

## Appendix two: publication two

PEACOCK, S., GORDON, L., MURRAY, S., MORSS, K. and DUNLOP, G., 2010. Tutor response to implementing an ePortfolio to support learning and personal development in further and higher education institutions in Scotland. *British Journal of Educational Technology*. vol. 41, no. 5, pp. 827-851.

### Aim of this paper

The paper addressed two research gaps. First, it explored ePortfolio implementation across institutions and sectors as a facilitative tool supporting learning and personal development. Second, it sought out the tutor voice, across disciplines and sectors, to inform understandings about the advantages and challenges of ePortfolio to support the process and product of learning.

Accessed online and/or downloaded	Citations	Impact factor of journal
2,167 times (accessed online) in June 2013 (information provided by Scopus)	6 citations in January 2015 (checked in SCOPUS and WoS)  20 citations in April 2015 (checked in GoogleScholar)	This has an impact factor of 1.394 and ranks 37 out of 219 journals in the education and research category in Journal Citation Reports (data provided by BJET).

### Approval from publisher for inclusion in PhD

Provided by Nick Rushby, Editor  
British Journal of Educational Technology  
17/07/2013

## Background

### Title of the research

The identification of staff training needs within the tertiary sector in using an ePortfolio.

### Aim

The aim of QMU's work package 5.1 in the ISLE project was to identify the staff development needs of tutors within further and higher education who will support learners in using an electronic portfolio system.

### Research Team

I was the lead researcher working closely with Ms Gordon, Dr Murray and Mrs Dunlop

### Date work undertaken

The study was conducted between March 2005 and December 2007 with a further four years for dissemination

### Affiliation

Funded by Scottish Funding Council (SFC)

## Overview

This paper is an output of the SFC-funded Individualised Support for Learning through ePortfolios (ISLE) project. QMU was assigned to a work package (5.1) to explore staff development requirements differing from my preferred holistic approach to research focusing upon tutor and student experiences in technology-mediated learning environments. This was the result of a practical decision made by the ISLE Project Team; each of the many partners was required to research into a specific allocated area (work package) (P3:829). QMU thus explored tutor experiences of ePortfolios in further and higher education addressing if, and in what ways, staff development might help alleviate issues when colleagues start to embed an ePortfolio into the curriculum.

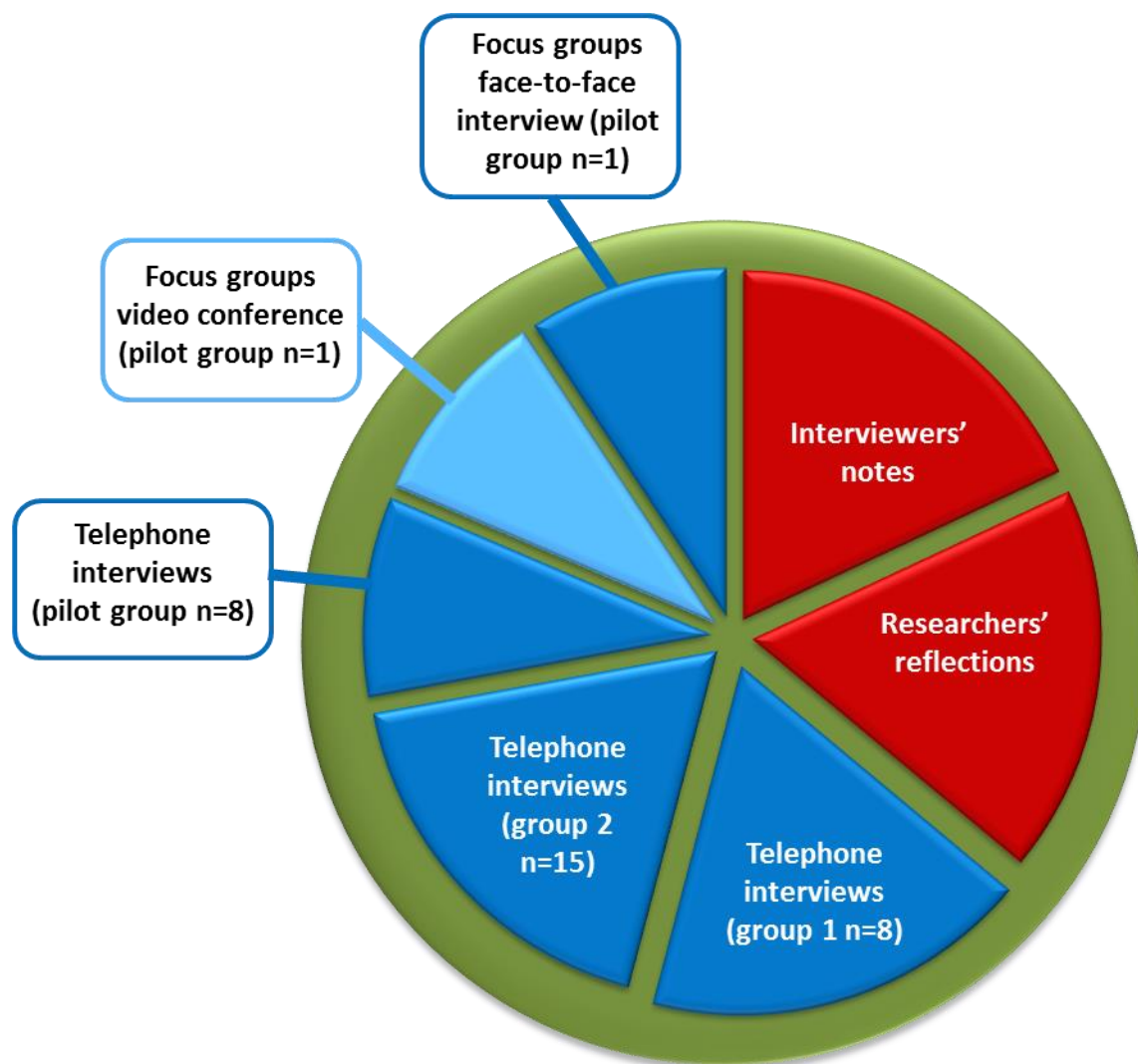
I designed the inquiry process including ethical approval in collaboration with Mrs Dunlop. 23 semi-structured, telephone interviews were conducted with tutors at different stages of ePortfolio implementation using various systems. Contacted through the ISLE project, individual tutor accounts of ePortfolio implementation in the learning environment were collected from those working in different institutions, sectors (FE and HE) and disciplines across Scotland by Mrs Gordon and I. Eight pilot interviews and two focus groups (one f2f and one video-conference) with staff developers across the world in the field of ePortfolio were conducted by Mrs Dunlop and I, informing the two sets of tutor interviews. After member checking the transcripts with tutors, Mrs Gordon and I undertook the data analysis in NUDIST developing themes and sub-themes (following a similar approach to P1). Figure 2 of the publication, for example, shows the iterative process that we took in the data analysis. Dr Murray independently reviewed the themes and sub-themes prior to the distillation of the findings for sharing in publications and reports.

