Bridging the gap. An evaluation of the introduction and use of a free e-portfolio tool on two courses in the Faculty of Health and Social Sciences at Leeds Met.

Introduction

There has been a great deal of interest in the potential for e-portfolios to support learning, and an extensive and growing body of literature gives testament to the power of e-portfolios to aid the reflective learning process (Doig et. al, 2006; Riedinger, 2006; Jenson, 2011), to encourage personalised independent learning (Blackburn and Hakel, 2006; Chau and Chen, 2010), and to support and evidence professional development, lifelong learning and transitions between courses of study and periods of employment (Howes et. al., 2011; Joyes et. al.; 2009; Cambridge, 2010 Stefani et. al., 2007). Use of e-portfolios has grown rapidly in the Higher Education (HE) sector across the USA, Europe and Australasia fuelled by ‘top-down’ government policies and ‘bottom-up’ growth within Universities themselves (Australian ePortfolio Project, 2008). In the United Kingdom, a growing number of HE institutions have made e-portfolio tools available to all students and, during the research process for this project, Leeds Metropolitan University (Leeds Met), was in the process of evaluating options with the aim of recommending a similar institutional implementation of an e-portfolio tool. Despite expectations that an e-portfolio would be made available in 2010-11, this was delayed until the 2011-12 academic year when Pebblepad was selected for introduction across the University.

This project aimed to analyse the introduction and use of an e-portfolio tool as an interim solution in the 2010-11 academic year to support reflective practice and personal and professional development on two courses of study in the Faculty of Health and Social Sciences (HSS) at Leeds Met, namely the BSc (Hons) Clinical Language Sciences (Speech & Language Therapy) (SLT) and PG Diploma in Dietetics (Diets). These are both professional courses which aim to provide graduates with the skills required for practice and, in both cases, successful course completion brings with it eligibility for registration with the Health Professions Council (HPC) and employment within the National Health Service (NHS). In turn, this brings with it a requirement to evidence continuing professional development post-registration.

These courses provide a natural context for use of e-portfolios and, in addition to the benefits outlined above, their enhancing potential has been particularly well recognised in professional courses given their ability to provide support for the development of professional competencies and a means of evidencing their achievement and maintenance (Anderson et. al., 2009, p.73). The importance of reflective practice is also well recognised in such courses as a means of maximising learning from experience during work placements and other situated experiential learning activities (Roberts, 2009, p. 634), making the benefits of e-portfolios to support reflection and feedback provision during work placements particularly visible (Peacock et. al., 2011). The stated aim of the course leaders involved was to provide a vehicle for collecting, organising, retrieving and making available personal reflective pieces and evidence of development and achievement of practice competencies. This, they felt, would provide a stimulus for students to focus on
their own professional development and reflective practice to support their learning both within the University and in practice settings.

In the absence of an e-portfolio tool available across the institution and as a response to funding restraint, a free web based e-portfolio service (Foliospaces) was selected for use on the courses. Beyond cost, the main rationale for selecting this provider was that it offered access to an installation of Mahara, the leading open source e-portfolio which is in use in a number of HE institutions. By mapping the functionalities of Foliospaces to criteria for selection of the institutional e-portfolio established by the University’s e-portfolio steering group, we were thus able to best ensure that the processes undertaken in the pilot implementation could be continued and/or adapted for use with the institutional e-portfolio once this had been procured.

Research questions

The key research questions underpinning the project concerned the impact that the introduction of an e-portfolio tool would have on learning within the courses, as follows:

- What uses do students make of e-portfolios within their courses of study and placement opportunities and what are their attitudes towards it?
- What do they perceive as being the benefits and drawbacks?
- What support do they feel they require?
- How do they see the e-portfolio alongside other formal and informal systems which they use to support their learning, particularly the Virtual Learning Environment (VLE) in use at Leeds Met and Social Network Sites (SNS) such as Facebook?
- How far do they develop a sense of ownership of their e-portfolio?
- What is the impact of e-portfolio use on reflective practice and independent learning?
- What plans do they develop continued usage, and what are their views on the future potential of e-portfolios to support their learning and development?
- What uses do staff make of e-portfolios and what are their attitudes towards its effectiveness and potential for development?

In attempting to answer these questions, it was hoped that the introduction and use of the e-portfolio could be analysed and evaluated in order to identify any critical success factors and inform developments both within the courses themselves and more broadly across the Faculty of Health and Social Sciences once the institutional e-portfolio tool was implemented.

Context of use

While, as outlined above, the overall aims of introducing e-portfolios was similar within both courses, there was some practical variation in the way that the e-
portfolio was introduced and used within the two courses, reflecting the differences in their level and duration. The SLT course is a three year course and, in the first year, the focus was placed on the use of Foliospaces for reflective accounts and for the presentation of proformas summarising placement experiences. The course team chose a relatively directed approach in which a relatively small number of tools and functions were introduced in the early stages, feeling that this would ‘lay the foundations’ for increased usage in future years of the course. They also felt that this was appropriate given their own relative inexperience with use of the tool. The students were required to create a blog and make a weekly reflective posting, to join the SLT group and make their blogs available to tutors within a ‘view’. They were also introduced to the issues around successful tagging in a specific learning activity.

The Diets students, on the other hand, were given a broader task of charting their personal, academic and professional development and evidencing mastery of competencies prior to an initial placement. The only directed requirement was to create a summary ‘view’ and make this available to tutors at the end of the first semester 1 in preparation for a pre-placement tutorial in which students were asked to begin the discussion by talking through their e-portfolio. They were also given directed group tasks related to PDP to be carried out within Foliospaces group discussion boards.

From the outset, it was emphasised to students in both courses that Foliospaces was not a University-owned system and that students were creating individual accounts with a third party and thereby agreeing to the terms and conditions of use. Guidance was provided relating to privacy (emphasising the importance of individual settings and care needed when publishing information), confidentiality, copyright, and data security. While students were given directed tasks to complete, it was emphasised throughout that students effectively ‘owned’ their own Foliospaces account and could use outside or beyond the course to support their longer term goals.

