an electronic environment.

Students were able to upload completed assignments for assessment by their tutors, as well as draft papers for tutors to provide advice and comments. These papers were also available to other students within the same groups as a discussion topic and a guide towards completion.

Students were given access to their own community specific to the year of study and these were used as a social networking system to discuss kaupapa and share ideas related to their specialist subjects.

Users were able to view and create weblogs, and participate in threaded discussions relating to their specialist or overall kaupapa.

Those with little or no internet experience had the ability to become more familiar with this technology. This was beneficial in allowing students to extend their research skills as well as becoming more comfortable with the integration of e-technologies as an addition to their learning environment.

Students are able to place work in views and also share this between their peers in a reflective manner. This is a good way to communicate, place assignments on for tutors to download, and illustrates the site's accessibility.

There were aspects of Mahara that tutors perceived as being a disadvantage within the students learning experience. As was the case with the tutor's comments, there were issues for students relating to training and site navigation. It was agreed that the training time was insufficient for students to become fully conversant with Mahara and as a result the tool was not used to its full potential.

One of the main factors that tutors believe affected student use of the ePortfolio system was that the majority of our students have a dialup connection and as a consequence, users reported being frustrated by delays waiting for pages to load.

There were also comments that the process to upload information into Mahara was not user friendly as there were too many steps involved. It is acknowledged however that work has continued onsite to make this process easier with the addition of new user guide documentation.

Continued Use of Mahara

5.1 System Quality

Overall, the quality of the Mahara ePortfolio system has been very good and in many areas, it has been an excellent addition to our existing eLearning technologies. The Case Study has shown Mahara to be a reliable platform and ongoing development proves its potential.

5.2 Intention of Continued Use

Te Wānanga-o-Raukawa is committed to the use of eLearning technologies and has been traditionally quick to adopt these technologies that support our kaupapa. However, before committing to these technologies, a decision making process is applied.

Our intention throughout this trial has been to test the potential of Mahara as a tool that will enable our students to successfully complete their studies. There is potential for Mahara to be a valuable asset to help our students to achieve these goals. Mahara requires development to suit our individual requirements and the indications from the Case Study are that Mahara is a quality tool that will complement our learning style.

At this point, Mahara stands alone as a separate eLearning tool, with or without its advantages. Our students and tutors are already familiar with the capabilities of the 'Moodle' learning management system. We see the integration of Mahara into 'Moodle' as a key factor in our decision to continue to use this system. The reason for this is that training would be required for more than one system and the focus for our students is not on eTechnology but on completing their studies.

Success of Pilot

6.1 Staff Response

Staff response has been open and positive towards the Mahara software. After the initial training was conducted in February and tutors became familiar with the software, there was positive discussion concerning the potential of this technology.

The benefits of additional communication between student and tutor and the ability to upload and share resources between themselves were valuable. Our tutors see Mahara as being complementary to our tikanga Māori learning environment, in particular with the level of student / tutor interaction available within this software. It contributes significantly to pūkengatanga (skill base) and whanaungatanga (shared purpose).

6.2 Overall Success

The Mahara ePortfolio Case Study has been very successful for Te Wānanga-o-Raukawa. Both students and tutors have been open and willing to adopt this system. In particular the students responded well to the introduction of this technology in our learning environment. With the introduction of our current e-Technologies, we had seen that our students and tutors were quick to adapt and to use these tools. This has also been the experience with Mahara.

As has been stated, we see potential in this tool to complement and enhance our learning environment and to support the statement; *'Kia rangatira te tū a Te Wānanga-o-Raukawa hei whare ako, whakatupu hoki i te Mātauranga'*, to maintain and create knowledge, and disseminate knowledge through teaching and research.

7.0 Concluding Comments

The Māori scholar and statesman, Sir Āpirana Ngata wrote the following in a young girls autograph book:

E tipu e rea ki ngā rā o tō ao
Tō ringa ki te rākau a te Pākehā
Hei ara mō tō tinana
Tō ngākau ki ngā taonga o ō tūpuna Māori
Hei tikitiki mō tō mähuna
Tō wairua ki te atua
Nāna nei ngā mea katoa

*Learn and grow in these times of your world
Turn your hand to the tools and technologies of the later settler
As a way to advance yourself
Seek out the treasures of your ancestors
As a topknot for your head
Dedicate your spirit to the lord
The creator of all things*

Of particular note to us is the invocation to turn our hand to the tools and technologies of the later settler, in our case the continued development of eLearning opportunities. Mahara has been an opportunity to build on our developing pūkengatanga in this area. While the project has been relatively short, the benefits to the teaching staff have been considerable in terms of developing our personal responsibility to assist and promote (manaaki) our student's capacity to deliver on their course outcomes.

The benefits to our students are yet to be fully realised but we anticipate and are confident of positive developments. These developments may be enhanced by dedicating time to Mahara introduction apart from the time dedicated to residentials. We see the continued use of Mahara and any enhancements that may be made to the tool as being a positive and meaningful contribution to Te Wānanga-o-Raukawa and education in general.

John Underwood
Mahara Coordinator
14 June 2007

¹ Mead.M and Grove.N – Ngā Pepeha a Ngā Tūpuna P. 205 *'The bravery is in the gun, it is the man who is weak.'* Without the technological skill, people are at a disadvantage.

eCDF ePortfolio Project Implementation Case Study



Introduction

Rather than an evaluation of the ePortfolio system Mahara, the eCDF ePortfolio project case study reports are designed to provide other organisations a guide to the lessons learnt and challenges faced during the implementation of a typical ePortfolio system.

It should also be noted that during the pilot period, case study partners were working on a pre v1.0 release of Mahara where development and refinements to functionality was continuing.

