Mahara ePortfolio System Implementation
NMIT Final Case Study Report

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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)

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 gave 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 fulltime 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.