If we build it will they come and more importantly will they stay?

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Introduction and purpose

The purpose of this case study is to look thematically at the outcomes of three e-portfolio projects developed at the University of Leeds and to attempt to highlight the main issues surrounding the implementation and subsequent engagement with these tools.

Two of these projects were funded by the JISC Enhancing Learner Progression (ELP) Project between July 2004-December 2005. These centred on the use of an e-portfolio as a progress file used as part of personal development planning (PDP) within post and undergraduate nursing courses and the use of an e-portfolio within the Foundation Year for PRHOs at a local hospital.

The university was also successful in funding the development of an electronic progress file for first and second year medical students to record and track the development of their skills for PDP purposes. The progress file has subsequently been modified and is now available to all students on the MBChB from years 1 to 4.

Within the MBChB, in particular, on the Personal and Professional Development (PPD) ICU there has also been an increase in the use of technologies to support learning and reflection. Blogging tools have been used to facilitate the teaching of ethics and students are encouraged to use the blogging tool on a weekly basis to reflect on their thoughts during the course of PPD.

The growth of blogs, wikis, social bookmarking and other tools under the web 2.0 umbrella has given rise to the idea of a technological 'ecosystem' (Sanders et al.2007) where students are informally recording, sharing and updating their knowledge by contributing to and reading about the experiences of others.

But how are these tools to be used? In which contexts are they to be used and what environments foster the use of these tools in learning landscapes?

Method

The projects were launched in June 2005 and evaluation has taken place at key points of development.

The main groups involved in the e-portfolio pilots are listed below in table 1:

Learners	Feedback required	AIM	Voluntary/ Compulsory Usage	No's
Nurses	Yes Tutors and placement supervisors	Assessment of 'Practice Records'/ PDP	Voluntary	30 Students 8 supervisors
Medical Undergraduates	No – but used as the basis of conversation at annual appraisal	PDP	Voluntary	450 students
PRHOs	Yes Educational Supervisors	Reflection on Assessments and /PDP	Compulsory	33 trainees 33 Educational supervisors

Table 1: Breakdown of users and nature of each e-portfolio pilot group

No formative evaluation was undertaken with the undergraduate medical students but a summative survey has been completed. Some changes of emphasis have been made to the progress file which is now being used by years 1 to 4.

The PRHOs and educational supervisors have taken part in a formative evaluation and summative responses were collected at the end of the project. E-mail and informal comments have also been collected from this group.

The student nurses and their supervisors and tutors have returned both formative and summative evaluations.

The qualitative results are supplemented by quantative data collected from statistics of e-portfolio usage and patterns.

Progress/discussion

From the results of the three different e-portfolios recurrent themes have emerged.

It was clear that there were varying degrees of usage of the e-portfolio systems. This usage is shaped not only by the student/trainees usual approach to learning but also by external factors such as technology, feedback and relevance. The four different types of users are described in table 2.

Type of Engagement	Characteristics
Reader	Makes no entries in the e-portfolio. May access once or on multiple occasions just to read the content.
Poster-Tentative	Makes 1 or 2 entries then stops.
Poster-Selective	Makes entries but only in sections they feel they can benefit from
Poster-Continuous	Makes continuous entries

Table 2: Engagement of Users by 'Type'

Relevance

Relevance plays an integral role in engagement with the e-portfolio and facilitates the movement of the users from reader to 'poster'.

Greenberg (2004) states that e-portfolio users do not utilise all of the functions available to them and only use the sections or functions that they identify as being of most use (Greenberg,G 2004). This pattern is certainly illustrated through the student nurses use of the e-portfolio.

Student Nurses

The majority, 67%, of nursing students believed that using the e-portfolio would facilitate reflection but all of the nursing students felt that using the e-portfolio to present their 'Practice Evidence Records' would enable them to receive feedback from multiple sources and much more quickly than normal. This was the 'added value' and the relevance for using the e-portfolio. All of these users were selective in the use of the tool. They all only made entries in the 'Practice Evidence Record' and 'Reflective' sections, representing 4% of the space available for recording. The nursing e-portfolio was used by the students to facilitate a link between their placements and their university tutors. Connectivity was the relevance of this e-portfolio.

After the second cohort of nurses began using the tool the need to complete 'Practice Evidence Records' for assessment purposes disappeared removing the main impetus of use which the first cohort of nurses had utilised and subsequently the use of the e-portfolio declined.