### Shared output of the inquiry process (dissemination)

The final report for working group 5.1 is available at:

<http://www.qmu.ac.uk/eportfolio/documents/finalreportqmu2007.pdf>

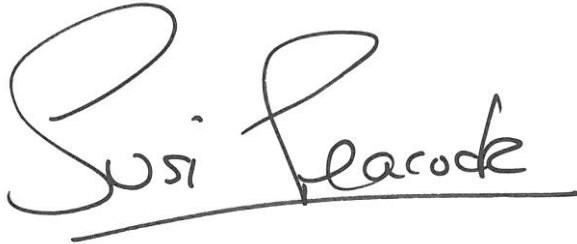


### Pictorial representation of research methods used in P2



**Authors' contributions to the paper**

<b>75% by Susi Peacock</b>	I was the lead author establishing the structure of the article, conducting the literature review, drafting the paper and writing the discussions, the limitations and the conclusion. I also provided feedback on the method and data analysis.
<b>10% by Dr Murray</b>	Dr Murray provided feedback on the methodology and methods section, developed the tables and commented upon the findings and discussions section.
<b>5% by Dr Gordon</b>	Dr Gordon assisted in the organisation of the findings and discussions section.
<b>5% by Ms Dunlop</b>	Ms Dunlop provided feedback on the work.
<b>5% by Dr Morss</b>	Dr Morss provided feedback on the draft of the paper.

**Signatures**

<b>Susi Peacock</b>		03/04/2015
<b>Dr Gordon</b>		20/04/2015
<b>Dr Murray</b>		05/05/2015

<b>Mrs Dunlop</b>	<i>Mrs Dunlop</i>	21/04/2015
<b>Dr Morss</b>	<i>Kate Morss</i>	02/04/2015



## *Tutor response to implementing an ePortfolio to support learning and personal development in further and higher education institutions in Scotland*

**Susi Peacock, Lisi Gordon, Sue Murray, Kate Morss and Gloria Dunlop**

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### **Abstract**

1 Emergent research indicates that electronic portfolios (ePortfolios) can have  
2 a positive impact on the learning experience, but there are significant  
3 challenges—pedagogical and technological—which may limit their effective-  
4 ness. This paper contributes to research by providing further evidence about  
5 such challenges from the tutor perspective and offers suggestions about  
6 how institutions may address these issues. The paper draws upon 23 semi-  
7 structured interviews conducted with tutors in a range of subject areas, from  
8 Scottish further and higher education. Tutors were positive about the role that  
9 ePortfolios could play in the learning environment to encourage personal  
10 development and a more reflective approach to studies, assist student transi-  
11 tion and, in some cases, support assessment. Concerns were raised, however,  
12 relating to moving paper-based assessed portfolios online, the legal issues of  
13 implementing an ePortfolio and the technical robustness and flexibility of  
14 systems. Barriers were identified regarding tutors' lack of understanding about  
15 personal development and reflection, and their role in the academic environ-  
16 ment, initiative fatigue and lack of access to information technology. It was felt  
17 that these could be overcome, especially with long-term institutional commit-  
18 ment, significant staff development and the creation of tutor support networks.  
19 These findings should assist academics, staff developers and managers to  
20 implement an effective institutional ePortfolio solution.

## *Using ePortfolios in Higher Education to Encourage Learner Reflection*

### **Introduction**

1 Electronic portfolios (ePortfolios) are becoming increasingly popular in tertiary education in the UK, northern Europe, America and Australasia to support learning and personal development (Barrett, 2007; Stefani, Mason & Pegler, 2007; Strivens, 2007).  
2 An ePortfolio is an electronic system that facilitates the development, collection and  
3 management of digital resources which may be drawn from a range of learner experiences  
4 over a period of time and could include those from formal and non-formal learning  
5 opportunities (Beetham, n.d.; Funk, 2004; Siemens, 2004). These resources or  
6 ‘artefacts’ will be personally significant to the learner and can be linked, augmented or  
7 evidenced from other data sources including personal data held on institutional  
8 systems, such as student records. In essence, the ePortfolio is a personal, private learning  
9 tool that is organised and managed by the learner and used to review and reflect on  
10 learning (Roberts *et al*, 2005). It can support continued personal enrichment through  
11 commentary and feedback with specified individuals and/or groups, because the  
12 learner can release materials selectively as appropriate, for example, for different audiences  
13 including tutors, peers and potential employers (Ward&Grant,2007).The ePortfolio  
14 system makes a range of tools available to the learner such as blogs, webfolios,  
15 online curriculum vitae (CVs) and proformas, which the learner may use for personal  
16 use or as part of an assessed piece of work.  
17

19 An ePortfolio may fulfil multiple roles in the learning environment, for example:

- 20 • Supporting transition from education to employment or further studies
- 21 • Learning and supporting formative/summative assessment
- 22 • Promotion of work to potential employers.

23 An ePortfolio can support learners to reflect on the *process* of personal development and  
24 learning as well as facilitate the organisation and maintenance of artefacts that are the  
25 *product* of personal development and learning (JISCinfoNet, 2008) (see Figure 1).

26 Emergent research indicates that ePortfolios can have a positive impact on the learning  
27 experience, as demonstrated in recent JISC projects, such as East of England Lifelong  
28 Learning Support and Enhancing Learner Progression (JISC, 2007). Critically, ePortfolios  
29 are a vehicle for learners to evidence continued learning activity through the use of  
30 reflection and reflective writing (Barrett, 2004; Roberts *et al*, 2005). It is generally  
31 accepted that if learners engage in reflection, self-evaluation, action planning and goal  
32 setting, then this will result in learner retention and achievement (ePistle, 2007).  
33 However, there are also significant challenges—technical and pedagogical—which may  
34 limit the effectiveness of a long-term, institutional implementation of ePortfolios (JISC-  
35 CinfoNet, 2008). Limited research has been undertaken across institutions and sectors  
36 in relation to implementing ePortfolios to support learning and personal development,  
37 and even less has considered the advantages and challenges from the tutor perspective.

