

Introducing an Electronic Portfolio: results of a one-semester pilot

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Introduction

London Metropolitan University introduced its Personal Development Planning (PDP) framework policy in Autumn 2004 during the merger of its two predecessor universities and the introduction of its unified undergraduate modular scheme (UUMS). As part of this scheme, every undergraduate course includes a core spine module at each level: HEO (Higher Education Orientation) – a subject specific introduction to HE study module in the first year, an employability related module at level 2, and a project in the final year. The PDP is introduced to students in the HEO module and PDP related activities and assessment are part of each core spine module. The PDP may be one of three versions: the standard university PDP booklet (online at www.londonmet.ac.uk/ugstudy/pdp), a customised version of this booklet or a tailored PDP adapted to the requirements of the particular course (e.g. for professional body reasons).

In 2006/07 it was decided to consider introducing an electronic portfolio across the university and that a small pilot should be set up in Spring 2007. New students joining one course were offered the chance to use the ePortfolio (a Blackboard WebCT Vista product integrated into the university's VLE, called WebLearn) during their HEO module. However, the ePortfolio was not used as the vehicle for either the teaching or the assessed tasks in the module and the students did not make use of it (see Chalk 2007a). The conclusions of this 'mini-pilot' were that the ePortfolio should

- be integrated into the teaching and learning,
- be formally introduced during an IT session,
- be used to create and share content, including a PDP related assignment,
- be used in conjunction with the module in the VLE (eg for the sharing of course work artefacts and reflection on assignment feedback),
- be used as the vehicle for students to engage with their tutor(s) by inviting them to be guests to view content and/or interact using the blog,
- be a place to store PDP elements such as their CV (using the CV tool).

It was decided to hold a much larger pilot in Autumn 2007/08, with the emphasis on integration into the module's teaching and learning as above, and the use of the ePortfolio for the PDP related assessment, where possible. Nine module leaders (from modules at each of the three levels plus one at masters level) agreed to take part and they attended various sessions during the summer of 2007 to prepare for the autumn start.

A formal evaluation strategy was proposed, consisting of two workshops for the module leaders and university PDP group (in November 2007 and January 2008 – see Chalkp 2007b and 2008), regular email questions to staff and students about their progress and two formal questionnaires to coincide with the workshops. This paper is a product of the collective experiences of all the staff and students involved in the pilot modules and the author (who led the project) would like to extend a special thanks to them.

The nine pilot modules

During the summer of 2007, various staff involved in the university's PDP and VLE activity were invited to join the pilot, and nine module leaders volunteered. They were asked to come along to an initial session where the ePortfolio was introduced and an agreement made to integrate it into their module, including an assessment component where this was feasible. The nine modules were a reasonably representative sample of level, subject and IT engagement, as follows. The active numbers of students involved varied from 3 to 40, with 20 being the average.

Pilot module 1 (PM1): Science Professional Studies HEO module (level 1)

There are 200 students on this module but only one tutorial group of 20 was chosen as the pilot group for the ePortfolio. They were asked to submit their CV and personal statement to the ePortfolio in week 4 as their first course work assignment.

PM2: Studying Service Sector Management HEO module (level 1)

The ePortfolio was made available to students. For the third assignment, in week 11, an ePortfolio (or any other) blog could be submitted as an alternative to their reflective commentary, but this was optional.

PM3: Computing HEO module (level 1)

There were about 50 students on this Foundation Degree module. A set of documents and activities were set up in the initial ePortfolio template to encourage students to engage.

PM4: Dietetics Professional Studies HEO module (level 1)

There were 30 students on this module and the intention was to use the ePortfolio to upload an assignment, but this was unfortunately hampered by the VLE being down on the day of submission.

PM5: Community Sports Coaching Foundation Degree (level 1)

Three students on this course were introduced to the ePortfolio across all modules with the intention that it should become the repository for their records of standards achievement – an essential part of their personal and coaching training. The ePortfolio was used for the assessment of a learning object produced by the student.

PM6: Film Studies HEO module (level 1)

A group of 40 students were given access to the ePortfolio and encouraged to upload their Film Studies logs (reflective statements), CV and formative assessment tasks.

PM7: Mathematics employability module (level 2)

There were about 25 students from the degree, HND and foundation degree courses. 10% of the module mark is allocated to six PDP Tasks.