In order to ensure relevance to other ePortfolio systems and ongoing accuracy of the case studies, where possible references to functionality or technical issues specific to the ePortfolio system Mahara and the pilot site (MyPortfolio) have been removed. Development suggestions made within the case study reports have however been captured by the eCDF project team and documented within the Mahara Development Roadmap (<http://www.mahara.org/roadmap>)

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*'Kei te pū te wana, nō te tangata te tahō.'*¹

Abstract

Te Wānanga-o-Raukawa Māori and Administration Studies (MAS) Department participated in the eCDF ePortfolio Project from February to June 2007. My Portfolio is powered by Mahara, and is described as a 'fully featured open source electronic portfolio, weblog, résumé builder and social networking system, connecting users and creating online communities'

Mahara is a web based software application designed to enable users to create e-portfolios for both personal and professional learning and development. My Portfolio therefore provided our users with the tools to create a personal learning and development environment.

Case Study Overview

1.1 Organisational Details

The organisation involved in this Case Study is Te Wānanga-o-Raukawa, a tertiary education provider situated in Ōtaki with satellite delivery sites in various locations around Aotearoa (the North Island).

The context in which Mahara was implemented within our organisation was as an aid for students to achieve specific learning outcomes within their specialist study area. The objective was for students to successfully complete these outcomes for the year of study in which they were enrolled.

1.2 Programme Description

All participants in this case study are enrolled in the Bachelor of Māori and Administration Studies (MAS) Year 2 or Year 3 programme. All papers within this degree are NZQA approved. These papers were last reviewed and approved in 2002 and the department NZQA audited in 2005.

Graduates of the three-year Bachelor of Māori and Administration programme will be equipped with the following skills:

1. An ability to administer effectively in order to provide optimum asset management;
2. An ability to operate as an administrator in a bi-lingual and culturally diverse environment;
3. Have enhanced employment possibilities;
4. Have enhanced personal growth; and
5. Have the ability to introduce administrative skills to whānau in order to protect and develop assets.

The subject areas for this Mahara study involved the first two papers delivered for both Year 2 and Year 3 students and are as follows:

Year 2

- ADM 2/1 - Māori Corporate Enterprise and
- ADM 2/8 - Decision Making & Problem Solving

Year 3

- ADM 3/3 - Computer Studies & Information Systems and
- ADM 3/9 - Macroeconomics & a Detailed Analysis of Microeconomics

The following paragraphs describe the typical formative and summative assessment tasks across the Māori and Administration Studies courses.

Te Wānanga-o-Raukawa is a tikanga Māori institution, therefore our view is that it is not appropriate to criticise our elders. Students are however encouraged to participate in student / teacher formative assessment tasks to enhance, recognise, and respond to the learning. These assessments include post residential reports completed by all tutors, and mihimihi or acknowledgement sessions between teachers and students that allow them to reflect on their experience. With Moodle, our students can also provide feedback to tutors via forum discussion and we encourage our students to actively participate. To add to this, Te Wānanga-o-Raukawa has formulated a Retention and Completion plan, the purpose of which is self-explanatory. Our reaction to these assessments is to refine or reformat our teaching process with the intention of promoting student attainment.

The summative assessments begin initially with the return of assignments which are due for marking three weeks following the residential seminars. Then follows the department Returns to the Academic Office which is a formal reporting structure. The Moodle eLearning environment also allows tutors to summarise the development of our Year Two and Three students at any particular time.

The purpose of the 'Te Wānanga-o-Raukawa Administration and Management Degree Experience Questionnaire' is to collect student's perceptions of their degree courses at Te Wānanga-o-Raukawa. The information gained from this is analysed and weaknesses identified to build on our formative assessments and aid to retentions.

There are a number of reasons ePortfolio was selected. The MAS Department within Te Wānanga-o-Raukawa is actively committed to using e-learning technologies. These currently include deliveries via Video Conference technology and the implementation of a learning management system named 'Moodle' that can be described as an active learning environment. It was envisaged that Mahara could be integrated as a reflective learning tool to complement those technologies already in place.

1.3 Participants

In total there were 58 participants involved in this case study. All students involved were studying fulltime. This was made up of the following groups:

- Year Two Students – 40
- Year Three Students – 12
- Teaching Staff – 6

Prior to implementation of the Case Study, the decision was made to exclude first year diploma students. The rationale for this is that many students enrolling in their first year of studies at Te Wānanga-o-Raukawa are not computer literate and furthermore, most are adult or 'second chance' learners. Although computer training is compulsory for all first year students it was envisaged that the workload may be too great for these students, especially given that the study would begin before this training had commenced.

In contrast, Second and Third Year students would be familiar with the Wānanga study environment and it was agreed that the Case Study would have less impact on their ability to complete the learning outcomes required.

All teaching staff involved in the study are academic members of the Māori and Administration Studies Department.

Implementation

2.1 Implementation Issues

It was expected that we would encounter organisational, technology, student and staff related challenges during the implementation of Mahara. A summary of these issues is included below.

In terms of required policy changes, the implementation of Mahara sat comfortably within the framework of our Guiding Kaupapa (Principles) and as such, no changes were required in the implementation stage for this Case Study. The software however may need to be revisited if the decision is made to continue to use the Mahara system. This would ensure that Mahara is structured from the ground up and tested against our kaupapa to sit appropriately within our framework.

There were issues in providing technical, student or tutor support. From a project coordinator perspective, technical support was reliant upon email and telephone conversations to deal with issues that arose. Although most issues were resolved within 2-3 days, this was not an ideal situation. Technical issues need to be resolved as quickly as possible to ensure the continued functionality and availability of this tool. If Te Wānanga-o-Raukawa adopted the software, the control would pass over to an onsite system administrator who would have the ability to deal with these issues promptly.

All deliveries for MAS are conducted off campus in residential seminars at one of our satellite locations. Due to the remoteness of these locations it is not practicable to travel to these sites to overcome any technical or support issues. For the duration of this study, most of the above issues have been solved via telephone although a few users have used the Mahara feedback post to request help. Ideally the support system would be integrated into our current I.T. support helpdesk.

Tutor support was reliant upon the time and availability of the individual tutor, and their knowledge of the Mahara software. Although one days training was carried out with tutors to become familiar with the software, this was not sufficient for tutors to

be able to provide adequate support. I would recommend a minimum two full days training for all users to become more conversant with this software.