38 This paper seeks to address this gap, by outlining the results from qualitative research  
39 that was part of a collaborative Scottish Funding Council e-Transformation project,  
40 Individualised Support for Learning through ePortfolios (ISLE), which sought to



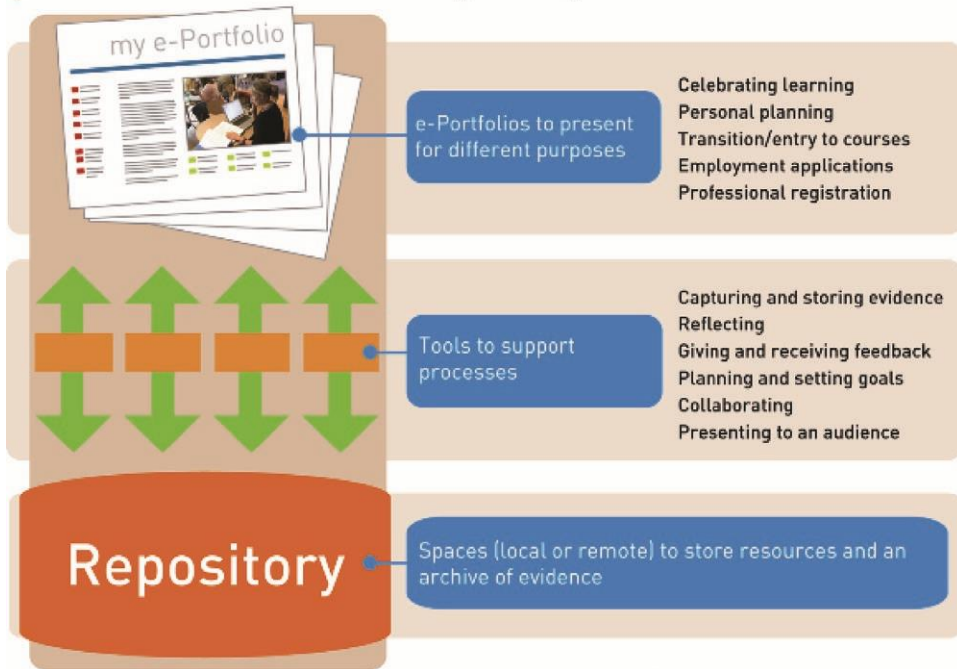


Figure 1: Understanding how ePortfolios work (© 2008, JISCinfoNet. Used with permission)

1 improve the student learning experience supported by ePortfolios. Each of the partners  
 2 in the ISLE project implemented ePortfolios in a range of subject areas and the project  
 3 team from each partner focused on a specific aspect of ePortfolio implementation, for  
 4 example, strategic use, technical implementation and the student voice. Our role was to  
 5 identify critical areas that a staff development programme for tutors preparing to imple-  
 6 ment an ePortfolio would need to address (ISLE, 2007). This paper reports tutor feed-  
 7 back gathered across institutions and sectors about the role and use of an ePortfolio, the  
 8 challenges and potential barriers, and how these could be addressed at an institutional  
 9 level. Such findings can help staff developers, managers and academics when organis-  
 10 ing an ePortfolio implementation.

### Methodology and methods

11 Qualitative research focuses on the production of subjective data concerning peoples'  
 12 feelings and attitudes in order to provide insights into situations that are not sufficiently  
 13 understood (Hancock, 2002). Qualitative research methods were therefore felt to be  
 14 appropriate for this study, which sought to explore tutors' attitudes to ePortfolio imple-  
 15 mentation for the support of personal development. An iterative approach was taken,  
 16 with each stage of the study informing the next. Hence, the results of the first set of  
 17 interviews and literature review helped to inform the next set of questions and so forth

## Using ePortfolios in Higher Education to Encourage Learner Reflection

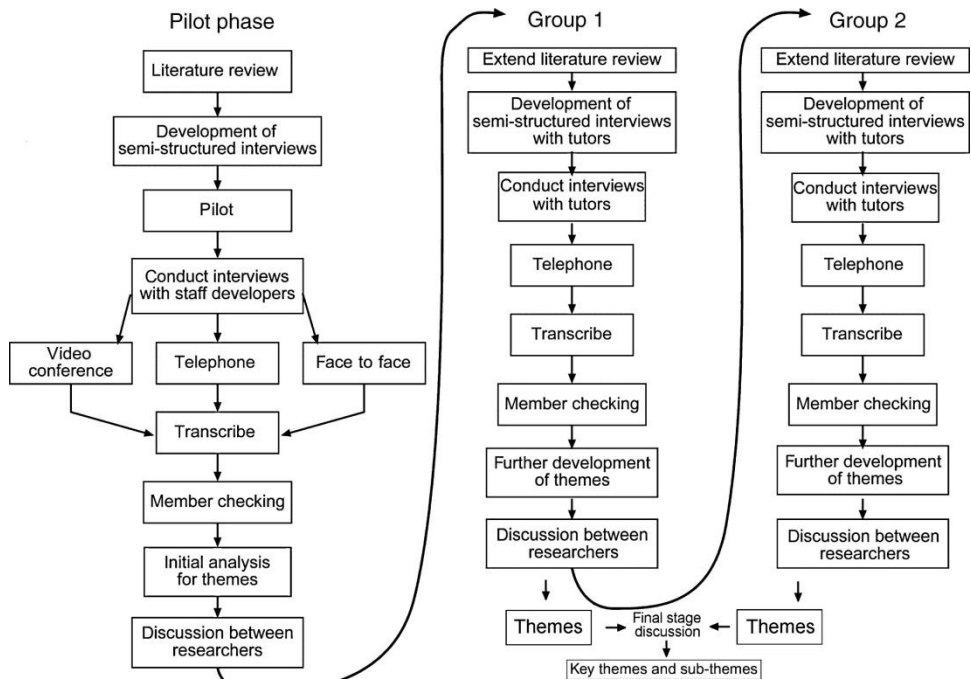


Figure 2: Iterative approach

- 1 (see Figure 2). Ethical approval for the study was granted by the Research Ethics Com-  
 2 mittee of the institution.

### Study design

3 An individual, semi-structured interview approach was used for the purpose of this  
 4 study. Initially, two of the researchers created a set of open-ended questions based on  
 5 themes identified from the literature. While these questions pre-defined the topics under  
 6 consideration, the semi-structured nature of the interviews provided opportunities for  
 7 participants to discuss topics in more detail, if appropriate. This process allowed for  
 8 some consistency between the interviews, which facilitated categorisation of data and  
 9 aided analysis (Hancock, 2002). Interview questions focused on the following topics:  
 10 purpose of implementing an ePortfolio with students in the learning environment,  
 11 knowledge and experience of personal development, student and staff response, and  
 12 barriers and challenges to institutional implementation.