PM8: Computing project students (level 3)

About 60 students were offered the chance to use the ePortfolio to reflect upon their project progress but this was not assessed and it was not feasible to change the way the project was run to incorporate all the supervisory staff into a coordinated pilot.

PM9: Events Management masters degree (level M)

Although the university does not have a formal post-graduate PDP strategy in place, it was decided by one module leader to encourage a group of about 30 students to use the blog facility to record their reflections on the module, to enhance inter-group communication and to support the development of research topics and assessment tasks – although, crucially as we will see, the ePortfolio was not used for the assessment.

Preparation and introduction

During the summer of 2007 the earlier Spring pilot was reflected upon by the university PDP group (see Chalk 2007a) and it was decided to focus on a number of issues that arose around the presentation of the ePortfolio to students:

1. Supporting resources. We were kindly allowed by Edinburgh University to use their ePortfolio Guide (www.elearn.malts.ed.ac.uk/eportfolio). A number of other documents and links to learning objects were included in the standard initial template given to students on the pilot modules (see Figure 1).
2. Staff training. Following an initial session, staff were offered one-to-one support and a number took advantage, particularly to develop some extra resources for their initial template.
3. Introduction to students. Module leaders were advised to utilise IT sessions to ensure students could practise using the ePortfolio tools, in particular the Guest

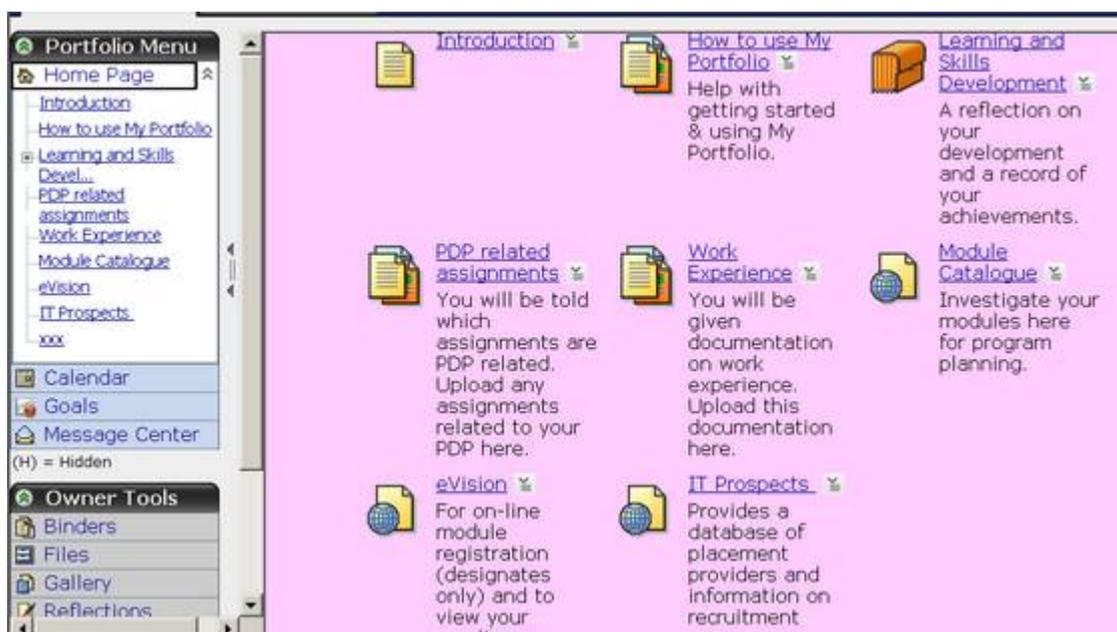
Tool as this allowed the tutor (and, in some cases, the author) to view the student's work.

4. The initial template. Some module leaders decided to customise the initial template to the needs of their module. For example, in the case of PM3 (Computing HEO) the template was set up as in Figure 2. The importance of the initial template is that once the student is given the ePortfolio, this template can no longer be amended or added to by academic staff.