The Mahara software was successfully integrated into our curriculum however the timing of the integration caused problems with student training and implementation. Training had to coincide with scheduled residential seminars for which the timings and content had been pre-allocated, however no allowance had been made for additional training. Consequently, training time was allocated from the existing scheduled delivery and as a result was rushed and not as comprehensive as it should have been.

Both tutor and student participation was good to satisfactory with positive feedback from the training sessions. Student use of Mahara varied, with one student creating five views containing artefacts, and others content to create one. While accurate reporting on individual use is not possible without access to administrator privileges, the following results from our users were recorded:

- Of the 21 registered Year Two Kawerau students, 18 created at least two views with the other 3 being unavailable for training.
- Of the 19 registered Year Two Kereru students, 5 created at least one view with the other 14 being unavailable for training.
- Of the 12 registered Year Three students, 8 created at least one view, and 4 created two views with 4 being unavailable for training.
- Of the 6 teaching staff, 5 created at least two views.
- Of the total 58 registered users, 36 created at least one view, and 27 created two views with 21 being unavailable for training.

The participants in this case study showed varying degrees of technical proficiency. All students had at least 12 months experience researching assignments and completing these using Microsoft Office applications. This also included the use of email applications, however the similarities ended there.

With regard to internet use and familiarity, some users were extremely conversant with the technology whilst others had little or no experience. This variance was illustrated during the Mahara training sessions where those with little internet experience were less confident and therefore less inclined to use and explore Mahara.

Through monitoring some individual users, the profiles of those who were less proficient had not changed since the initial training. This indicates the need for more comprehensive training and familiarisation that should include helpdesk support and further individual training where required.

In general Mahara was functionally stable, however some issues occurred after initial release and this was to be expected. It is noted however that all problems were resolved after reporting to the System Administrator.

From the outset, Mahara has been a work in progress. The site development has been constant since its release to our users and this shows the potential of Mahara. While the site is functional and generally user friendly, there are areas that can be improved.

During the period of the Case Study, hosting and server arrangements have been managed by the ePortfolio Project Team. There have been no issues with hosting. If Te Wānanga-o-Raukawa decides to continue with the Mahara software, we have the capacity and expertise to host, implement and manage the service.

With regard to system availability, apart from minor delays in service due to system changes and updates, the system has been consistent and reliable.

2.2 Documentation

There is ample documentation to support students and staff within Mahara. The Staff User Guide proved beneficial as a support to the initial staff training and also later as the Student User Guide was added to support students online. The use of screen captures added a further level of convenience for users. With the addition of the View Creation and Quick User Guides, student feedback has been positive.

The Implementation Guidelines was an extremely useful document in that it clearly illustrated the requirements for students, tutors, and administrators as well as the necessary technical requirements. We see this document as integral to our own supporting documentation should Te Wānanga-o-Raukawa proceed to implementation of the software.

One drawback is the .pdf format used for this documentation. Once downloaded, the user needs to scroll through the document to find the area of help required and this takes time. These are also slow to load for those students with dialup access, as is the situation with the majority of our users.

To overcome this, a 'Help' section could be created in the main menu built in HTML with hyperlinks to specific help areas. This would speed up access and provide a direct link to the section required without having to fully load a separate document. As the Help documentation is mainly text, HTML hyperlinked coding also has the benefit of speeding up access for those users on dialup.

Technical

3.1 Technical Support

The level of technical support provided within Te Wānanga-o-Raukawa was sufficient, however this was limited to some degree as the Project Coordinator did not have access to administrator privileges and was therefore reliant upon the ePortfolio Project Team system administrator for higher levels of support. If Te Wānanga-o-Raukawa adopts the Mahara system, full support would be provided onsite. Training and familiarisation would also be required for a site administrator to provide service at this level.

3.2 Reporting

Reporting tools available within Mahara at Project Coordinator level were minimal. The only tool available was the Activity Record that generated either an activity log or email from users within specific communities.

Being familiar with Moodle, this is the type of reporting facility that is required as it is comprehensive and configurable. If Mahara were successfully integrated into

Moodle, the expectation would be that this reporting structure would become available.

3.3 Site Configuration

N/A

Tutor Feedback

4.1 Teaching With ePortfolio

MAS tutors were asked to provide information on specific areas of Mahara. The results of their feedback are as follows.

There were some aspects of Mahara that tutors perceived as being of benefit within their teaching. Being web based was very beneficial in enabling tutors to access Mahara anytime and anywhere. This was important as our tutors generally deliver off campus at marae or other remote locations; therefore with access to a telephone line Mahara was available. This was also valuable in that all Mahara students training took place in these locations.

Mahara was seen as an additional teaching tool and aid compatible with other Learning Management Systems such as 'Moodle' that we could add to our kete.

Tutors commented on the benefits of additional communication between themselves and students. Being able to upload and share resources between student and teacher was a further benefit.

Our tutors also saw value in the ability to upload student reports, as well as being able to provide download links relating to student learning outcomes.

Some of the aspects of Mahara that tutors perceived as being a disadvantage within their teaching were as follows. The tutor needs a clear understanding of the purpose of this tool to use it effectively. Tutors found that without this understanding the teaching would be ineffective. There was an issue with the length of time it took in getting to the information required. This issue was related to navigation and site configuration and comments where it took too long to get there.

Tutors commented on the main factors affecting their use of the ePortfolio system. They found they were unable to monitor student progress and relied upon current systems to gain this information. They also commented that the time to access information within Mahara was a laborious task they had not adequately budgeted this time into their current workload.

The site would also benefit from a cosmetic facelift to portray the kaupapa of Te Wānanga-o-Raukawa as a tikanga Māori institution.

4.2 Student Learning Experience

There are many aspects of Mahara that our tutors saw as being of benefit and value to our students learning experience. The focus of MAS is to enable our students to fulfil all learning outcomes required to successfully complete their studies.

With this in mind, the views created within our communities were based on the first two residential seminars for the year. These views contained not only requirements from the student prospectus, but also additional information relating directly to the paper studied. This information included downloadable files as well as hyperlinks to web information relating to the paper. This can only occur in an electronic environment.

Students were able to upload completed assignments for assessment by their tutors, as well as draft papers for tutors to provide advice and comments. These papers were also available to other students within the same groups as a discussion topic and a guide towards completion.