Tutors provided scaffolding in the form of introductory sessions and tasks, and both courses were provided with an introduction to Foliospaces co-delivered by tutors and a Learning Technologist. Ongoing support was also provided in the form of optional sessions for students experiencing problems and contact with tutors who sought further learning technology support if needed. During the implementation of the e-portfolio, two technical problems were identified relating to emails within the system and server set-up issues which resulted in broken links within e-portfolio views. These were dealt with through liaison with the Foliospaces team.

Outline of the research process

All students (n=77) were provided with study information (appendix A) and invited to take part in the evaluation questionnaire (appendix B) which consisted of 37 questions with follow-on questions to explore reasons for answers given. In total 52 students completed it (68%) and response rates from the two courses were similar at 71% for SLT and 62% for Diets, both of which represent response rates well in excess
of those targeted by Brennan et al (2004) and Nulty (2008) as being adequate for the purpose of evaluating educational courses. Item non-response rates averaged 0.7% with the majority of the open questions answered by over 90% of participants. Whilst it is not possible to entirely rule out a systematic non response bias, the relatively robust response rates along with the wide range of responses received suggests that there was no great similarity in the profile and attitudes of respondents compared to non-respondents. Consultation with the course teams at the conclusion of the research process also suggests that this was the case.

The questionnaires were followed by interviews with the course teams aiming to provide an insight into their experiences of using Foliospaces, their views on how it was received by the students, and their plans for development of e-portfolios in the future. This seemed to be particularly pressing as initial findings from the questionnaire suggested that the uses made by learners of the e-portfolios tended to be heavily coloured by the approaches taken by staff, for example to the tasks employed and the rationales given. The interviews were carried out through a semi-structured group interview process. Key questions were pre-prepared, but a conversational interview approach was adapted to allow for context and to provide an opportunity for further exploration of key issues as they were expressed by the participants. This also allowed discussion around differences in views and approaches taken by different members of the course teams to be explored and served to add further contextual information with which to triangulate the findings of the questionnaire.

**Key findings and discussion**

The questionnaire provided rich quantitative and qualitative data which showed a wide range of opinions and attitudes towards use of the e-portfolio. Key results are summarised below:

**Uses and attitudes**

Generally, the students were in favour of the use of Foliospaces within their courses. 94% of students reported that they had found the e-portfolio useful, with 37% saying that they had found it very useful. 80% said that they would recommend that it should continue to be used with future cohorts

Those in favour of continued usage cited the following reasons:

- Accessibility and convenience of use compared to paper-based records
- Availability of feedback from tutors
- Ease of charting development and progress over time

Comments included:
It allows you to keep all of your personal documents together and saves having to carry them around. It is accessible from any computer.

I think that it is useful to have somewhere to record my placement experiences and it was easy to get feedback about the placements from lecturers.

It is useful to look back on what you have achieved and it makes you think about how you could possibly do things differently in the future.

Those who said that they would not recommend its continued use pointed to a personal preference for paper-based portfolios, a sense that building an e-portfolio was too complex and time consuming and concerns over privacy.

Comments included:

I think it should be up to the individual whether they use Foliospaces or not. For some people it will be more beneficial, however others may feel that having a portfolio in a folder may be easier to use.

I was worried about putting information related to my course and files with my work on a website where an administrator other than my university lecturers may be able to access

It’s difficult to use

There was thus no universal agreement that the benefits of e-portfolios outweigh their paper-based counterparts and as a member of the SLT course team stated:

I think because all students seem to be on Facebook and so on, I thought hat it would be a piece of cake for them but actually it was a lot more difficult for them. It’s an assumption.

Any easy assumptions that the students would be technologically adept and ready to rapidly adapt to new technologies and perceive immediate benefits in their use were quickly confounded.

In terms of the use of e-portfolios to support the reflective learning process, the majority seem to have found this of great value.

75% of students made positive reports that they had received useful feedback via Foliospaces and 76% felt that it had allowed them to reflect more effectively. 75% considered that their use of the e-portfolio had helped them to become more independent learners.

The majority of students (86%) felt that use of Foliospaces would become more important as their courses progressed (see below) and a sizeable proportion (63%)
also stated that they would be likely to continue using Foliospaces to support their continuing professional development in the workplace.

**Figure 1: Chart showing responses to question:**
How far do you feel it will become more important/useful as your course progresses? Choose from 1 (I feel it will definitely become more important/useful) to 5 (I don’t think it will become more important/useful at all)

<table>
<thead>
<tr>
<th>#</th>
<th>Answer</th>
<th>Response</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>11</td>
<td>21%</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>24</td>
<td>46%</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>10</td>
<td>19%</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>4</td>
<td>8%</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>3</td>
<td>6%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>52</td>
<td>100%</td>
</tr>
</tbody>
</table>

These results suggest that the supposed benefits of e-portfolios in supporting the processes underpinning PDP and professional development obviously struck a chord with the participants. Staff were similarly positive about the fact that the e-portfolio had allowed them to better monitor, track and provide feedback about the development of students’ skills of reflection and personal planning. Comments included:

I’ve had more of a handle on it (the progress of individual within the cohort) and they’ve been more engaged through the process. (Diets)

And

once you actually got into the system it was quite nice because you could easily look back and see what they did – oh yeah that’s what they said last week and that’s what they said they were going to do this week – and you could see what you’d put as feedback as well.

Within this positive picture, however, there was clearly a wide range of responses and opinions amongst the students about their use of Foliospaces, giving credence to the fact that the processes involved in the creation and maintenance of e-portfolios are heavily influenced by learning styles and preferences of those involved.