Figure 1: The standard initial ePortfolio template



Figure 2: The PM3 Computing HEO initial template



How the ePortfolio features and tools were used on the modules

In all cases, the full set of tools provided (as shown on the left hand menus in Figures 1 and 2) was made available to the students. The initial template in all cases included the supporting resources and guidance documents. Figure 2 is an example of some additional material provided to the PM3 Computing HEO module. Figure 3 shows how the visual style was amended for the PM2 and PM9 Management modules. (Figure 3 shows the 'guest view' of the ePortfolio, so not all the 'build' tools are listed on the left).

Figure 3: The initial template for PM2 and PM9 Events Management modules

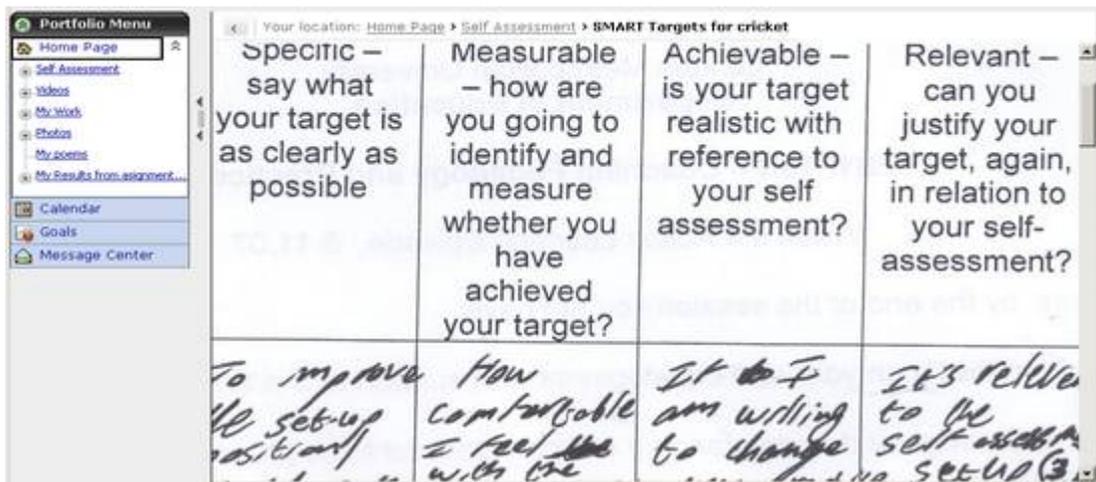


Several module leaders encouraged students to upload their CVs, use the blog and 'showcase' multimedia material – as the template in Figure 3 exemplifies. In the case of the Sports Coaching module (PM5) the students were also asked to show how the video evidence meets the coaching standards. An example of one PM5 student's work is shown in Figure 4a and 4b – a link to his YouTube site and a scanned in evaluation sheet.

Figure 4a: A PM5 Sports Coaching ePortfolio – multimedia evidence



Figure 4b: A PM5 Sports Coaching ePortfolio – reflection on feedback



One student on the PM6 Film Studies HEO module had, within six weeks, uploaded not only their film logs, but also their Résumé (as the tool is American, this is how the CV has to be referred to) and one course work essay into a new folder they had created (see Figure 5).

Figure 5: Film Studies example including film logs, course work drafts and CV



There was one student who used the Goals tool to record her reflection and plan: “What I want to achieve after University - I want to start working as a junior Dietician in a hospital setting as soon as anyone will let me. I would like to gain experience in as many different areas as I can in my first employment to help me build my portfolio. I am particularly interested in Gastroenterology and allergy due to personal experience and I feel my enthusiasm and passion will be of most use in these areas.”

One final year Computing student in PM8 used the Goals tool as well, specifying their goals as follows:

“Research Skills

Improve research skills. This includes improving referencing and citations as well as broadening my research methods and sources.