Students were given access to their own community specific to the year of study and these were used as a social networking system to discuss kaupapa and share ideas related to their specialist subjects.

Users were able to view and create weblogs, and participate in threaded discussions relating to their specialist or overall kaupapa.

Those with little or no internet experience had the ability to become more familiar with this technology. This was beneficial in allowing students to extend their research skills as well as becoming more comfortable with the integration of e-technologies as an addition to their learning environment.

Students are able to place work in views and also share this between their peers in a reflective manner. This is a good way to communicate, place assignments on for tutors to download, and illustrates the site's accessibility.

There were aspects of Mahara that tutors perceived as being a disadvantage within the students learning experience. As was the case with the tutor's comments, there were issues for students relating to training and site navigation. It was agreed that the training time was insufficient for students to become fully conversant with Mahara and as a result the tool was not used to its full potential.

One of the main factors that tutors believe affected student use of the ePortfolio system was that the majority of our students have a dialup connection and as a consequence, users reported being frustrated by delays waiting for pages to load.

There were also comments that the process to upload information into Mahara was not user friendly as there were too many steps involved. It is acknowledged however that work has continued onsite to make this process easier with the addition of new user guide documentation.

Continued Use of Mahara

5.1 System Quality

Overall, the quality of the Mahara ePortfolio system has been very good and in many areas, it has been an excellent addition to our existing eLearning technologies. The Case Study has shown Mahara to be a reliable platform and ongoing development proves its potential.

5.2 Intention of Continued Use

Te Wānanga-o-Raukawa is committed to the use of eLearning technologies and has been traditionally quick to adopt these technologies that support our kaupapa. However, before committing to these technologies, a decision making process is applied.

Our intention throughout this trial has been to test the potential of Mahara as a tool that will enable our students to successfully complete their studies. There is potential for Mahara to be a valuable asset to help our students to achieve these goals. Mahara requires development to suit our individual requirements and the indications from the Case Study are that Mahara is a quality tool that will complement our learning style.

At this point, Mahara stands alone as a separate eLearning tool, with or without its advantages. Our students and tutors are already familiar with the capabilities of the 'Moodle' learning management system. We see the integration of Mahara into 'Moodle' as a key factor in our decision to continue to use this system. The reason for this is that training would be required for more than one system and the focus for our students is not on eTechnology but on completing their studies.

Success of Pilot

6.1 Staff Response

Staff response has been open and positive towards the Mahara software. After the initial training was conducted in February and tutors became familiar with the software, there was positive discussion concerning the potential of this technology.

The benefits of additional communication between student and tutor and the ability to upload and share resources between themselves were valuable. Our tutors see Mahara as being complementary to our tikanga Māori learning environment, in particular with the level of student / tutor interaction available within this software. It contributes significantly to pūkengatanga (skill base) and whanaungatanga (shared purpose).

6.2 Overall Success

The Mahara ePortfolio Case Study has been very successful for Te Wānanga-o-Raukawa. Both students and tutors have been open and willing to adopt this system. In particular the students responded well to the introduction of this technology in our learning environment. With the introduction of our current e-Technologies, we had seen that our students and tutors were quick to adapt and to use these tools. This has also been the experience with Mahara.

As has been stated, we see potential in this tool to complement and enhance our learning environment and to support the statement; *'Kia rangatira te tū a Te Wānanga-o-Raukawa hei whare ako, whakatupu hoki i te Mātauranga'*, to maintain and create knowledge, and disseminate knowledge through teaching and research.

7.0 Concluding Comments

The Māori scholar and statesman, Sir Āpirana Ngata wrote the following in a young girls autograph book:

E tipu e rea ki ngā rā o tō ao
Tō ringa ki te rākau a te Pākehā
Hei ara mō tō tinana
Tō ngākau ki ngā taonga o ō tūpuna Māori
Hei tikitiki mō tō mähuna
Tō wairua ki te atua
Nāna nei ngā mea katoa

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Of particular note to us is the invocation to turn our hand to the tools and technologies of the later settler, in our case the continued development of eLearning opportunities. Mahara has been an opportunity to build on our developing pūkengatanga in this area. While the project has been relatively short, the benefits to the teaching staff have been considerable in terms of developing our personal responsibility to assist and promote (manaaki) our student's capacity to deliver on their course outcomes.

The benefits to our students are yet to be fully realised but we anticipate and are confident of positive developments. These developments may be enhanced by dedicating time to Mahara introduction apart from the time dedicated to residential. We see the continued use of Mahara and any enhancements that may be made to the tool as being a positive and meaningful contribution to Te Wānanga-o-Raukawa and education in general.

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eCDF ePortfolio Implementation Case Study

June 2007

From the Graduate School of Nursing, Midwifery and Health, Faculty of Human and Social Sciences, Victoria University of Wellington

Introduction

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This report evaluates the experience of hosting the pilot case study on implementing the Mahara ePortfolio programme at the Graduate School of Nursing, Midwifery and Health (GSNMH), Faculty of Human and Social Sciences (FHSS), Victoria University of Wellington (VUW).

1 Case Study Overview

1.1 Organisational Details

The Graduate School of Nursing, Midwifery and Health is a relative small school within the Faculty of Human and Social Sciences at Victoria University of Wellington. It provides postgraduate courses at a certificate, diploma, masterate and PhD level for nurses, midwives and other health professionals e.g. social workers and occupational therapists, from all over New Zealand. The estimated FTE estimate of students for the school in 2007 is 212. Implementation of Mahara was in a one year programme known as the Postgraduate Certificate in Clinical Nursing (Mental Health).

1.2 Programme Description

Advancing the practice knowledge of clinicians in mental health nursing is the main purpose of the Postgraduate Certificate in Clinical Nursing (Mental Health). The school implemented Mahara in one course: Mental Health Nursing in Complex Contexts Nurs 512/534. The course is at level eight in the NZQA level of study. In 2007, as in previous years, it runs through semesters one, two and three of the academic year.