13 Initially, a pilot phase was undertaken and involved staff developers who had experience  
 14 of ePortfolios. This provided an opportunity to trial the first draft of the questions and  
 15 the data analysis procedures. The question set was then further developed for the first  
 16 group of tutor interviews (group 1) and then refined and extended for the second  
 17 different set of tutor interviews (group 2) (see Table 1). Group 1 interviews took place

*Table 1: Questions set for group 2 interviews*

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*Questions*

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Do you use personal development planning (PDP)? If so, how long for? And in what context?  
How long have you been implementing an ePortfolio in the learning environment?  
Which subject discipline, course and level of learning do you use the ePortfolio for?  
Do you use an ePortfolio for your own PDP?  
For what academic purpose do your students engage with an ePortfolio (for example, learning and teaching, personal academic tutoring, diagnostic testing/learning profiles)?  
Does the ePortfolio have any other purpose?  
Have you always used an electronic system or have you previously used a paper-based system for PDP?  
What system of ePortfolio have you been implementing and have you needed support in learning how to use the system?  
Was there a structure in place to support your introduction to the system? If so, was this adequate? If not, how were you introduced to the system?  
Did you require any support/introduction regarding PDP? If not, is there anything you would have liked to have had training in?  
Do you receive any ongoing support/training while using your ePortfolio system? If yes, what is this support/training, who delivers the support/training and is it helpful?  
Was there any aspect that you felt was missing from your training?  
In your opinion, what information is essential for new staff users of an ePortfolio?  
In your opinion, is there any other specific training required for new users of an ePortfolio?  
In your opinion, what information should staff be exposed to/be trained in before using an ePortfolio?  
In your opinion, what skills should staff be exposed to/be trained in before using an ePortfolio?  
Within your institution, do you see any barriers which might affect the ongoing implementation of an ePortfolio?  
How have the students accepted/adapted to using the ePortfolio?  
How do the students utilise the ePortfolio for personal use?  
Who supports the students when they are using the ePortfolio?  
In your opinion, what information is essential for new student users of an ePortfolio?  
Have you encountered any issues related to plagiarism or intellectual property rights related to the use of an ePortfolio?  
Do you know of any plans within your institution to use PDP to support wider access or employability?  
Are there any plans within the institution for ongoing storage of ePortfolios once the student has left the institution?

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1 mainly during the summer and autumn of 2006, while group 2 interviews were con-  
2 ducted during the winter of 2006. These interviews were undertaken by two research-  
3 ers (LG and GD) who were not involved with the delivery of any of the modules or the  
4 programmes using an ePortfolio.

5 Because of the geographical location of the participating tutors (across the east and  
6 west of Scotland), all of the tutor interviews, and most of the staff developer interviews  
7 in the pilot phase, were conducted on the telephone; where possible, all interviews were  
8 tape-recorded. Prior to interview, participants were emailed an information sheet and a

## *Using ePortfolios in Higher Education to Encourage Learner Reflection*

1 consent form. Also, to encourage participation in these interviews and to assist inter-  
2 viewees to prepare, the questions were sent in advance to participants.

### *Participants*

3 Over 40 tutors involved in the ISLE project were contacted directly by the researchers  
4 or by their institutional representatives for the project. Twenty-three tutors, drawn  
5 from 10 Scottish higher education (HE) and further education (FE) institutions, vol-  
6 unteered to participate in the interviews. The tutors who were interviewed came from  
7 a wide range of academic subject areas, such as computing, drama, nursing and busi-  
8 ness studies, and were responsible for delivering modules from Scottish Credit Quali-  
9 fications Framework (SCQF) level 4 (SVQ level 1) to SCQF level 11 (Masters) (see  
10 Tables 2 and 3).

11 Similar to most UK institutions, the tutors interviewed were either using an all  
12 encompassing commercial ePortfolio system, which, in some instances, was linked to a  
13 virtual learning environment such as Blackboard, or an open-source system such as  
14 Open Source Portfolio Initiative (OSPI) (Strivens, 2007). A few were using a proprietary  
15 system, which had been developed within the institution and was often based on a  
16 paper-based system. The tutors (both groups 1 and 2) were at varying stages of imple-  
17 mentation at the time of the interviews—most had used an ePortfolio for nearly a year,  
18 while a few were still in the early stages, having used an ePortfolio for a few months;  
19 very few of the tutors engaged with the ePortfolio tool to support their own personal  
20 development.

21 Many of the FE tutors had not integrated the ePortfolio into a particular module or  
22 programme, but used it to support personal development guidance, transition and  
23 employability. In most cases, the ePortfolio provided the opportunity to take a paper-  
24 based portfolio into the online environment and occasionally, this was linked to assess-  
25 ment. Usually, protected time was provided for students to develop and maintain the  
26 ePortfolio. In comparison, HE institutions tended to embed the ePortfolio within a  
27 module or programme and sometimes linked it with assessment.

28 Some of the tutors were not able to introduce the ePortfolio system to their students  
29 until a later period in the project because of curriculum, timetabling and institutional  
30 restrictions. Hence, they were interviewed in group 2. In most cases, the tutors in group  
31 1 had no more or less experience of using ePortfolios than the tutors in group 2. No  
32 tutor was interviewed twice.

### **Data analysis**

33 The individual interviews were transcribed verbatim by a professional typist, used to  
34 transcribing, and familiar with the language of ePortfolios (Hancock, 2002). Copies of  
35 the transcript, where possible, were sent to each interviewee to ensure accuracy. This  
36 process is known as member checking and is a means of enhancing the validity of the  
37 data (Krefting, 1991). The transcripts were returned and corrections were made, if  
38 necessary.