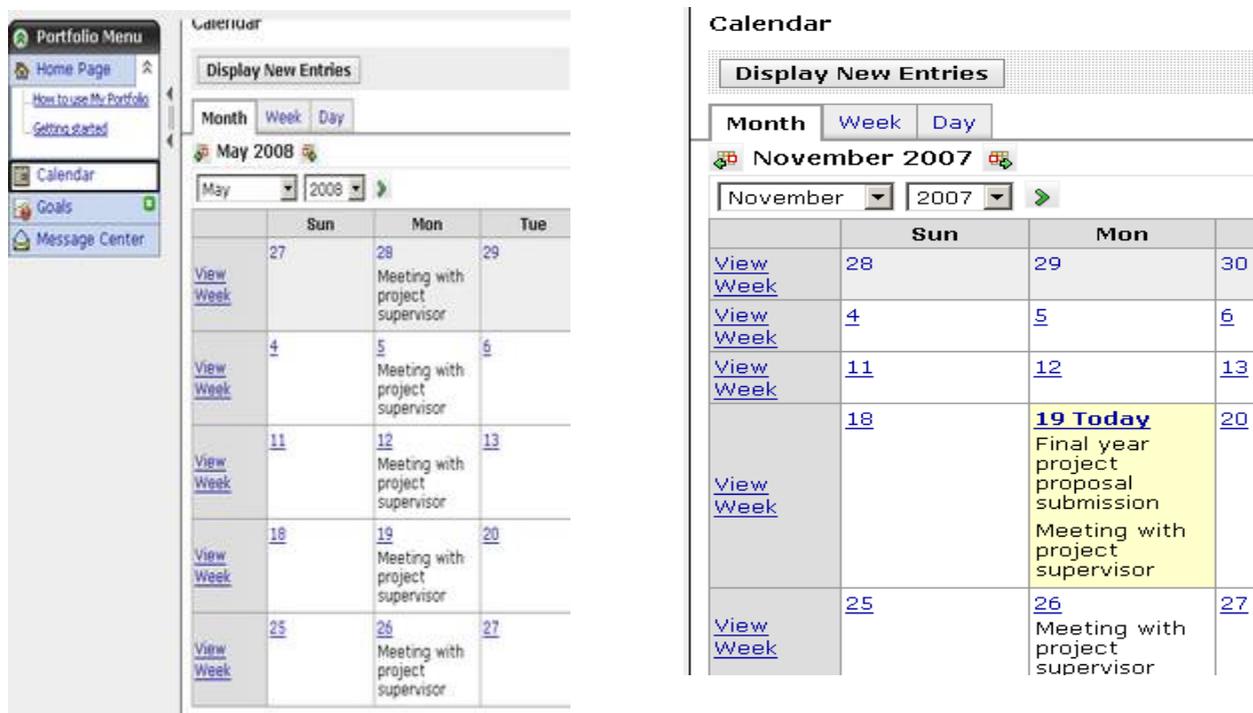
Time Management

Improving personal management. Placing more focus on end results and create proper plans to aid in managing resources therefore time.”

He also used the Calendar tool (see Figure 6) to record meetings with his supervisor and deadlines – using the auto-populate method to flow weekly meeting reminders into his diary.

One PM9 events management masters student commented in his first blog entry in October 2007: “I am not sure where to start with this, as I have never kept a blog before. I am sure it will be a good experience to add my thoughts and experiences, to maybe be able to have an overview of how I have progressed...”. However, generally, this group (PM9) did not follow through with their blogging as their tutor explains in Table I, probably because it was not assessed.

Figure 6: A PM8 Computing Project student used the calendar tool



Evaluation of the ePortfolio pilot

The evaluation was conducted in several different ways:

- two feedback workshops in November and January for module leaders (and, in one case, two Dietetics students also contributed),

- questionnaires were circulated by email or in the class (in the case of PM7),
- staff and students were asked by email for more informal responses during the course of the pilot,
- observation during lab sessions and guest views of example ePortfolios.

The results are set out in Appendices 1-3.

As can be seen in Appendix 1, module leaders attempted a variety of strategies to engage their students. Where the ePortfolio was assessed, there is evidence of some engagement (e.g. PM1, PM3, PM4, PM5, PM6, PM7) but several staff indicated a lack of further interest. Where assessment was optional (PM2) 71% of one group, but only 37.5% of another group used the ePortfolio. In non-assessed examples (PM8 and PM9) and in the PM1 tutorial groups not in the pilot, there is very little evidence of voluntary engagement.

Selected results from the questionnaire are included in Appendix 2, and the full set of results, from the November questionnaire, is in Appendix 3 with the extreme 'most positive' and 'least positive' ratings in bold. In general students were very positive, but this could be put down to the 'halo effect' or to disinterested students not responding. A sample of 32 self-reporting respondents out of the 200 or so actively engaged in ePortfolio pilot module tutorial groups may not be considered statistically significant. November may have been too early for a considered, reflective response.