Participants were asked to provide up to three key words or phrases to summarise their experiences of using Foliospaces. Whilst the descriptions were broadly positive with 74 positive descriptions compared to 44 negative ones, they were very diverse. Some of the most common choices were:

*Posivite*
Useful x23, easy x 11, efficient x 9, reflective x 7, quick x 5, others (accessible flexible, interesting, thought-provoking, time-saving)

Negative

Difficult x 10, complicated x 9, confusing x 7, time-consuming x6, frustrating x 6, boring x 3, others (impersonal, temperamental, annoying)

This is represented in the following word cloud in which the size of the words included represents the frequency of use (larger words included more frequently):

![Figure 2: Word cloud showing key words used by students to describe their overall experience of using Foliospaces](image)

What is particularly noticeable is the reporting of extremes of opinion; for all the positive impressions given by participants, the opposite opinion is reported by others. Approximately equal numbers of students found it to be easy, quick and efficient as those who found it difficult, complicated and time-consuming. In analysing the reasons for this is important to consider the actual uses made by the participants of the e-portfolio tool.

The majority of students (64%) logged on at least fortnightly and they undertook a wide range of activities (see figure 3):
<table>
<thead>
<tr>
<th>#</th>
<th>Answer</th>
<th>Response</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Created a reflective blog</td>
<td>52</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>Added a file</td>
<td>51</td>
<td>98%</td>
</tr>
<tr>
<td>3</td>
<td>Added a folder to organise files</td>
<td>17</td>
<td>33%</td>
</tr>
<tr>
<td>4</td>
<td>Created a ‘view’</td>
<td>38</td>
<td>73%</td>
</tr>
<tr>
<td>5</td>
<td>Created a ‘collection’</td>
<td>2</td>
<td>4%</td>
</tr>
<tr>
<td>6</td>
<td>Created a plan using the ‘My plans’ tool</td>
<td>15</td>
<td>29%</td>
</tr>
<tr>
<td>7</td>
<td>Joined a group</td>
<td>34</td>
<td>65%</td>
</tr>
<tr>
<td>8</td>
<td>Edited your profile page</td>
<td>27</td>
<td>52%</td>
</tr>
<tr>
<td>9</td>
<td>Added a CV (resume tool)</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>10</td>
<td>Used tags to describe a blog posting or file</td>
<td>17</td>
<td>33%</td>
</tr>
<tr>
<td>11</td>
<td>Used tags to find a blog posting or file</td>
<td>7</td>
<td>13%</td>
</tr>
<tr>
<td>12</td>
<td>Added friends</td>
<td>20</td>
<td>38%</td>
</tr>
<tr>
<td>13</td>
<td>Used a discussion board</td>
<td>17</td>
<td>33%</td>
</tr>
<tr>
<td>14</td>
<td>Added audio or video files</td>
<td>3</td>
<td>6%</td>
</tr>
<tr>
<td>15</td>
<td>Added links to other websites</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>16</td>
<td>Used formatting to make your blog postings more memorable/clear/appealing</td>
<td>7</td>
<td>13%</td>
</tr>
<tr>
<td>17</td>
<td>Reviewed or changed your Foliospaces account settings</td>
<td>19</td>
<td>37%</td>
</tr>
<tr>
<td>18</td>
<td>Reviewed or changed your email notification settings</td>
<td>9</td>
<td>17%</td>
</tr>
</tbody>
</table>
The uses of particular tools were much more prominent than others and the majority of students felt they had not explored the functionality of the e-portfolio in full (see figure 4):

**Figure 4: Chart showing responses to question:**
How far do you feel you have explored / experimented with what's on offer in Foliospaces? Choose from 1 (I feel I have explored everything it has to offer) to 5 (I have not really explored it at all)

<table>
<thead>
<tr>
<th>#</th>
<th>Answer</th>
<th>Response</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td></td>
<td>19</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>52</td>
</tr>
</tbody>
</table>

This confirms the view that there is a strong need for scaffolding to support the students’ engagement with the tools and functionalities on offer and to help them to personalise and make sense of their use for their own purposes. Again, though, there was a sense from the course teams that this was dependent on the styles and attitudes of particular students:

I think it’s different for different students. Some have made it their space, personalised it, done independent work in it and used it to provide examples for discussion. Everyone’s different. For some people, e-portfolios are always going to work really well, but for others to have the choice of a hard copy is important. (Diets)

Within an overall picture of reasonably frequent and varied usage, differences between the uses made by Diets and SLT students are apparent:

SLT made more frequent log-ins (See table 1) which is likely to be as a result of the fact that during placement the SLT students were directed to write a reflection at least weekly.

<table>
<thead>
<tr>
<th></th>
<th>SLT</th>
<th>Dietetics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logged on weekly</td>
<td>59%</td>
<td>6%</td>
</tr>
<tr>
<td>Logged on fortnightly</td>
<td>15%</td>
<td>39%</td>
</tr>
<tr>
<td>Logged on monthly</td>
<td>15%</td>
<td>22%</td>
</tr>
<tr>
<td>Logged on rarely</td>
<td>12%</td>
<td>33%</td>
</tr>
</tbody>
</table>

**Table 1: Comparison of frequency of log-ins between SLT and Diets students**
However, a broader range of activity was undertaken by the Diets students. More use was made of the ‘social networking’ tools available amongst the dietetics students, the ‘my plans’ and discussion board tools were used, and there was an increased tendency to review personal account settings (see table 2).