Students aim to:

- orientate their practice to the Postgraduate Certificate and/or Masters programme of study using a folder/portfolio process
- consider specific personal and professional strengths associated with present practice and through personal appraisal, identify those areas which can be improved
- engage in professional supervision and explore the development of roles, relationships and responsibilities of the advanced nursing practitioner working in groups.
- articulate nursing practice through these processes.

Mahara was used for some mandatory formative components of the major assignment of the course which were to culminate in a full nurse/nursing portfolio. The assignment is worth 50% of the final course grade. Mahara became the vehicle in which to send the components of the assignments, which in previous years were sent in hard copy.

The course runs as distance a learning course with schools held three times a year: February, May, and September.

1.3 Participants

The course commenced with 14 students attending the February school and was down to 12 students in the May school. The Clinical Training Agency (CTA) funds the students in this course. This agency funds post entry clinical based education and training for staff in a variety of health disciplines. These students come from various

locations throughout New Zealand. They are mature students who undertake part-time study alongside full time work and family responsibilities. Most students study part time. They are distance learners required to come to Wellington for the schools.

One main lecturer taught the programme with some assistance from another lecturer.

2 Implementation

2.1 Implementation Issues

Ethical approval from the VUW Human Ethic Committee was required prior to implementation. Although there is movement towards Massey University and VUW to accept the ethical approval given by one institution when the other is involved in a joint research project, this had not occurred at the time of implementing Mahara. The VUW Human Ethics Committee required tabling of the documentation from the Massey Ethics Committee approval, a form outlining the project and its implementation and any additions made to the course outline because of the pilot.

Five main overlapping issues were encountered:

Both the lecturers and the students commented on difficulties they experienced in using the programme. This included student participants who rated themselves as having reasonable computer skills and who have mostly taught themselves to use other programmes. For example, they had hoped to have prompts to tell them what to do when they could not proceed, or find an easy solution to their problem when looking up the user guide. Therefore, they did not achieve what they wanted to and often put off further attempts as there were other priorities for their time.

Some of the ‘unfriendliness’ related to the programme’s evolving nature. When the lecturers or students encountered problems that they expected the programme to accommodate, there was a tendency to think ‘they were the problem’ in not having interpreted aspects in the ‘right way’. This led to more frustration and time wasting and consequently not persevering or contacting help to sort out the issue.

All participants were required to have basic computer skills for entry to the course and these were required in their work places. While acknowledging they had some skill and experience, only approximately 50% rated themselves as feeling confident in computer use. This, coupled with the fact that the students were also required to learn a second elearning tool (Blackboard) put pressure on the time they had available to spend troubleshooting. Not being on campus where the students could seek help readily compounded this difficulty. Therefore, student participation in the programme was low. Further complicating this issue was that the students were not compelled, although expected, to commence using Mahara immediately after the introduction and the cyber laboratory experience they participated in at the February school. Consequently, when asked by the lecturer to report back to her via a blog message sent to them some weeks later, they found navigating the system difficult after this time gap.

The course chosen for implementing Mahara was because the course content included development of a portfolio and the students would gain skills in using a tool that would be a long term asset in their careers. Neither the lecturers nor the students

voluntarily offered to host the pilot. The main lecturer agreed to implement it because she believed it would have long term benefits for the students, and herself. She believed that regulatory body of nursing, which already requires all practitioners to keep a practice portfolio, would likely be needing these presented in electronic form in the future. Nevertheless, making the time to learn the programme increased the pressure of the main lecturer's already busy workload.

The busy workload the main lecturer in the course was a factor in not becoming as fully cognisant with Mahara as she would have preferred. Although she was offered extra help when this became apparent, bringing another lecturer into the course, who was not already familiar with Mahara, was thought to be too great an increase in workload for the short time of the research period that remained.

The interim advocate's limited advanced computer skills and no experience with elearning management tools compounded the problem of the lecturer's busy workload. More time for the interim advocate and main lecturer to really grasp the programme and its potential before it went live with the students could have assisted in reducing this problem.

Further, greater 'buy in' from the students may have occurred if both key staff had volunteered their participation for the implementation and been able to be highly enthusiastic about its potential. In retrospect, although the potential of the programme to nursing is evident, the size of the school, the timing of the research and the courses available for its appropriate implementation were all factors in not finding staff who would have volunteered to undertake the research.

No specific school policies for implementing the programme were considered necessary during the research period or on reflection after the period was completed

2.2 Documentation

The implementation guidelines worked well in grasping how to work with the programme. Being part of the steering committee where these were developed and discussed enabled a good understanding of their intent by the interim advocate.

The student user guides were helpful to an extent. Some users created hard copies of them to have beside them as they worked while others used them online. However, when participants could not find a resolution to a problem encountered they tended to dismiss them as having limited value.

The main gap pertained to having a step by step guide for all areas of use. For example, the lecturers used the blog function to contact the students and requested that they reply through the feedback function available. A very small number achieved this without prompts. A step by step process to achieve this was then written and sent to them via Mahara and by email which aided more to accomplish this task. A second recommendation for the guidelines is to add a section on the frequently asked questions.

3 Technical

3.1 Technical support

The Information Technological Service (ITS) was informed via a discussion with several of their personnel about the GSNHM participating in this case study. One of their personnel attended the demonstration of Mahara given by the administrator in January. However, because of the small number of students, and the accessing of Mahara via a website outside of the university, it was decided that the main lecturer in the course would be the first contact for technical support and queries which she could not answer would be sent on to the administrator. Only a few queries came through to the lecturer. Although the feedback from students given in the May school indicated difficulties in accessing and working with Mahara, the students appeared reluctant to seek help.

3.2 Reporting

The only reporting tool used to date was the blog function. It appeared to have potential for informal reporting to and from students but some students did not complete the built in feedback loop.

3.3 Site Configuration

No site reconfigurations took place.