PRHOs

The assessment function of the Foundation Year portfolio produced a 'poster' rate of 87% but 54% of students were selective with trainees only completing compulsory sections, such as the 'End of Placement Review' and PDP sections.

MBChB Students

The use of the medical student's e-portfolio reached a peak of 60% in the four weeks prior to the annual appraisal. It was clear however from some of the comments noted from the evaluation process that the use of e-portfolio tools themselves are not the barrier but rather what this technology is being used *for*. Comments included:

'I'd far rather spend my time actually reading, learning something useful than being made to feel I was at some activity camp for business groups'

And

'It takes up too much of my time and isn't assessed so why should I bother?'

In an attempt to increase relevance and encourage continuous use overarching themes have been introduced alongside the evidencing of professional competency: In Year 1 'Becoming a Medical Student', Years 2 and 3 'Developing Skills' and Years 4 and 5 'Preparing for Employment'. Sections have been added linking the users to careers advice, skills development tools, non-academic achievements and activities, deanery statistics and support with applications. Many students in the pilot project stated that even though they did not use the progress file continuously they could see the future

relevance and felt that this would become more apparent and useful as they passed into the later stages of the course.

Technology
When designing an e-learning tool we should not assume that all users possess the required level of IT skills. The technology should not overshadow the learning outcomes of e-portfolio use (Woodward and Nanlohy 2004). We should also remember that the entire process is 'about people….not technology.' (Dublin 2004, p294). If this is not taken into account then we are in danger of losing the faith and attention of those we are trying to engage. The use of technology should not be a barrier to the use of the e-portfolio and the survey results have shown that the ease of use of the technology is not a barrier for the students/trainees. Eighty-five percent of the students/trainees engaged in the projects found the technology easy and intuitive to use.

However the technology was a barrier to those providing feedback.

PRHO's and Student Nurses

The nursing supervisors/tutors and educational supervisors experienced high levels of difficulty in navigating and using the electronic tools.

Sixty percent(n=33)of the educational supervisors signed on to the system during the pilot. No supervisor signed on more than 5 times with the majority signing on an average of 2 times. Only 2 of the supervisors placed feedback into the PRHO's log directly, the majority, 88% (n=17) of those who provided feedback did so under the PRHO's log-in whilst sat next to them.

The supervisors of both the nurses and the PRHO's had no involvement in the design or content of the e-portfolios. The tools were as unfamiliar to them as they were to the students/trainees.

MBChB Students

The undergraduate e-portfolio was not used to collect feedback from tutors on an ongoing basis. It was primarily for student usage to track and record achievements and progress. Tutors were involved in the design and content of the e-portfolio. Students were encouraged by tutors to post to their e-portfolio at key formative and summative assessment points and 60% of the students in both years one and two used the progress file in their appraisal meeting.

The evaluation clearly demonstrates that those providing feedback need to be involved in the design of the e-portfolio and that the confidence of the feedback provider both with the technology and the process is pivotal in shaping the type of usage of the student/trainee.

Feedback/Comments
In order to provide the best environment for continuous use feedback, comments and/or an opportunity to present the e-portfolio contents to an audience needs to be factored into the process.

PRHOs
The provision of feedback within the Foundation Year e-portfolio encouraged users to post into the reflective sections of their logs.

Where feedback has been provided 50% of users have posted public reflections. Another pattern which emerged during the analysis was the extent to which those receiving feedback in their log utilised the voluntary (non-assessed) sections of the PRHO e-portfolio. All of the trainees receiving or recording feedback in their e-portfolio made an entry into one or more of the voluntary sections, but only 68% of those not receiving feedback displayed this type of behaviour.

Nurses
All of the student nurses who posted comments or work and did not receive feedback did not post anything else into their e-portfolios. Those nursing students who did receive feedback continued to make posts and submit work and reflections for comment.

Feedback fuels the journey from tentative use to continuous use. It not only encourages regularity of posting but also the range of postings within the e-portfolio.

The importance of feedback or comments will depend on the purpose of the e-portfolio. Can meaningful reflection take place without any form of communicative discourse? Is merely collecting evidence to track achievements sufficient for the purpose of a reflective e-portfolio?