In January 2008 at the end of the Autumn semester pilot, another workshop (Chalk 2008) was held with module leaders and a short emailed questionnaire was sent to the students:

1. Did you use the WebLearn Portfolio?
2. Did you find it user-friendly?
3. Would you prefer to use another electronic portfolio system, if a suitable alternative exists?" (A link to PebblePad was provided as an example alternative).

A summary of their responses is provided in Appendix 4. 26 students replied with 6 making generally positive comments and 20 negative. The free text was analysed for key phrases and a count made of the number of students mentioning that phrase. So, for example, 4 students mentioned how long it took them to 'figure out how to upload my CV' or words to that effect. It is striking to note the change from a generally positive view in November, to a more negative view in January, although the numbers of returns do not make this statistically significant.

One interpretation of the results could be that, in November, students realised the potential to use the ePortfolio for reflection (score 1.2 in Table 3) and involving guests (score 1.3). However, by January, the mainly negative comments related mostly to usability issues, which might indicate they were frustrated in their

attempts. Another issue concerning the November results in Table 3 is that there was little evidence of the activities students reported (e.g. posting a comment) in the ePortfolios seen by the author, indicating some early wishful thinking perhaps?

Conclusions

It is hard to draw any firm conclusions from a single semester, single module pilot of a process and tool that is meant to last for the duration of the student's course and across all modules and beyond. Certainly staff and students, between them, used the full range of features – CV, blog, uploading files, guest view, web links, folders, goals, template, message centre, calendar – except one: the ability to save artefacts from a WebLearn module (assignment, discussion, assessment) into the ePortfolio. Several staff commented on the need to integrate the ePortfolio further into their module, and this is one area that requires careful planning.

One finding from this and other research is that students are unlikely to do tasks that not related to assessment. Curle *et al* (2006 page 187) go so far as to say that “assessment drives learning”. Apart from one or two enthusiastic students who continue to develop their ePortfolio even though the pilots have ended, our evidence (unfortunately) points in this direction.

On the other hand, it might be that, as one member of staff said, a more intuitive, fun-to-use, Facebook-like ePortfolio will prove popular. The students and staff who looked at the Pebble Pad (www.pebblepad.uk) alternative seemed to agree with this. But even this will require a managed learning approach if the goals of reflection, action planning, showcasing, CV development etc are to be achieved for all students. Most staff agreed that they need to include ePortfolio-related assessment tasks in their module.

However, this brings its own problems. For example, the ePortfolio is owned by the student and its content can be changed at any time, so a separate facility is needed (in the VLE or as part of the ePortfolio) to store assessed work and to show it to the external examiner. Assessment might remove the fun, or positive motivational aspect. Finally, devising ePortfolio related assessment tasks is not straightforward: for example assessing an uploaded CV may be easier to manage than a reflective blog but does it allow for a range of critical, reflective writing and appropriate grading criteria?

On several modules there were more students who had access to the ePortfolio than those in groups doing the pilot (as a consequence of the mechanism for assignment of ePortfolios by module). There is no evidence that any of these students voluntarily ventured into their ePortfolio space. Similarly, since the pilots ended, although students have had access to the space, very few have been actively using it – mostly those on the FDA Sports Coaching, because there has been an

active attempt by the module leader to use it on the other modules he also happens to be teaching and because they have been told it is the place to store their standards evidence and other assessed work.

In conclusion, then, it is probably the case that a more user friendly ePortfolio system, integrated into all aspects of the student's life, including regular assessment related tasks and enthusiastically supported by academic staff, is required in order to justify what is a very large investment of time and other resources. In the meantime we, as a university, remain committed to the existing paper-based PDP, which can also be used electronically as a static word-processed document. A research group is exploring what might be desirable in an ePortfolio using Kelly's (1995) personal construct theory and repertory grid technique, working with the pilot module leaders and students.