4 Tutor Feedback

4.1 Teaching with ePortfolio

The lecturer found the programme difficult and consequently time consuming to learn related to its perceived lack of user friendliness and gaps in the functions relating to its evolving nature. By May, she was unable to identify any benefits of it in her teaching. Any potential benefits appeared to be lost in the difficulties and disadvantages identified above under section 2. The need to teach two eLearning programmes presented added pressures in an already full course. The main lecturer's preference for this particular distance learning course would be to have one eLearning programme that incorporates the ePortfolio and a facility for eTutorials. It appears to the main lecturer that students having to learn two new electronic programmes, as well as master all the new content in the course, culminated in the students experiencing a negative attitude to Mahara and reduced motivation in persevering in this endeavour. These sentiments, according to the main lecturer, appear to have inhibited their understanding of its long term worth.

4.2 Student learning experience

The lecturer and GSNMH interim advocate held a discussion with the students at the May school. Although a small number indicated they were willing to persevere in becoming competent in the use of Mahara the majority found that it was difficult and only expressed negative statements about it. 'Frustrating' was the main descriptor used to describe their experience.

Another descriptor included was 'concrete' i.e. it was perceived to have its own particular internal logic and they failed to be able to generalise learning from other computer programmes they were familiar with.

All expressed concern about the time involved in learning the programme, which they believed was counter productive to mastering the course content. Mastering the content was their rationale for enrolment in the course. One went as far as to say he was not prepared to put any more time into it and would risk failing the course.

Their reluctance to seek help, often influenced by the time of night they were using their computers and the extra time it was going to take them, meant giving up on further endeavours to work with it.

The group believed Mahara would be better trialled in undergraduate courses where the students were on campus, were required to use it daily or at least weekly and could obtain ready access to help.

5 Continued use of Mahara

5.1 System quality

Rating for system quality Satisfactory

Taking account of Mahara as a programme in evolution the system was satisfactory.

5.2 Intention of Continued Use

The school has decided not to continue with Mahara as the mandatory vehicle for submitting the formative assessment components and summative assessment envisaged. This is because of all the difficulties encountered in piloting Mahara within the particular course chosen and the nature of the students taking the course

The official advocate, Rose McEldowney, does not rule out the possibility that Mahara may be used again in the future, taking account of what this school has learned from the pilot and positioning it in a more appropriate course. The fact remains that nurses will, most likely be required sometime in the future, to submit ePortfolios to the nursing regulatory body to prove ongoing competency to practice.

6 Success of Pilot

6.1 Staff Response

Staff response rating - neither positive or negative.

Although a decision to discontinue the programme was made mainly because of the student feedback, the staff believe the piloting of Mahara was beneficial. The short time frame of the pilot in relation to the nature of the course meant that staff were becoming increasingly familiar with Mahara and could have become more positive as time went on.

Overall success rating

Satisfactory

The school felt satisfied with the pilot case study of Mahara in the sense that there were no major technical obstacles in its implementation and much was learned from the implementation. The nature of the pilot as a programme in evolution had not been fully appreciated. Therefore, the time needed to implement it exceeded prior expectations.

7 Additional Comments

The GSNMH are pleased to have had the experience of hosting a pilot of the Mahara ePortfolio system. As ePortfolios are likely to feature more in the future of nursing it gave us an entrée into how these work and material to consider in any attempt to position them in a nursing, midwifery or health course offered by the school in the future.

Multiple factors culminated in the decision not to continue using Mahara in the located course. Important among these factors were the distance learning nature of the course; the nature of the students (many only having limited computer confidence and having to learn two new eLearning tools); and experiencing many competing demands on the use of their time.

The staff, although frustrated at times, in the amount of time taken to become familiar with it and offering encouragement and support to students, did come to see its potential value and are pleased to have mastered another teaching eLearning tool.

Margaret Connor, Interim ePortfolio Advocate.
Thelma Puckey, Lecturer in course of pilot case study.
Rose McEldowney, Official ePortfolio Advocate.

Graduate School of Nursing Midwifery and Health
Victoria University of Wellington
25 June 2007

e-Portfolio Implementation Case Study

Victoria University Wellington

Introduction

Rather than an evaluation of the ePortfolio system Mahara, the eCDF ePortfolio project case study reports are designed to provide other organisations a guide to the lessons learnt and challenges faced during the implementation of a typical ePortfolio system.

It should also be noted that during the pilot period, case study partners were working on a pre v1.0 release of Mahara where development and refinements to functionality was continuing.

In order to ensure relevance to other ePortfolio systems and ongoing accuracy of the case studies, where possible references to functionality or technical issues specific to the ePortfolio system Mahara and the pilot site (MyPortfolio) have been removed. Development suggestions made within the case study reports have however been captured by the eCDF project team and documented within the Mahara Development Roadmap (<http://www.mahara.org/roadmap>)

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1 Case Study Overview

1.1 Organisational Details

Mahara was implemented within the Bachelor of Teaching degree at Victoria University Wellington. Victoria University has four campuses on different sites located in and around the city of Wellington: Kelburn; Pipitea; Te Aro and Karori. The university currently has approximately 17,000 equivalent full time students, with 1400 of these enrolled in teacher education on the Karori campus. The Bachelor of Teaching degree (BTeach), offered by the Faculty of Education on the Karori Campus, forms part of the conjoint degrees: the BA/BTeach; BCA/BTeach; BSc/BTeach. These three conjoint degree programmes combine study in two teaching subjects with teacher education.

Mahara was implemented within the professional studies component of the BTeach programme. The degree is made up of curriculum studies (CUST) and professional studies (TEAP) papers. The student e-portfolio is developed and maintained throughout the programme from trimester one in the second year, and is a terms requirement of the TEAP papers. This programme was chosen for the case study because it already had an established process for the implementation of an e-portfolio.

The purpose of the e-portfolio is to assist students to advance their learning and improve their teaching through

- collecting and using evidence to critically reflect on their learning and teaching
- collaborating with peers and their Professional Development Mentor (PDM) to critically evaluate their progress in learning and teaching
- critically analysing their practice in relation to theory and research
- self directed learning by systematically setting and reviewing personal professional goals

Students are required to identify one aspect of their progress as a focus for reflection each trimester and relate it to one of the relevant course/programme learning outcomes. In meetings and/or online interactions with their PDM and/or their peers, they were required to share an artefact and their reflection; give and respond to feedback; reflect on learning and set professional goal/s for the following trimester. In terms of using Mahara, students were required (as a minimum) to create a view containing one artefact as evidence of their learning and a reflection on that learning. They were required to submit the view to their PDM by 27 April 2007. Students were able to access the template for the reflective report and some reflection exemplars by being granted access to a view containing these files.