Table 2: Interview participants – group 1

<i>Tutor participants group 1 – summer 2006</i>						
<i>Tutor</i>	<i>Tutor gender</i>	<i>Subject are and cohort</i>	<i>Sector</i>	<i>Tutors' personal use of ePortfolio</i>	<i>Students' use of ePortfolio</i>	<i>System being used and length of time using ePortfolio with students</i>
1	Female	Social sciences (HNC and HND) 11 students	FE	Tutor not using this system—only for student use Other systems in place for tutors	For PDP Delivered as part of course. Previously uses a paper portfolio. Not being assessed	Using an electronic copy of paper version. Looking at using SELF system. 12 weeks
2	Male	Computing (HND2) 7 students	FE	Tutor not using an ePortfolio	For PDP Delivered as part of guidance. For transition and employability. Not currently using for learning and teaching—maybe next year Assessed	Started as paper-based system, then moved online to Blackboard. 3 months
3	Female	Computing (HND-year 2) 11 students	FE	Tutor using since November 2005 to prepare for showing students how to use	For PDP activity Delivered as part of guidance. Timetabled in class. For transition and employability. Not being assessed	OSP-USB stick 3 months
4	Male	Computing (HNC) 8 students	FE	Tutor using, so able to demonstrate to students	Rolling out for PDP Not currently used for learning and teaching—but might in future. Delivered over and above normal course hours.	Blackboard 3-4 months
5	Male	Musical theatre/acting and performance (HNC and HND year 2) 19 students	FE	Tutor using for personal use	To introduce aspects of PDP. Timetabled in class.	Blackboard 3 months
6	Female	Computing and information sciences (SGA-Int 2) 24 students	FE	Some tutors are using for ePortfolio for personal use (introduced to a system when doing TQFE training).	Primarily for PDP. Not currently using for learning and teaching, but plan to at some stage. Using over and above normal course hours.	In-house system - electronic copy of paper version.
7	Female	Nursing Studies (Direct entry, BA) 8 students	HE	Tutor not using—system is only for students	Work-based learning programme. Written into an assessed module this year. Not assessing the ePortfolio.	EPDP (ISLE system) Since October 2005
8	Male	Technical communication 8 students in the first semester 130 students in 2nd semester	HE	Tutor not using for personal use	Used as part of module. For PDP. ePortfolio is being assessed.	Blackboard 5 months

EPDP, electronic personal development planning; FE, further education; HE, higher education; HNC, Higher National Certificate; HND, Higher National Diploma; ISLE, Individualised Support for Learning through ePortfolios; OSPI, Open Source Portfolio Initiative; PDP, personal development planning; SGA, Scottish Group Awards; TQFE, Teaching qualification in further education; USB, universal serial bus.

Table 3: Interview participants – group 2

<i>Tutor participants group 2 – winter 2006</i>						
<i>Tutor</i>	<i>Tutor gender</i>	<i>Subject area and cohort</i>	<i>Sector</i>	<i>Tutors' personal use of ePortfolio</i>	<i>Students' use of ePortfolio</i>	<i>System being used and length of time using ePortfolio with students</i>
1	Female	MSc (pre-registration) Physiotherapy SCQF level 11 1 <sup>st</sup> -year learners	HE	Tutor not used for own PDP as yet – no time.	Used for reflection – reflecting on learning experience (intended to facilitate transformative learning and self-identification of strengths and weaknesses). Not using for employability. Not assessed. Portfolios are a professional requirement for these learners.	PebblePad 6 months
2	Female	HNC/D graphic design and new media SCQF level 7 HND2 graphic design and new media SCQF level 8 25 students	FE	Tutor not using an ePortfolio. Keeps a traditional CV.	For transition and employability. Implemented PDP as part of ongoing guidance. There was no timetabled session so PDP took place during other scheduled teaching slots. To help prepare for assessment, but not actually assessed.	Piggy backed onto Bell system 1 month
3	Male	Computing SCQF level 7 1 <sup>st</sup> -year learners	HE	Tutor not using.	Used for a module – team-based problem solving. For PDP, CVs and with personal tutor system. Not being assessed, but can show if a student has done work to improve situation.	SELF system 3-4 months
4	Male	Computing 1 <sup>st</sup> -year learners	HE	Not actually using an ePortfolio as yet at institution	Have to pass a viva based on the portfolio.	Word documents with hyperlinks
5	Female	BSc (Hons) Food, nutrition and health SCQF level 10 10 students (all female) Fourth year Also, small group of 1 <sup>st</sup> -year sport study students	HE	Tutor using an ePortfolio in her capacity as PhD student	Used for a module – diet, exercise and weight management. Used the university ePDP package within tutorial sessions to reflect on the learning which occurred during their practical work experience. Not being assessed. For the 1 <sup>st</sup> year students, it was part of the personal tutorial system.	SELF system
6	Female	HNC information technology 10 students HNC interactive multimedia creation 7 students Students in all groups predominantly male	FE	Tutor not using ePortfolio or doing own PDP in an organised way.	For PDP. Not assessing it – not been using it long enough. Not using for meaningful reflection as yet – just logs of work. Previously used a paper-based system	SELF system

7	Female	NEET Fashion, textiles and retail opportunities Mostly 16 year-olds	FE	Tutor has been using paper portfolio for 2 years – now transferred to electronic	Using PDP. Using like a diary – for tasks in hand - looking at areas to improve	Moodle
8	Male	HND filmcraft and animation SCQF level 8	FE	Has an interactive one like the students use. Uses for CPD.	For PDP. Showcasing digital work on CD-Rom, which is submitted for assessment. Has been part of coursework for some time. Not using for reflection yet.	Using two systems – CD-Rom plus ISLE ePortfolio (Blackboard)
9	Male	SICN introduction certificate in construction Int 1 and 2 level (SCQF 4/5) 10 students Age range 16-23	FE	Tutor uses an ePortfolio	For PDP – at end of each activity to encourage students to do some sort of evaluation. Have a specific page for reflection. Used for employability	Wordpress
10	Male	Business studies	FE	Tutor had not kept a portfolio before. Now using ePortfolio out of interest and for practice.	Use the ePortfolio to create responses for assessment.	ISLE ePortfolio 2 months
11	Female	Nursing SCQF level 9 1 <sup>st</sup> year learners	FE	Tutor does PDP, but not using an ePortfolio. Plans to use for teaching and personal use.	The layout and the content of the ePortfolio are assessed. The content has to be reflective. For the PDP module, the students' ePortfolio was not assessed but used to prepare for an assessed assignment.	ISLE ePortfolio Only been using 3-4 weeks
12	Female	NC fashion and clothing 1 <sup>st</sup> year students NEET Pre-NC level Mostly 16-25 year-olds	FE	Tutor not using an ePortfolio	PDP as part of guidance. Self evaluation.	Moodle
13	Female		FE		Using for PDP. Reflecting on achievements and reviewing progress in the ePortfolio. Assessed	Paper based alongside ePortfolio
14	Male	Performance production and management	HE	Has used the ePortfolio, but has not become part of everyday activity yet.	Assesses their learning outcomes and ability to reflect on their learning from their reflective journal.	Pebblepad
15	Female	Midwifery	HE	Uses a paper-based for PDP.	Mainly just an area for storage. Not assessed this time, but possibly in future. At 1 <sup>st</sup> year level, create a paper-based portfolio for employability – not using ePortfolio for this yet.	Blackboard





1 Data from the interviews were analysed using Non-numerical Unstructured  
2 Data Indexing Searching and Theorizing (NUD\*IST produced by QSR International  
3 (Americas) Inc. 90 Sherman Street Cambridge, MA 02140USA Website: [http://www.  
4 qsrinternational.com/](http://www.qsrinternational.com/)) version 6. Before starting the first set of tutor interviews, the  
5 researchers (LG and SP) checked the analysis and discussed the results. As mentioned  
6 earlier, the question set was then refined and extended. The second set of tutor interv-  
7 ews were also analysed in NUDIST. To improve rigour and reliability, a third researcher  
8 independently reviewed the analysis in NUDIST and examined the key themes in  
9 response to the questions (SM).