The Future

The increase in discussions over the use of web 2.0 technologies and attempts to integrate these tools into teaching and learning practice are still in the formative stages. Current projects involving medical students and year 12 students are being piloted (see www.elp.ac.uk for more details). The social nature of these tools contrasts with the individual nature of e-portfolios. To date, a review of the progress of these projects, which have included social networks and blogs, highlights issues such as relevance and the role of the e-moderator/facilitator. The majority of students engaged in these activities prefer to use the collaborative areas as 'static' websites rather than as areas to share ideas and post comments. Further evaluation of the use of these tools is required.

Organisation

At the present time all of these e-portfolios are 'add-ons' either within or separate from VLEs/institutional systems and learning materials. Should systems change to encourage greater usage, personalisation and engagement with the recording of achievement and evidencing of competencies, from the model currently in use:
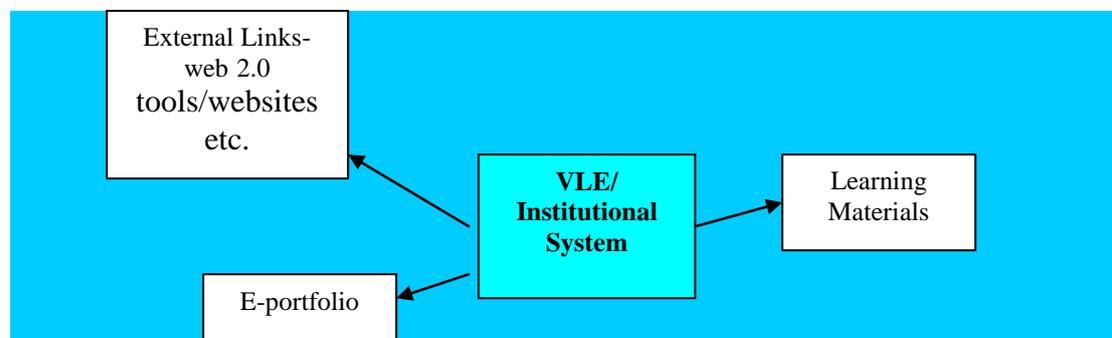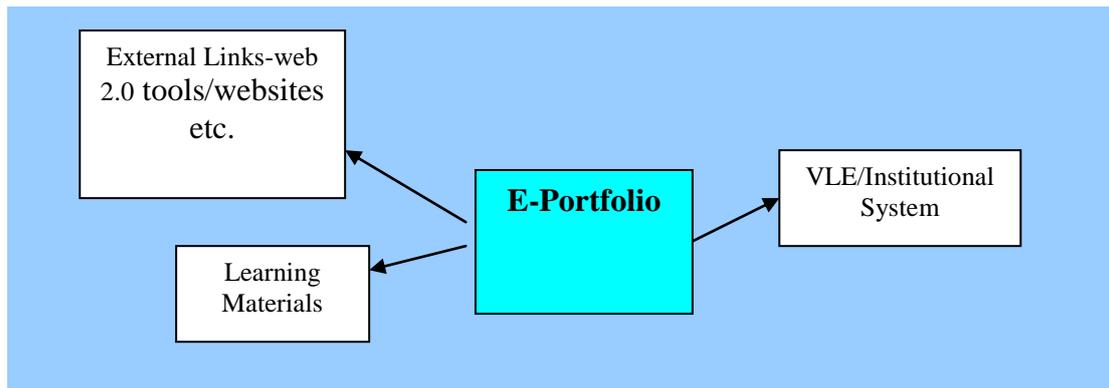

Figure 1:VLE/Institutional System Centric Model

To this model?

Figure 2: E-portfolio Centric Model

Recommendations/Conclusions

Determine which type of usage you require.

Any development of an e-portfolio should start with those providing feedback and thorough training should be offered.

The largest barrier to student/user engagement with e-portfolios is the role and nature of the audience. Ensure users are aware what type of feedback they can expect.

The relevance of the e-portfolio should be made clear to users and we should expect this relevance to be of cumulative importance to some users.

When thinking of using any form of technology determine if it is suitable for the aims you wish the learners to fulfil. Do not introduce a technology just for the sake of it.

Ensure linkages are made in the curriculum to any e-portfolio used as part of PDP. PDP should not be an 'add-on' activity but an integral part of any course.

References
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