<table>
<thead>
<tr>
<th></th>
<th>SLT</th>
<th>Dietetics</th>
</tr>
</thead>
<tbody>
<tr>
<td>View</td>
<td>88%</td>
<td>44%</td>
</tr>
<tr>
<td>Collection</td>
<td>0%</td>
<td>11%</td>
</tr>
<tr>
<td>Plan</td>
<td>0%</td>
<td>83%</td>
</tr>
<tr>
<td>Tagging</td>
<td>38%</td>
<td>11%</td>
</tr>
<tr>
<td>Profile page edits</td>
<td>26%</td>
<td>100%</td>
</tr>
<tr>
<td>Added a profile photo or icon</td>
<td>0%</td>
<td>39%</td>
</tr>
<tr>
<td>Discussion boards</td>
<td>0%</td>
<td>94%</td>
</tr>
</tbody>
</table>

**Table 2: Comparison of use of selected Foliospaces tools between SLT and Diets students**

The students were asked why they did not add a profile photograph or icon and the majority of SLTs gave the reason that either they were not directed to do so or that they were not aware that this was possible. By comparison, of the 61% of Diets students who did not add a photograph or icon, the majority cited that they had made an active decision not to do so for privacy reasons or because of personal preference. Diets students were also more likely to self-report that they had explored and experimented with what was on offer within Foliospaces than SLT students (33% SLTs compared to 67% Diets).

It is clear that the frequency of use and the types of activities undertaken by the students were heavily influenced by course requirements and tutor influence. Where tutors promoted particular use or provided directed tasks, students were more likely to take part. A small minority took part in activities or used tools independently. This confirms the view that course design and constructive alignment between the delivery and assessment is important.

This was clearly recognised by staff in Diets who took a more directive approach initially and then placed the onus on students for continued development of their e-portfolios.

‘I suppose we wanted to make it looser in terms of saying ‘right, you’ve got the tools, you’ve got your portfolio, over to you. And I’ve seen some phenomenal stuff and then I’ve seen others who have just dropped off because they haven’t had the – I’ll say stick in inverted commas.’

This conception of the need to provide structure in order to encourage engagement was shared by the course team within SLT who clearly felt that many students had taken a strategic approach to their portfolio development based on the specified minimum levels of engagement:
They do have a lot of assessment and busy lives so I think to a certain extent they were doing the minimum to get through to but it was still doing what we needed it to do. SO it was alright

What we need to get through to them in future years and for the first year next year is the importance it could play as a record for them and make them take ownership of the content more.

In both cases, the course teams had developed plans to increase the scaffolding for the use of e-portfolios and to provide structured tasks with the goal of increasing motivation:

<table>
<thead>
<tr>
<th>We are planning to embed a practice learning element in the module – it’s going to be a strong motivator because that’s what these students want to do. But then we’re going to be using the tools in pdp and reflective practice to help them do the skills. This will be a stronger motivator for the students to do it, collate and demonstrate to us how they have developed those practice skills. This will also help. Honing down the tasks – making them more authentic and motivating</th>
</tr>
</thead>
</table>

There was also agreement that some form of assessment was required for engagement:

<table>
<thead>
<tr>
<th>I think we have to put marks on it – It’s something we have to think about but I think it has to have a weighting and a percentage to make it – to drive the learning really. Not for everybody, but for some people (diets)</th>
</tr>
</thead>
</table>

But also a realisation that, in many cases, this led to surface approaches and minimal engagement

<table>
<thead>
<tr>
<th>...as regards the chronology of whether they really were reflecting after each placement we couldn’t be definite about that but I think everybody eventually did reflect on each placement but I wouldn’t surprised if some of them wrote four at the end to meet the requirements that we laid down. (SLT)</th>
</tr>
</thead>
</table>

Interestingly, the majority felt that it would be inappropriate for their use of Foliospaces to be assessed (see figure 6)
Of those who were against assessment of the e-portfolio, the majority expressed the view that it is a personal, informal space for their ‘own use’ and that it would be inappropriate for this to be assessed. Other reasons given were avoidance of duplication of assessment, and avoiding increasing the assessment load. Some interpreted the question as an assessment of their use of the technology, stressing that they would not be happy to be assessed on these skills.

Those who expressed the view that their e-portfolio should be assessed reported that they felt that this would ensure that their efforts are recognised and that it would increase their motivation to continue to develop their e-portfolios during the course. This response raises the question of whether the students’ beliefs that their e-portfolio should not be assessed is more likely to be held by students with a lower level of engagement with the process, and this will provide an interesting question for further study.

Ownership issues

The majority reported a sense of ownership of their portfolio but a similar proportion also said that they felt the course team had asserted control over their use of Foliospaces. The students were asked to report on what they felt the requirements from their course teams for their use of Foliospaces were, and there were differences between the two cohorts.

There was more variety in how the Dietetics students expressed the requirements and they reported broader aims related to evidencing learning and progress, and to reflecting on experiences. Typical responses are:

*Use the tool regularly to provide critical evidence supporting professional development and fitness to practice.*

*use it as a reflection tool. use it as a discussion board to improve reflection style and to upload evidence needed for placement*

The SLT students answered the question in a more standard way, with most summarising the requirements as ‘to keep a blog’ on a weekly basis and also to submit placement documentation. A typical response is:
I was required to keep a blog of my placement experiences, and also to submit some reflections and assessment via this method

Analysis of the frequency with which students used the following terms in their description of requirements emphasises this difference:

<table>
<thead>
<tr>
<th>Terms used to describe e-portfolio requirements:</th>
<th>Frequency of use of terms as percentage of all responses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Diets</td>
</tr>
<tr>
<td>Reflect</td>
<td>78%</td>
</tr>
<tr>
<td>Discussion</td>
<td>28%</td>
</tr>
<tr>
<td>Evidence</td>
<td>39%</td>
</tr>
<tr>
<td>Blog</td>
<td>22%</td>
</tr>
<tr>
<td>Hand in/ submit</td>
<td>0</td>
</tr>
<tr>
<td>Placement</td>
<td>11</td>
</tr>
</tbody>
</table>

Table 3: Comparison of frequency of usage of selected terms in descriptions of requirements for Foliospaces use

Engagement with the e-portfolio was thus more consistent amongst SLT students, but generally deeper and more varied amongst diets students. This again suggests the key role that tutor expectation, task and scaffolding can play in the development of e-portfolios and this is further evidenced by the fact that the majority of students on both courses reported that their use of Foliospaces had been no more and no less that the requirements placed on them by their tutors (see figure 5).