10 The following bibliographic details of the researchers are included to enable readers to  
11 evaluate the possible influences the researchers' backgrounds may have had on their  
12 interpretation of the findings. The three researchers who performed the analysis of the  
13 findings were academic members of staff of the institution; one worked as a physio-  
14 therapy lecturer in the School of Health Sciences (LG) and the other two were located in  
15 the Centre for Academic Practice (SP and SM). All three are female, white, in their 30s  
16 to 50s and have a history of undertaking educational research, focusing on learning  
17 technology. Two other researchers were involved in the collection of group 1 data, the  
18 development of the article and the synthesis of the findings (GD and KM)—both of  
19 them are female, white and in their 50s and 60s.

20 Through the analysis of the interview data, four key areas emerged in response to our  
21 questions.

22 In the context of your teaching:

- 23 1. What role does the ePortfolio play in the learning environment?
- 24 2. What issues have been raised by implementing the ePortfolio system in the learning  
25 environment?
- 26 3. What are the potential barriers to implementing an ePortfolio?
- 27 4. In what ways could the challenges identified when implementing an ePortfolio be  
28 overcome?

29 See Table 4 for the themes and sub-themes generated by these four questions.

### **Findings and discussion**

30 Although tutors were at different stages of implementation, used different systems and  
31 had embedded the ePortfolio within the learning environment in different ways (for  
32 example, to support assessment and/or personal development), consistent responses to  
33 the questions emerged in the two groups. Critically, *all* the tutors from all the institu-  
34 tions (FEandHE) valued the ePortfolio and wanted to continue to refine and develop the  
35 role of the ePortfolio in supporting learning. A number of issues and challenges were  
36 identified, but throughout, the tutors were particularly positive about the ePortfolio and

Table 4: Themes and sub-themes

- 
- 1. What role does the ePortfolio play in the learning environment?**
    - 1.1 To support personal development
    - 1.2 To improve student progression and employability
    - 1.3 To encourage reflective practice
    - 1.4 Assessing ePortfolios for learning and teaching
  - 2. What issues have been raised by using an ePortfolio?**
    - 2.1 Moving from a paper-based system to an online system
    - 2.2 Assessing ePortfolios
    - 2.3 The usability of the system
    - 2.4 Legal issues
      - 2.4.1 Who should have access to materials (DP)
        - 2.4.1.1 Tutor access
        - 2.4.1.2 Institutional access
        - 2.4.1.3 External access
        - 2.4.1.4 Sharing materials
      - 2.4.2 Copyright
      - 2.4.3 Plagiarism
      - 2.4.4 IPR
    - 2.5 The role of training and support
      - 2.5.1 Student training and support
        - 2.5.1.1 Technical training
        - 2.5.1.2 The purpose of the ePortfolio
      - 2.5.2 Staff training and support
        - 2.5.2.1 Technical training
        - 2.5.2.2 Staff development about PDP
        - 2.5.2.3 On-going tutor support
  - 3. What are the potential barriers to implementing an ePortfolio?**
    - 3.1 Adequate time for tutor and students to engage with and continue to engage the ePortfolio
    - 3.2 Negative tutor and student attitudes to
      - 3.2.1 Technology
      - 3.2.2 PDP and ePortfolios
    - 3.3 Initiative fatigue among tutors
    - 3.4 Poor technical infrastructure including accessibility
  - 4. In what ways could the challenges identified when implementing an ePortfolio be overcome?**
    - 4.1 Tutor engagement
    - 4.2 Institutional engagement
    - 4.3 Staff development
      - 4.3.1 PDP
      - 4.3.2 Technology
    - 4.4 Support network for staff
    - 4.5 Protected time for staff and students
    - 4.6 Student engagement and support
    - 4.7 Lifelong access for learners to ePortfolios
- 

DP, data protection; IPR, intellectual property rights; PDP, personal development planning.

1 its impact on student learning. Tutors provided a range of suggestions on how they  
2 believed such issues could be overcome. The findings are now presented according to  
3 the four key areas of questioning.

***What role does the ePortfolio play in the learning environment?***

4 The tutors had integrated the ePortfolio in the learning environment for a number of  
5 purposes and the main points are discussed below.

*To support personal development and encourage reflection and reflective practice*

6 All the tutors agreed, *consistently* and *in both groups*, that ePortfolios should be used to  
7 support personal development and encourage reflective learning. Often, the ePortfolio  
8 was introduced to students as a tool to store evidence related to a student's personal  
9 development planning (PDP) and support the product of PDP. For example, tutor 1  
10 (group 1) reported:

11 The first page is just their personal information like their name and address and such like and  
12 then it goes into a sort of area where they're asked to talk about their goals and you know their  
13 strengths and weaknesses that sort of thing and then it moves into a section where they get  
14 feedback on each block's performance. ...

15 Tutor 7 (group 1) explained how the use of an ePortfolio was presented to the  
16 students as,

17 ...a chance to organise what they'd done in their past life and to look at projections for their future  
18 careers although most of them did have sort of stable careers up to maybe a year in advance but  
19 hadn't projected any further forward than that and I thought it was interesting for them to go  
20 through the exercises actually doing this ... and for career planning.

21 Tutor 4 (group 2) explained:

22 ... we've introduced a new ePortfolio system for our first year students which requires them to  
23 compile a portfolio and an ePortfolio is the most practical way of doing it because you don't lose  
24 it on the bus that way. ...

25 For the future, tutors hoped that the ePortfolio would have a wider role in assisting  
26 students to develop skills of self-evaluation and diagnostic testing, and hence, focus  
27 more on the process of PDP. It is common for academics to find integrating ePortfolios  
28 and PDP in the curriculum challenging (Gathercoal, Love, Bryde & McKean, 2002); it  
29 takes time for tutors to understand the differences between using an ePortfolio to  
30 support the process of PDP rather than the product and to develop an holistic approach  
31 to integrating an ePortfolio into the learning environment (JISCinfoNet, 2008). The  
32 following quotation from tutor 1 (group 2) emphasises this point:

33 ... there was actually very little about PDP and about how you might actually use an ePortfolio or  
34 how you might implement an ePortfolio and I think that's something that's been missing because  
35 I still know nothing about PDP and I kind of ... implemented ePortfolio without any em, I knew

1 what I wanted to use it for, but without any great understanding of such systems or even how they  
2 might look ... so I guess I went into it a little kind of naively. ...