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Appendix I: Evaluative comments by module leaders and other staff (Nov & Jan combined)

Module	Comments
PM1 Science HEO	<ul style="list-style-type: none"> • Students engaged well and all but one submitted course work I online, • The ePortfolio assisted students in reflecting and planning, • Sending feedback was a problem as the message box is not forwarded to the student's email account, • Students needed to have access to an internet-enabled lab during class time to teach/ encourage them, • Students added tutor as guest and uploaded files for them to view, • Very few students not in the pilot tutorial group chose to use the ePortfolio.
PM2 Management HEO	<ul style="list-style-type: none"> • The Guest Tool is not intuitive, very few students used this, so little collaborative work was done, • Creating a Blog topic is not intuitive, so students created a new file instead, so threaded reflections were not possible, • Message notification is poor, only one interaction, • 71% of the students in one tutorial group used the ePortfolio for their reflective commentary, and 28% of these had invited guests to view it (but not the module leader), • In another group only 37.5% used the ePortfolio to record their reflections and none invited in guests, • Students' reasons for non-engagement: costly, confusing, unstable internet, too much effort, • Introduction in week 1 was missed by a lot of (late) students, • Set up Blog topics in advance, • Needs expert introduction and ongoing IT support.
PM3 Computing HEO	<ul style="list-style-type: none"> • The ePortfolio chat facility doesn't work outside the university (this is a university networking problem), • Very large multimedia files uploaded just before course work deadline cause bandwidth problems.
PM4 Dietetics HEO	<ul style="list-style-type: none"> • "Very few students have engaged any more than was absolutely necessary. 30% experienced a significant degree of difficulty in using the system despite two sessions with Peter [the author] and open invitations to come forward with queries" (January), • "It needs further integration into the module" (January).
PM5 Sports Coaching	<ul style="list-style-type: none"> • Not sure about using blank template – may require a setup to store detail of over 30 separate standards in 4 key dimensions (using standards profiling across all modules), • Issue of copyright may need addressing in future.

Module	Comments
PM6 Film Studies HEO	<ul style="list-style-type: none"> • The ePortfolio is an improvement over paper-based PDP, • It was customisable by the student, they were told “this is London Met’s Facebook”, • But it’s not as user-friendly, • Tutor can see lots of potential but needs to be integrated into teaching and learning throughout the course and not just on one module, • Can use multimedia binder to store short films, and it’s the only place to store their seminar logs throughout their course.
PM7 Maths employability	<ul style="list-style-type: none"> • Used ePortfolio for university PDP tasks and want to show examples to external examiner.
PM8 Computing project	<ul style="list-style-type: none"> • The ePortfolio was not assessed in any way so little engagement: one uploaded their CV, two provided some evidence of reflection,
PM9 Events masters	<ul style="list-style-type: none"> • No students had used the ePortfolio (again, as it was non-assessed?), • Multimedia files can be uploaded into the ePortfolio but there are technical problems with playing them, • Weblinks can be embedded into ePortfolio postings but the user has to be familiar with HTML, • Module leader recommends regular reminders and embedding the PDP into an assessment.
Other staff	<ul style="list-style-type: none"> • The ePortfolio needs to be intuitive, and fun to use, and across all modules, • Not necessarily one answer, but another said it’s easier for students if university adopts a single system, • Inability to back up or export the ePortfolio and inaccessibility after graduation, • Course teams need to reflect on their own requirements.