Figure 5: Chart showing responses to question:
Would you say that your use of Foliospaces has been:

<table>
<thead>
<tr>
<th>#</th>
<th>Answer</th>
<th>Response</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Substantially more than these requirements</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>2</td>
<td>Slightly more than these requirements</td>
<td>10</td>
<td>19%</td>
</tr>
<tr>
<td>3</td>
<td>No more and no less than these requirements</td>
<td>39</td>
<td>75%</td>
</tr>
<tr>
<td>4</td>
<td>Slightly less than these requirements</td>
<td>2</td>
<td>4%</td>
</tr>
<tr>
<td>5</td>
<td>Substantially less than these requirements</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>52</td>
<td>100%</td>
</tr>
</tbody>
</table>

Given the strategy employed within SLT of taking a gradual approach to e-portfolio development aiming to build in aspects of individualisation and personalisation as
the course progresses, it will be interesting to see whether and how this changes in future years.

Attitudes to the fact that Foliospaces is a third-party e-portfolio not operated and controlled by Leeds Met were mixed (see figure 7).

**Figure 7: Chart showing responses to question:**
**Do you like the fact that Foliospaces is a web based system open to anyone and not a Leeds Met software system?**

<table>
<thead>
<tr>
<th>#</th>
<th>Answer</th>
<th>Response</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Yes</td>
<td>24</td>
<td>46%</td>
</tr>
<tr>
<td>2</td>
<td>No</td>
<td>28</td>
<td>54%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>52</td>
<td>100%</td>
</tr>
</tbody>
</table>

Those in favour gave the following reasons:

- Scope for continued use after completion of the course.
- Scope for interacting with other outside the course (e.g. getting to know students from other Universities, using other people’s blogs for inspiration)

Comments included:

*Allows use beyond the course - perhaps for future employers.*

*Able to access it from anywhere - will be useful after i’ve qualified if i want to look back on anything*

*So that you can look at other people’s public blogs to help with information and writing style if need be*

*It allows me to share my development with future employees and view and access other peoples portfolios.*

Those against were mainly concerned about privacy issues and a sense that access beyond Leeds Met is inappropriate

Comments included:

*I would feel more safe knowing that only Leeds Met can access it. However, it is good that they have privacy settings to solve some of these issues.*

*I keep getting irrelevant messages which I just delete (from other people/institutions)*
I fear that this way it becomes like a social networking site which it should not be, I also worry that people might be able to see my personal documents and details. Also because it’s not the University I worry about the validity of the site.

These responses seem to have been coloured by the actual uses made of e-portfolios and, for example, the fact the majority of students only shared the contents of their e-portfolios with tutors largely under direction seems to have led to a sense that the potential to share beyond e-portfolios beyond Leeds Met is not required. As before, it will be interesting to revisit this issue once use and scope of the e-portfolio increases.

Both staff and students were generally positive about the usability of the e-portfolio, though there was a common feeling expressed by the staff that they were learning how to use the software as they went along ‘one step ahead’ of the students. For some, this was clearly an uncomfortable experience:

In fairness we’ve been one step ahead of the students and we’ve had to pick it up and run with it as well. We’d recognise that if we had more training so that we were highly skilled and highly confident with it, then I’m sure that rubs off on the students too.

It’s like so many things – you just have to pick it up and go with it. You don’t always have the luxury of several hours looking at it. But most of it you could do quite easily.

The use of the e-portfolio was not without technical problems, and 69% of students reported that they had had issues mostly related to the Foliospaces site rather than to user error.

A small number of students also pointed to problems related to file size limits on the free accounts offered by Foliospaces, commenting as follows:

Storage capacity (needs to be increased) otherwise its counterproductive and you just end up replacing files throughout the year.

Relationship between the e-portfolio and the VLE/other social network tools?

A number of students felt that materials that were of direct relevance to PDP should be presented in Foliospaces rather than in the VLE, but the general feeling was that materials or activities currently presented in the VLE should not be ‘moved’ into Foliospaces. There was a clear view that materials should not be duplicated in two places and that Foliospaces should be a venue for personal development separate from the VLE as a venue for course information and activities. A number of students also expressed the view that both should be available from a single website and that it was frustrating to have to log in to two separate systems. For institutional e-portfolio implementations, this suggests that clarity is perceived to be important and the students value a ‘joined up’ approach to the use and presentation of systems to support their learning.
In terms of the relationship between Foliospaces and other social networking tools such as Facebook, the students presented a clear view that they valued a separation between their learning and social lives. They also presented a note of caution to staff who may feel that the benefits of Facebook can be easily appropriated within an educational context:

it was compared to facebook a lot!! and it really isn't anything like facebook, this made the people introducing it look like they were trying to be cool, it would be better if it was introduced as it is

**Support issues**

The introduction of Foliospaces was supported by a session carried out jointly by the course team and the learning technologist to introduce the system and the broader issues around keeping an e-portfolio. The majority of students felt that the time spent introducing this was about right (Figure 8) and that the introduction was reasonably motivating (Figure 9):

**Figure 8: Chart showing responses to question:**

*Do you think the time spent on introducing and working with Foliospaces was:*

<table>
<thead>
<tr>
<th>#</th>
<th>Answer</th>
<th>Response</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Far too much</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>2</td>
<td>Too much</td>
<td>7</td>
<td>13%</td>
</tr>
<tr>
<td>3</td>
<td>About right</td>
<td>30</td>
<td>58%</td>
</tr>
<tr>
<td>4</td>
<td>Not enough</td>
<td>13</td>
<td>25%</td>
</tr>
<tr>
<td>5</td>
<td>Not enough by far</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>52</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>
The majority of students felt that the introductory sessions and the instructions sheets provided were adequately comprehensive to give them a grounding from which they could work with the tool independently (see figure 10).