3 The majority of tutors felt that ePortfolios provide an ideal opportunity to integrate  
4 reflection into the curriculum. However, just because students are developing an  
5 ePortfolio, it cannot be assumed that reflection and learning are taking place—probably  
6 they are, informally or formally, but not necessarily (DiBiase, 2002). Many advocates of  
7 reflection assume that learners already possess the ability to be a reflective learner, but  
8 as Beetham and Strivens (2005) state, not all learners will naturally engage with  
9 reflection, especially those with less confidence and experience. An additional assump-  
10 tion is equally made that all academic staff are knowledgeable and skilled in the reflective  
11 process and are already reflective practitioners.

12 The reflective process encourages the learner to reflect on what they know and to  
13 modify and change that knowledge in the light of their new learning experiences  
14 (Moon, 1999). It requires the learner to consider their new learning and make sense of  
15 it—exploring it and organising it. Then, the learner needs to represent this new learn-  
16 ing and link it to what they know already. Many of our tutors were initially uncomfort-  
17 able with reflection and did not understand its role in the students' learning. However,  
18 others were more comfortable with reflection and felt that it was important to focus on  
19 working with their students and encouraging them to become reflective rather than  
20 adhering to what were perceived to be restrictive theoretical models of reflection.

21 Some tutors reported that students had difficulty adapting to a reflective approach in  
22 their learning, as the following quotations demonstrate:

23 It's been difficult for some students to cope with—they've never done anything like this before you  
24 know they've never reflected on who they are and what they're doing you know and they look at  
25 me sometimes as though my lights have gone out when I say these are the tools you can use ...  
26 (tutor 2, group 1).

27 ... the things that students find difficult are reflection, they find it difficult to look back and  
28 think 'well why did I do that and what did I learn from it and where would I take it next' (tutor 11,  
29 group 2).

30 I think it's quite difficult, I think they expect you to be the person telling them what you've  
31 thought and when you say no I want you to tell me what you as a student felt about it, they are  
32 a wee bit 'oh' ... (tutor 2, group 2).

33 However, the value of reflection was understood by most tutors, as tutor 14 (group 2)  
34 illustrates:

35 ... they've had a certain amount of reflection ... they've been asked to write journals in the past ...  
36 but it's never really been explained to them in such depth. I think it was part of ... the process of  
37 their practical activity before ... they were to write a journal but I think it was very much like  
38 Adrian Mole's diary whereas now what I'm doing is explaining what management is about, some

1 of the kind of deeper things about it and why this is important to them so it's explained on a  
2 different level and that's what's made the difference.

*To improve student progression, transition and employability*

3 Crucially, *all* tutors believed that ePortfolios would improve student progression and  
4 employability, as the following tutors explained:

5 ... this [the ePortfolio] is helping you think about your skills and where you're going next and  
6 identifying what those skills are, making yourself you know being more self aware and they you  
7 know they bought they sort of had buy-in to it from that point of view (tutor 3, group 1).

8 We tell them that well okay you're coming here to study your mechanical engineering or your  
9 chemistry but your qualification's only half the battle to get a good job you'll need to present  
10 yourself well and present evidence of what you've done and so on—present evidence of your  
11 development, so we present it as a thing that's important to them, but I think the fact that there's  
12 a national agenda I think helps you know, to boost the credibility of it in students' eyes really  
13 (tutor 8, group 1).

14 ... it [the ePortfolio] gets them looking further and seeing goals and maybe just motivates them  
15 better to see where they're heading ... and see the steps to get there and see how they can achieve  
16 it in small chunks ... the whole point of it obviously is to increase their employability ... (tutor 13,  
17 group 2).

18 ...I think the employability side of it is one of the key you know selling points, because that's what  
19 we're doing, we're training people, preparing them for the world of work and the world of  
20 academia (tutor 14, group 2).

21 Some tutors felt that students in the first stages of their programmes were less motivated  
22 by future employment prospects and, consequently, did not engage with the ePortfolio.  
23 For example, tutor 1 (group 1) stated:

24 ... unless they go into a job where they're required to produce a portfolio and they can see that oh  
25 well I have actually done it then I might ... know if it's helped me get a job at the end.

26 However, tutor 6 (group 2) suggested that these 1st-year students were able to see the  
27 relevance and be motivated quite quickly as new skills were learnt and documented  
28 within their ePortfolio:

29 ... students find it difficult at the beginning to see what it's really all for ... it's only when you've  
30 been putting information in and you've got to the stage of updating it and when you've acquired  
31 new skills and you start to update what you've already done that you begin to see how it will  
32 become useful.

33 It became apparent through the study that students need clear guidance about the role  
34 and purpose of the ePortfolio in their studies, and this needs to be reinforced by all  
35 members of the teaching team on a regular basis.

*To support the assessment process*

36 Considerable debate exists about whether to assess ePortfolios (Barrett & Carney, 2005;  
37 Stefani *et al.*, 2007). Those who favour using ePortfolios for assessment state that the

1 ePortfolio is a means of capturing valuable material developed from a process of learn-  
2 ing. Assessment encourages student and staff engagement, as well as raising the aware-  
3 ness of PDP supported by ePortfolios. Furthermore, ePortfolios may provide an  
4 opportunity for the sector to measure and record non-formal learning and update, often  
5 antiquated, assessment procedures.

6 In contrast, those who do not favour assessing ePortfolios stress that the process of  
7 reflecting on learning is too personal and would require complex evaluation proce-  
8 dures. Barrett and Carney (2005) state that using ePortfolios for assessment may have  
9 an influence on how learners perceive the purpose of the ePortfolio process—for learn-  
10 ers, assessing an ePortfolio changes the purpose, from a tool that can support lifelong  
11 learning development to a ‘high stakes’ document that will be judged against a set of  
12 prescribed learning objectives. The result is that learners may perceive an assessed  
13 ePortfolio as ‘...something “done to them” rather than something they WANT to main-  
14 tain as a lifelong learning tool’ (Barrett & Carney, 2005, p. 2).

15 Among the tutors in the ISLE project, there was no consensus about whether to assess  
16 an ePortfolio. Initially, some tutors were less inclined to assess because of the personal  
17 nature of the ePortfolio, as tutor 7 (group 1) illustrates:

18 No no no no, it’s part of the portfolio, it’s a skills for lifelong learning module and that is part of  
19 it and the assessment really isn’t anything to do with the portfolio because I don’t know how you  
20 would assess that ... that would be very difficult because it is very subjective, very personal isn’t it.