The students received formative feedback from their PDMs. This was achieved using the feedback feature of Mahara. Students are not graded on their portfolio entries; however, if the terms requirements are not fulfilled, the students do not pass the associated TEAP paper. Some students chose to share their entry with their peers and their PDM by creating a view in Mahara, and received feedback from their peers in this way. Most students, however, chose to meet face-to-face with their peers or share their reflections by e-mail. For the final paper in year four, following the final teaching experience, elements of the portfolio will be selected by the students to be incorporated in a presentation portfolio which is graded as a summative course assessment.

1.2 Programme Description

The BTeach conjoint degree is four years of full time study at NZQA level 7, and is structured in such a way that study in the first and second years is mainly in the teaching subject disciplines.

The subsequent years introduce the BTeach components in combination with subject courses. In the third and fourth years of the programme students spend one trimester of each year in full-time BTeach study. In these trimesters they have teaching experiences totalling 14 weeks.

The conceptual framework for the degree currently incorporates the Professional Standards for Beginning Teachers (Ministry of Education N. Z., 1998) and the BTeach graduate profile:

Students graduating with the conjoint BTeach degree will be:

- well prepared to become highly competent practitioners with a commitment to lifelong learning and the ability to ‘make a difference’ to the lives of the children they teach
- knowledgeable about current educational research and practice and able to reflect this knowledge in their teaching
- knowledgeable about the children and young people of the 21st century and their world
- knowledgeable about their disciplines
- knowledgeable about the principles of the *New Zealand Curriculum Framework* and national curriculum statements
- confident, tolerant and open to change
- knowledgeable about the principles of the Treaty of Waitangi and mindful of their significance for teachers
- able to recognise and value the multicultural diversity of New Zealand
- highly flexible in that they can move more readily between primary and secondary sectors.

The graduate profile is currently being reviewed to ensure it aligns with the Graduating Teacher Standards (New Zealand Teachers Council, 2007)

1.3 Participants

The entire cohort of forty-seven students in trimester one of the second year of the BTeach was split into seven groups and each group was allocated a different member of staff as their PDM. Each PDM group was created as a Mahara community with the PDMs assigned as tutors. As the BTeach Associate Director, I acted as the advocate for the e-portfolio case study. I was also assigned as a tutor within each group in order to monitor and support the online activities of the groups.

2 Implementation

The system of e-portfolios and PDMs has been in place in the BTeach programme for the past three years. In previous years, the e-portfolio was not web based, but a digital template which the students used as a framework for their reflections and goal-setting. This was the first year the students were required to digitise their artefacts as well as their reflections. It was also the first year that the students and PDMs were obliged to share reflections and feedback in an online environment.

Students and PDMs were introduced to Mahara in the following face-to-face sessions:

Students

- One-hour lecture – introduction to the rationale for the e-portfolio process and demonstration of Mahara
- Two-hour tutorial – reflection and feedback models and strategies

PDMs

- One-hour session – introduction to the rationale for the e-portfolio process and demonstration of Mahara

Students and PDMs

- Two-hour tutorial where PDMs met with their groups and all were introduced to Mahara in the computer lab. PDMs were given the initial passwords for their group of students and they worked closely with their own student group to support initial login and exploration.

Both students and staff were informed of the support documentation downloadable from Mahara. I also prepared some context specific guides for the students to support them in creating and submitting views. These were made available to students within their community views and also e-mailed as an attachment. All students and staff were given my contact details and asked to contact me with any difficulties. I held several one-on-one sessions with individual staff when they were required to provide feedback for submissions. I also had e-mails from approximately six students who had initial difficulties. All of these difficulties were resolved and most arose from those students who were not very ICT literate.

2.1 Implementation Issues

There were some implementation issues:

- Coincidentally, the new VUW portal 'My Victoria' was being launched in that same week. This caused some confusion. In future, we would hope to have a single login to the VUW portal and then access Mahara from within the portal.
- Students are currently required to use the discussion forums in LearnOnline, a learning management system used for online delivery of courses. This presented yet another online environment to grapple with. Both staff and students reported that they found it frustrating that there was no communication function within Mahara. It was cumbersome to obtain an e-mail address from within Mahara and then transfer to LearnOnline or Microsoft Outlook.
- Some students were also required to use Blackboard for course work within the BA/BCA/BSc pathway of the programme. This was another online environment some students had to cope with
- Student workload issues – due to the timeframe for the case study report, it was necessary to assign an early date for submission of portfolios. This had a negative impact on student workload as other assignments were also due at that time.

There were some difficulties in the early stages due to initial software bugs when creating and accessing views. Students were given no additional face-to-face support with technical issues. It was assumed that students and staff had a certain level of competence in terms of ICT capability. Staff had a varied level of ICT competence and confidence and required different levels of support.

2.2 Documentation

The Implementation Guidelines were comprehensive and served as a useful guide to the implementation of the portfolio. Since VUW had already set up an e-portfolio system prior to using Mahara in this case study, the guidelines served to affirm the way in which we were adopting the portfolio system in terms of selecting and supporting tutors, determining assessment tasks and advising students of assessment requirements.

I personally found the user documentation very useful. I'm not sure to what extent it was used by staff or students. I found I had to produce documentation which addressed the specific requirements of the BTeach programme as the Mahara User Guidelines provided seemed 'too much information' for our students at this point in time.

3 Technical

3.1 Technical Support

There was no technical support provided other than myself. There were no difficulties that I could not address. In cases where there seemed to be a malfunction or inconsistency I contacted the site administrator with appropriate reports of the issues. On several occasions members of staff and students also contacted the site administrator. To my knowledge, all problems were resolved.