However, a sizeable minority felt that the introduction could have been improved and / or that further support would have been useful. The suggestions made by these students were:

- There should be an early introduction to the e-portfolio provided at the outset of the course.
- Optional further support sessions should be provided for students who need it
- There should be more structured exercises as the course progresses focusing on different aspects of Foliospaces (e.g. creating a view, planning)
- There should be more ‘hands-on’ sessions for smaller groups to take people through the process of building their first blogs and views so that it is clear that everyone has a grounding in the basic setup of their e-portfolio.
- A greater emphasis on how it can be used, what it has to offer, what people are currently using it for and how it can be useful into the future.
- More guidance on what should be included in the e-portfolio and what different tools and uses are available.
This suggests that any attempts to divide the technical from the pedagogic in presenting and supporting e-portfolios is likely to be problematic. This also led to differences in viewpoints amongst staff, some of whom believed that it was sensible to deal with training in how to use the ‘tools’ separately from issues such as reflection and the evidencing of competencies, whilst others favoured closer integration between the two aspects through structured tasks not simply focused on how to use foliospaces as a goal in itself, but focused on broader goals such as planning processed dependent on the use of functionalities within the e-portfolio.

From the staff perspective, it was clear that they had considered the first year of implementation of the e-portfolio to be very much a pilot process and one that had given them a far greater insight themselves into what was involved in embedding their use for professional development and reflective practice:

I don’t think we’d be having a discussion like this if we hadn’t gone for it. Whichever e-portfolio we get next year, I think we’ll be in a much better position now than we could have been otherwise – and the students have got going in a way that will make things easier next year when it comes to looking at the standards of proficiency (SLT)

And

I’m hoping with the evaluation that we’ll understand a lot more about how students want to use it – that’s the missing bit and it’s getting all the feedback in terms of how they found the whole experience. And that will shape what happens next.

Part of what I feel is that - I see the value of an e-portfolio and I don’t think it probably matters which one it is – we’ll just adapt and the students will move on to work with that. I think the key things will be around its functionality, whether students like it, whether there’s support to use it and how we embed it – and I think those things will override what it is. (Diets)

The uses and attitudes made of the e-portfolio by students suggest that they perceived it as a valuable tool to support their learning process. However, there is a clear sense that more could be done to promote personalisation and ownership of the processes involved, and the opportunity for staff to explore the issues involved in implementation first-hand seems to have allowed them to consider these issues in practice. Their future focus concerning ongoing developments suggests that this will be a process that they will are prepared to undertake.

Conclusions and recommendations

Joyes et al.’s (2009) survey of the landscape of use of e-portfolios in UK HE provides a valuable context for a final analysis of these results. This attempts to make sense of the wide range of practice and experiences of e-portfolios and the process that teams implementing their use at various levels and scales of use within across institutions. They identify five ‘threshold concepts’ (p. 493) which they believe to be essential for successful approaches to implementation, each of which has significance in the outcomes of this study. These, ‘threshold concepts’ are seen as key understandings that ‘change forever’ the
perspective of those who pass through them on their ‘developmental journey’. Based on the outcomes of this research, I would argue with the idea that there is any straightforward and recognisable ‘point’ at which this threshold can be achieved and that the journey is somewhat messier and less predictable. However, each can go some way to explaining the outcomes, both the successes and the limitations of implementation.

Firstly, they consider that the purpose of e-portfolio use must be thoroughly examined in context to ensure that they are aligned. In the case of this study, the purposes as expressed by the course team (including myself) and the students were clear, namely to support reflective learning and the development of practice competencies. However, there were clear practical lessons for implementation. In the case of the SLT course, for example, the use of reflective blogging as a vehicle for a process of reflective skills development supported by feedback was clearly aligned to the goals and valued by all. However, the use of the e-portfolio as a tool for handing in an assessment served to hinder the reflection process as so much time was taken with the procedural and technical aspects of the submission process at the expense of more aligned purposes of allowing for reflection on feedback. While this will bring about positive changes in future implementation, it highlights the importance of ensuring the support the intended purpose.

This is closely connected to the second and third of Joyes et al’s (2009) threshold concepts, namely that there must be a recognition of the need for a conscious learning design with activities to support the development and use of e-portfolios and that the processes underpinning the development of e-portfolios are thoroughly considered. The actual uses made by the students tended to be limited to the uses suggested within the courses and usage appears not to have reached a ‘tipping point’ at which the majority of the students went on to independently explore the use of e-portfolios or used them in a broader context. If this is a desired outcome as seems to be unanimously agreed by the course teams, greater attention will need to be placed on constructively aligned learning designs to promote this. This conclusion is clearly supported by the background research underpinning this study. This is likely to require a focus on the use of e-portfolios that goes beyond more technical and procedural matters more firmly into course design territory with a clearer focus on the underpinning pedagogic processes involved in the development of the difficult to achieve skills of reflection and autonomous learning.

This issue is also closely related to the fourth threshold concept which concerns the requirement that students should ‘own’ the processes and outcomes of e-portfolio use. This perhaps represents the most problematic challenge facing the course teams who were unanimous in stating this as the central aim of e-portfolio use. This was also a major factor in the selection of ‘Foliospaces’ as a non-institutional system truly ‘owned’ by the students and available for their ongoing use. This fact alone was clearly not enough to promote a sense of ownership across the board. The balance between providing structure and guidance, and encouraging independence and ownership has been a central theme within this study and further attention needs to be paid to this if attempts to provide appropriate scaffolding whilst encouraging deeper learning are to be achieved.

The final threshold concept concerns the disruptive nature of e-portfolios and their potential to ‘shake up’ existing methods and processes. There was a strong sense across the board that once the process of implementation had been embarked upon there was ‘no going back’. The appetite is there to refine and further evaluate the approaches taken to the development and use of e-portfolios as the current students proceed with future years of
their studies and as new students embark on a similar process. This will, it is hoped further inform practice across the Faculty.