Appendix 2: Evaluative comments by students

Module	Comments
PM1 Science HEO	<ul style="list-style-type: none"> • Comment: “I have many friends who do not have the time and cannot understand it, prefer it for submitting course work”, (November), • Comment: “It takes some time to go through it all and understand what to do. Like making different folders and files and photographs in it are difficult to do without going through the whole thing at least three times” (January), • 11 students answered the November questionnaire with 100% claiming to have uploaded files, 90% adding guests, 60% using the CV tool and adapting the presentation and 50% blogging, • The most positive ratings were for guest control, showcasing achievements, CV development and reflecting on progress and learning, • The least positive ratings were for career planning but even this was rated at 0.8 on a -2 to +2 scale.
PM2 Management HEO	<ul style="list-style-type: none"> • Student comments: ”it’s difficult to learn, took me some time, but now I know how to do it” (November), • “I don’t think I will find it useful since a lot of my courseworks have to be scanned if I want it in my portfolio and that’s quite time consuming for me”, • “I am using the reflections tool... it will be useful”, • “I use the blog, not the CV tool as I use my own version, I don’t like the layout, the message centre is not working from home”.
PM3 Computing HEO	<ul style="list-style-type: none"> • Technical problems with using it at home.
PM4 Dietetics HEO	<ul style="list-style-type: none"> • Students were confused by switching between ‘build’ and ‘view’ – see Figures 2 and 3, • Not as easy to use as, e.g. Facebook, • One student comment: “I carried on using it because I needed it to submit an assignment, however I did not find it an easy application to use, navigating round the system was difficult and there seemed to be not a lot of order... I would like to try alternatives...” • Needs more support and regular use.
PM5 Sports Coaching	<ul style="list-style-type: none"> • One student commented (see their work in Figure 4): “I find this portfolio system safe and also fun... I can post my work on it and add other accessories, e.g. poems, pictures, videos etc. Using this portfolio has been one of my greatest experiences”.
PM6 Film Studies HEO	<ul style="list-style-type: none"> • Students “liked it as a repository”, • Hands-on introduction essential: Non-attenders of this session have not registered tutor as a guest, attenders have customised the portfolio to some extent and added files (November).

Module	Comments
PM7 Maths employability	<ul style="list-style-type: none"> • 16 students filled in November questionnaire with 90% stating they had uploaded files and added guests, 70% posted a comment and adapted the presentation, only 40% using the CV tool, • The most positive ratings were for guest control, showcasing achievement, improving employability, developing self and subject awareness, reflecting on progress, • The least positive ratings were for developing creativity and learning about ePortfolios • Comments: hard to upload files, doesn't always work.
PM8 Computing project	<ul style="list-style-type: none"> • One student comment: "It is a good idea to use ePortfolio for students; it's a good way to see the past and future..."
PM9 Events masters	<ul style="list-style-type: none"> • Students comments: "forgot about it", "not important for studies".

Appendix 3: Results of the November 2007 student questionnaire

N = 32 (mostly PMI and PM7)	Averages
Section 1 (yes = 1, no=0) – Have you...	
been introduced to the WebLearn Portfolio?	1.0
used the WebLearn Portfolio?	1.0
become aware of the WebLearn portfolio in other ways?	0.7
Section 2 (yes = 1, no=0) - Have you...	
added any guests to your WebLearn Portfolio?	0.9
uploaded any files to your WebLearn Portfolio?	0.9
posted a comment to a reflections topic (blog) in your Portfolio?	0.6
used the CV tool?	0.5
adapted the presentation of your Portfolio home page?	0.7
Section 3 (scored on an opinion scale of -2 negative to +2 positive) - Please rate the ePortfolio for...	
learning about online Portfolios?	0.9
controlling what can be seen by your guests?	1.3
displaying your achievements (products, CV etc)?	1.1
reflecting on your progress?	1.2
communicating?	1.0
presentation (eg the home page)?	1.1
the initial template (the files, binders and resources provided by us)?	1.0
helping to learn about your subject?	1.0
developing your graduate attribute A1 self-awareness?	0.9
developing your graduate attribute A2 subject awareness?	0.9
developing your graduate attribute A3 creativity?	0.7
developing your CV?	1.1
helping you plan your career?	1.0
helping you choose modules or plan your next academic steps?	1.0
doing assessment for the module?	0.9
reflecting on your learning of the subject?	1.0
developing your employability?	1.0
<i>In addition, what is your overall opinion of:</i>	
Electronic Portfolios in general?	1.1
The WebLearn Portfolio in particular?	1.1

Appendix 4: Summary of 26 student responses to a free text questionnaire in January 2008

Positive = 6 - Categories mentioned in text replies:	
not had a chance to use any other	1
for reflective commentaries	1
I'm still using the Weblearn Portfolio	1
safe & also fun	1
one of my greatest experiences	1
I can post my work on it & add other accessories e.g. poems, pictures, videos etc	1
Negative = 20	
took me a while to figure out how to upload my CV	4
good idea to hand out step by step instruction	1
links didn't work; problems	4
did/ do not use	3
confusing	3
virtually nothing in my ePortfolio	1
PPad looks better	5
navigating round the system was difficult	1
would like to try alternatives	3
html editor needs improving	1
tasks not labelled clearly	1
complicated/ did not understand	4
limited personalisation	1