3.2 Reporting

Due to the fact that both students and tutors had to take on board the use of the Mahara application amidst all other course and programme requirements, in a very limited timeframe, I chose not to specifically introduce the reporting tools at this stage. These will be incorporated next trimester along with the blogging facility. I think that phasing in the introduction of these features in this way will provide just-in-time learning. These features are more likely to be appreciated as useful tools and may well serve to address some of the implementation issues identified in the case study.

3.3 Site Configuration

There was no site configuration necessary as VUW did not host the e-portfolio.

4 Tutor Feedback

4.1 Teaching with e-Portfolio

The tutors reported that the benefits or values within teaching were:

- it was useful for students to be able to read each others work and give feedback. This allowed students to see the sorts of artefacts that different students present and the learning that has come from these artefacts.
- the portfolio allowed tutors (through the artefacts and reflections) to see what students were doing in other courses
- using the portfolio improved IT skills
- it was useful to have time to consider feedback before writing it
- the process is consistent between students so they are all being scaffolded in the same way

The tutors reported that the disadvantages or limitations were:

- it takes more time and is less personally satisfying; face-to-face was preferable because it gives a more in-depth picture of where the student is at. Research shows that building relationships enhances teaching and learning, so it seems to defeat the purpose when the interactions are focused in cyberspace.
- tutors had to rely on students providing quality feedback and on students getting their work in early to allow for tutor feedback and responses
- other communications tools such as e-mail and forums would allow a variety of interactions

- there were a lot of steps to go through to access communities and individuals and to download and then respond to submitted work for each student
- there needs to be careful consideration of timeframes for submission/feedback

The tutors reported that the factors affecting their use of the e-portfolio were:

- there is a lack of ease and acceptance of this medium for teaching
- it takes time to read and comment in depth
- frustration with having to work back several screens to see student peer feedback after downloading artefacts
- lack of knowledge of how to use the application
- waiting for students to upload and coordinate with time PDMs had available

The tutors reported that desirable features were:

- navigation needs improving as it was not easy to follow; it would be better to have less steps to access each community
- larger lettering and headings set out more clearly with steps visible as you progress through each stage
- integration with the 'MyVictoria' portal
- improve the time-out feature so no information is lost on time out
- communications suite: e-mail/discussion forums/chat

4.2 Student learning experience

The tutors reported the following benefits within the student learning experience:

- the students' ability manage work without need for tutor availability
- sharing of artefacts and reflections meant that students had access to peers' variety of work which broadens knowledge and experience
- self regulation of learning and ongoing updates
- demonstrates the possibility of using the portfolio as a medium with their own students
- it is fair because everyone experiences the same process in the same way

The tutors reported the following disadvantages within the student learning experience:

- access to, and skills with computer is a pre-requisite
- it takes time to provide quality feedback; students may receive less detailed feedback than face-to-face would provide
- there is a lack of personal touch and relationship (personal contact has more value), and it can isolate some students; making connections with people face to face can enhance relationships and develop a more positive learning environment where students feel safe to contribute

The tutors reported the following factors affecting student use:

- dependant on student priorities and pressures
- submission times coincided with other assignments
- students require more scaffolding in the early stages as a first step to select artefacts, discuss and give feedback (face-to-face; in pairs?)
- dependant on access to a computer and knowledge of the e-portfolio application

5 Continued Use of Mahara

5.1 System Quality

Overall, the quality was satisfactory. The application was very stable and the administrative support was excellent. However, at this stage, the templates were not user friendly or contextualised for our purpose.

5.2 Intention of Continued Use

We are planning to continue using Mahara for the remainder of this year and possibly beyond that, depending on modifications to enhance usability. For example, I think one of the main difficulties was the fact that existing templates were not meaningful to the students' contexts or user friendly. Whether or not we will make use of the *myportfolio.ac.nz* URL will depend on VUW IT services and how they might operate, although indications at this stage are that it is probable we would use the URL.

If there is a decision to continue use beyond the pilot, we would probably look at integrating it with the VUW portal i.e. single login access. Continued use will depend on cost and hosting implications as well as the availability of ongoing maintenance and site administration services.

6 Success of Pilot

Disappointingly, from the point of view of the students, with regard to functionality, the pilot was not very successful. The major considerations in implementing a portfolio system are accessibility and ease of use.

Thirty-two students found Mahara difficult to use, while eleven found it easy after spending some time on it. Twenty-six students said they would rather use a paper based portfolio.

Although the students were guided towards the documentation on the site, some said they were not aware of its existence.

6.1 Staff Response

Overall, the staff response was positive, and they were committed to the e-portfolio process in spite of the time required to get to know the application.

6.2 Overall Success

Overall, I would rate the pilot initiative satisfactory, considering the demands placed on the students and staff in the short timeframe. Many of the difficulties were due to limited time and unfamiliarity with the software and might be considered teething problems. As more communications tools are developed and the staff and students become familiar and comfortable with the application in future, the focus will be on the educational benefits such as enhanced critical reflection, self regulation and collaboration.

7 Additional Comments

I think one of the main problems in the implementation of Mahara at this point in time was the proliferation of web portals each student had to engage in. In the future, increased communication functionality in Mahara, and integration with the 'My Victoria' portal, should negate the need for LearnOnline forums. It will be necessary, however, to consider the features of 'My Victoria' and Mahara and determine how they might best be integrated and implemented.

Staff and students were in agreement that Mahara requires simplification. They reported that there were too many steps in the creation of a view, and it was easy to 'get lost'. I think that students might perceive more benefit to them if they could see how their artefacts and views might come together in a resume/ presentation portfolio.

One of the features that Mahara offered that was not available previously in the BTeach portfolio process was the sharing of artefacts, reflections and feedback from peers. Thirty-four students reported that they found peer collaboration and feedback feature a useful strategy for reflecting on learning. Twenty-four students reported that the e-portfolio in general was a useful strategy for reflecting on learning, while eighteen did not find it useful.

It is worth commenting that students were not explicitly introduced to the blogging feature on Mahara, although they were encouraged to explore it and use it if they wished. Blogging offers a powerful tool with respect to maintaining a portfolio, and this feature will be introduced next trimester. The aim would be to make blogging a mandatory requirement at a later stage in the programme.

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