The results of the evaluation have highlighted some of the key issues that can occur ‘on the ground’ when e-portfolios are implemented. It seems clear that the supposed existence of certain ‘affordances’ around reflective and autonomous learning will not bear fruit without a consideration of factors far beyond ‘technical mastery’ of the toolset. For e-portfolios to deliver on their transformative potential, it is also essential to consider task design, constructive alignment and support for the ‘depth’ of learning and self-awareness required. A number of areas for further exploration and development have been identified and, as these changes are implemented, valuation needs to be continued both with existing students and future cohorts to begin to more fully understand the dynamic and complex processes at work in the development and use of e-portfolios.
Appendix A

Information sheet for participation in the foliospaces e-portfolio study

Project overview

In 2010-11, e-portfolios (Foliospaces) are being introduced in two courses within the Faculty of Health and Social Sciences at Leeds met: BSc (Hons) Clinical Language Sciences (Speech & Language Therapy) and PG Diploma in Dietetics, to support the development of a Personal Development Portfolio and reflective learning.

This project aims to evaluate the impact of the introduction of an e-portfolio tool on students and staff through analysis of your experiences, practice and attitudes. We hope that this will improve the way that portfolios are used on your courses as well as providing specific evaluation of the Foliospaces service to help use decide whether we should recommend its continued use in the future.

We also hope to make the evaluation available across the University and beyond through a project report, presentations and publication in order to increase understanding of success factors in the introduction and use of eportfolios.

What will I have to do if I take part?

We would like you to complete an online questionnaire which will take approximately 10-15 minutes. This questionnaire will also ask you whether you wish to take part in a focus group interview with a group of other students on your course aiming to further explore your attitudes to the introduction and use of eportfolios on the course. If you agree to this, further information and a consent form will be provided to you prior to the interviews.

Do I have to take part?

Absolutely not. We would appreciate your participation in order to help us to properly evaluate the use of e-portfolios, but this is your choice. You may take part in the questionnaire only, the questionnaire and focus group interviews, or neither component of the project.

What is the process?

We will send you an email with a link to the questionnaire. If you wish to take part, you should click on this link to access and complete the questionnaire. If you do not complete the questionnaire, we will send a maximum of two email reminders, after which we will not contact you again.

Should I be entirely honest about my experiences of e-portfolios on the course?

Yes please. For the evaluation to be a success we would appreciate your honest reactions to the introduction, use and value of e-portfolios on your courses and we would value your views on any negatives as well as any positives you have experienced. This will help us to
improve things both for you in subsequent years of your courses, and for students starting the course later.

**Will the course team see any criticisms I may have about the use of e-portfolios or how they were introduced?**

No. The data will be anonymised before it is analysed by course teams. Until this point, it will be available only to members of the project team who are not responsible for teaching and assessment on your courses. This also applies to information about who has and who has not completed the questionnaires.

Similarly, if you are selected to take part in a focus group interview, you will be interviewed by members of the project team who are not directly involved in teaching and assessment on your courses. The interviews will be recorded and anonymised transcripts will be produced for analysis. Prior to anonymisation, the data will only be available to members of the project team not involved in teaching and assessment on your course and, following analysis, the recordings will be destroyed.

Participation in focus group interviews will only be available to those who agree to keep confidential, any views expressed by others in the focus group.

**What will happen to the data I provide?**

The information you provide on the questionnaire, or in the focus groups, will be used to evaluate the use of e-portfolios on your courses and the findings will be shared across the University and with a wider audience through a project report, presentations and publication.

All data will be stored securely in accordance with data protection legislation. It will be anonymised in any project outputs.

**Can I see the results of the evaluation?**

Yes. All participants will be provided with access to the project report and you can contact Rob Shaw for further information following completion of the project.

**What if I change my mind after I have completed the questionnaire or taken part in a focus group interview?**

You may withdraw your information from the study at any time up to one month following the interviews when the data will have been analysed and the project findings released.

If you wish to withdraw your information, you do not have to provide a reason but need to contact a member of the project team on the e-mails provided below, expressing your wish to withdraw from the study. You will be sent an e-mail in return acknowledging your request and all the information you have supplied will be destroyed and not included in the study report.

**Who is organising and funding the research?**
The research is being carried out by staff within the Faculty of Health and Social Sciences at Leeds Metropolitan University with funding from a regional e-portfolio network consisting of 5 Universities within Yorkshire (The ALPS e-portfolio network). The research is also being carried out and submitted for assessment for a Masters course being undertaken by Rob Shaw at the School of Education at the University of Leeds.

Who has reviewed the study?

This research has been reviewed favourably under Leeds Metropolitan University’s research ethics procedures.

Who can I contact for further Information?

If you have any questions either before signing the consent form or during the study, then please contact a member of the project team:

or the Research and Governance Officer, Faculty of Health and Social Sciences

NB. Contact details not included in critical study appendix.
Appendix B

Evaluation questionnaire

pre1) Thank you for taking part in this evaluation of the Foliospaces e-portfolio that has been used on your course this year. We appreciate your participation which will help us to improve the way e-portfolios are introduced and used both for you next year and for new students on your course.

This evaluation questionnaire consists of 37 questions with occasional follow-on questions. It should take around 10-15 minutes to complete. Use the next (>>) and back (<<) buttons below to move through the questions.

pre2) You should have received the project information sheet which can also be downloaded from the link below. This provides information about the project which you should read before taking part.

Click to download project information sheet

pre3) Before you complete this online questionnaire, please read the following statement and electronically 'sign' that you agree by adding your name and the date. Please note that any data you provide will be anonymised before it is made available to members of the project team who are responsible for teaching and assessment on your course.

I have been provided with written information regarding this e-portfolio study. I have had the opportunity to read this information and any questions I have had have been answered. I understand what is involved and, by completing the project questionnaire, I give my consent to take part in this study.

Signed

Date

pre4) Would you be prepared to take part in a focus group interview with a group of other students on your course aiming to further explore your attitudes to the introduction and use of e-portfolios on the course? This should take a maximum of an hour.

Yes | No

Q1) In a sentence or two, how would you describe what Foliospaces is to someone who had never heard of it before?

Q2) How useful have you found Foliospaces?
Choose from 1 (very useful) to 5 (not useful at all)

Q3) How easy have you found it to use Foliospaces?
Choose from 1 (very easy) to 5 (not easy at all)

Q4) How enjoyable have you found using Foliospaces?
Choose from 1 (very enjoyable) to 5 (not enjoyable at all)
Q5) Would you recommend that Foliospaces should be used with future students on the course?
   Yes | No

Q5a) Why?
Q5b) Why not?

Q6) Please add three words or short phrases that best describe your experience of using Foliospaces this year

Q7) How often have you been logging on to Foliospaces?
(choose the closest from the following options)

Daily | Weekly | Fortnightly | Monthly | Rarely | Never

Q8) Which of the following have you done in Foliospaces?

- Created a reflective blog
- Added a file
- Added a folder to organise files
- Created a ‘view’
- Created a ‘collection’
- Created a plan using the ‘My plans’ tool
- Edited your group
- Added a CV (resume tool)
- Used tags to describe a blog posting or file
- Used tags to find a blog posting or file
- Added friends
- Used a discussion board
- Added audio or video files
- Added links to other websites
- Used formatting to make your blog postings more memorable/clear/appealing
- Reviewed or changed your Foliospaces account settings
- Reviewed or changed your email notification settings

Q9) Did you add a profile photograph or icon to your Foliospaces profile?
   Yes | No

Q9a) What and why?
Q9b) Why not?

Q10) Have you shown or shared any material you have in Foliospaces with anyone else?
   Yes | No

Q10a) with whom and why?
Q10b) Why not?
Q11) How far do you feel you have explored / experimented with what's on offer in Foliospaces?
Choose from 1 (I feel I have explored everything it has to offer) to 5 (I have not really explored it at all)

Q12) How far would you like to develop your use of Foliospaces?
Choose from 1 (very much so) to 5 (not at all)

Q13) Do you like the fact that Foliospaces is a web based system open to anyone and not a Leeds Met software system?
Yes | No

Q13a) Why?
Q13b) Why not?

Q14 Have you experienced any technical problems with your use of Foliospaces?
Yes | No

Q15) Please describe the technical problems you experienced in as much detail as you can

Q16) Please describe what you felt you were required to do with Foliospaces by your course tutors this year?

Q17) Would you say that your use of Foliospaces has been:
Substantially more than these requirements
Slightly more than these requirements
No more and no less than these requirements
Slightly less than these requirements
Substantially less than these requirements

Q18) How much control do you feel that the course team has had on how you use Foliospaces?
Choose from 1 (a great deal of control) to 5 (no control at all)

Q19) How far do you feel a sense of ownership of your own Foliospaces portfolio?
Choose from 1 (I feel I a very strong sense of ownership) to 5 (I don’t really feel like it is owned by me at all)

Q20) How far do you feel it will become more important/useful as your course progresses?
Choose from 1 (I feel it will definitely become more important/useful) to 5 (I don’t think it will become more important/useful at all)

Q21) Do you think that aspects of your use of Foliospaces should be assessed and contribute in some way to your final degree classification?
Yes | No

Q21a) Why?
Q21b) Why not?
Q22) How likely do you think you are to keep using Foliospaces after your course to support Continuing Professional Development in the workplace?
Choose from 1 (Very likely) to 5 (Not likely at all)

Q23) How far do you feel you have received useful feedback through Foliospaces?
Choose from 1 (very much so) to 5 (not at all)

Q24) How far has Foliospaces helped you to reflect more effectively?
Choose from 1 (very much so) to 5 (not at all)

Q25) How far do you feel that Foliospaces has helped you to become a more independent learner?
Choose from 1 (very much so) to 5 (not at all)

Q26) Do you think some of the materials or activities currently available in X-stream should be presented in Foliospaces?
Yes | No

Q26a) What and why?
Q26b) Why not?

Q27) How far did the session(s) you had about e-portfolios/Foliospaces motivate you to use it?
Choose from 1 (very much so) to 5 (not at all)

Q28) Do you think the time spent on introducing and working with Foliospaces was:
Far too much
Too much
About right
Not enough
Not enough by far

Q29) Do you think anything else should be covered in the introduction to e-portfolios and Foliospaces? Or that there should be other forms of ongoing support for use of Foliospaces
Yes | No

Q29a) Please specify what should be covered in the introduction to Foliospaces/what ongoing support there should be.
Q29b) Why not?

Q30) What would improve the introduction of Foliospaces for next year?

Q31) Please add any other comments about Foliospaces you may have here...

Q32) How important do you see reflection as being for the development of your skills through the course and placements?
Choose from 1 (very important) to 5 (not important at all)
Q33) How important do you think it is to keep a portfolio?
Choose from 1 (very important) to 5 (not important at all)

Q34) How would you rate your levels of motivation on the course?
Choose from 1 (Very motivated) to 5 (Very unmotivated)

Q35) Which of the following statements most closely matches how you feel about your academic progress compared to your initial expectations?
Choose from 1 (I am doing much better than I expected) to 5 (I am doing much worse than I expected)

Q36) How far do you feel a part of the following communities?
Choose from 1 (I feel like a fully-integrated and active member of the community) to 5 (I do not really feel like I belong to the community)

My course at Leeds Met
Leeds Met
Leeds
My (future) profession

Q37) If you have any other comments, please add them here:
List of references