21 However, by the end of the project, most tutors felt that students were more motivated,  
22 engaged and more accepting of the ePortfolio if it was linked to assessment. For  
23 example, tutors stated:

24 ... I know some people say it’s pointless to assess if they should do it anyway ... I mean the sort of  
25 cynical view is that if there are no marks at the end of it they won’t do it ... (tutor 8, group 1).

26 ... I think they [the learners] won’t see the intrinsic value of it [the ePortfolio] until they actually  
27 use it and they won’t use it until they’re forced to use it ... (tutor 1, group 2).

28 Other tutors reported asking students to submit all or parts of their ePortfolio for  
29 assessment. A variety of assessment methods were found to be used, as the following  
30 quotations demonstrate:

31 ... so they’ll have ... a section that just rates them on a scale of 1 to 4 on their attitude to work,  
32 their reliability, their conduct and so on and so forth—the staff rate the student numerically and  
33 then the students rate themselves, the idea being that they should compare those two and then  
34 there’s a discussion that takes place that’s noted and then we move onto the next block that’s  
35 really how it works (tutor 1, group 1).

36 ... at the end of the year they do what we call a viva in front of a panel ... the viva is there for them  
37 to present their portfolio to prove that if they had [for example] done poorly in the first semester

1 and they've done some work since or you know they have redone something then the panel can  
2 bring them up [in grade] (tutor 3, group 2).

3 The student nurses are assessed as part of their course ... the portfolio, the layout, the content, it  
4 has to be reflective [also] they have to do an assignment on portfolio work so that will be assessed  
5 ... (tutor 11, group 2).

6 ... they use it to send me reflection on certain things that have taken place so they're building up  
7 this journal using it ... then I will assess their ... kind of learning outcomes and their ability to  
8 reflect upon their learning from that journal ... (tutor 14, group 2).

9 In the interviews, formative assessment was not mentioned. Barrett and Carney (2005)  
10 suggest that it is important to make the distinction between assessment *of* learning  
11 (summative assessment) and assessment *for* learning (formative assessment). Formative  
12 feedback is essential for ePortfolio development, as feedback allows the learner to reflect  
13 change and improve their work (Barrett, 2004). Therefore, it could be suggested that if  
14 the 'process' of completion of an ePortfolio is viewed as an important skill, then this  
15 may be an appropriate method of assessment to use. Further support is required for  
16 tutors to demonstrate how the ePortfolio could be used for formative as well as summa-  
17 tive assessment.

### **What issues have been raised by implementing the ePortfolio system in the learning environment?**

18 Tutors enjoyed implementing an ePortfolio system, and some felt that the younger  
19 students were more positive about an online system, which retained their interest and  
20 was more engaging than a paper system. For example, tutor 13 (group 2) reported:

21 ... in starting to deliver the electronic side I feel that was a boost ... students love the computer  
22 aspect ... because it's online and it's the Internet, they are off, they're away way before me.

23 Nevertheless, issues were identified and these related to moving paper-based portfolios  
24 for assessment online, technical limitations of the systems, legal issues of implementa-  
25 tion and requirements for tutor support. These issues are now discussed.

#### *Moving a paper-based assessment portfolio online*

26 There are numerous advantages of an online, assessed portfolio including:

- 27 • The reduction and, in some cases, the elimination of paper-based storage space
- 28 • Ease of tutor and student access
- 29 • Easier rearrangement, editing and combination of materials
- 30 • The ability to link to a wider range of artefacts including multimedia
- 31 • Easier sharing of portfolio content that can be viewed by more than one individual at  
32 any one time

33 (Cotterill *et al.*, 2004; Gathercoal *et al.*, 2002; Love, McKean & Gathercoal, 2004;  
34 Siemens, 2004).

1 Critically, an ePortfolio is a ‘connected document’ (Stefani *et al*, 2007). Students can  
2 hyperlink between documents to show evidence and link to external sources, such as  
3 ‘MySpace’. However, tutors were critical of some of the ePortfolio systems and espe-  
4 cially their usability and robustness:

5 It was just not intuitive [the system]...not obvious...what you should be doing or what the words  
6 mean ... (tutor 4, group 1).

7 ... initially the problem that we had was the storage space online. I think initially it was, they had  
8 like 40Mb to work with which is nothing to us ... some other subjects, I would imagine that would  
9 be fine, but with us we’re working with large file sizes ... the only other thing again which would  
10 probably only really affect students in our field is that you are somewhat limited to the aesthetics  
11 of the portfolio (tutor 8, group 2).

12 As a result, some tutors continued to utilise a paper-based system alongside the online  
13 system; this seemed to be as a result of a lack of confidence in the online system. One felt  
14 that the electronic system might not stand up to audit from external examiners,  
15 although the same tutor admitted that confidence in the electronic system was  
16 growing. Those that were running dual systems tended to be tutors who had had a  
17 paper-based system for a number of years prior to introduction of the web-based  
18 system. Tutor 15 (group 2), for example, reported:

19 ... it would be hard to remove the paper system because you know they go and get certificates for  
20 things and whether or not they can all be online ... we do give them out certificates which are all  
21 paper.

22 Many ePortfolio systems are still in their infancy and it is anticipated, as the technology  
23 matures, that these issues will be addressed. However, it is essential that institutions  
24 using commercial packages work closely with their suppliers, to provide regular user  
25 feedback.

#### *The legal issues of implementing an ePortfolio*

26 Charlesworth and Home (2004, 2005, 2006) have raised legal issues regarding ePort-  
27 folios including:

- 28 • Protection of personal data held within an ePortfolio system
- 29 • Ownership and intellectual property rights of the material contained in the ePortfolio  
30 system
- 31 • Accessibility—the need for compliance with disability legislation
- 32 • Misuse of ePortfolio systems by learners, for example, by breaching copyright.

33 These are discussed in more detail by JISCinfoNet (2008).

34 Some tutors reported that a few of their students were concerned about privacy and  
35 data protection:

36 ...they couldn’t see the point of it being online they said if it was for them it was for them and their  
37 eyes only and if they wanted to show it to someone they would then make the decision to go to



1 them and say here have a look at this because they've got all sorts of security issues because they  
2 know about computing and how to hack into things (tutor 2, group 1).

3 I've had one student in the group who did not wish to participate in the ISLE project ... he was  
4 against you know other people being able to access his own information he had an issue with  
5 privacy and that kind of thing... (tutor 6, group 1).

6 However, generally, after discussions with students, tutors reported that students  
7 seemed satisfied that if their ePortfolio was password protected, then their privacy and  
8 data protection was protected. Tutor 6 (group 2) highlights this point:

9 ... I don't think that they would think about it because it is all password protected.

10 It is recommended that any institutional implementation of ePortfolio addresses data  
11 protection and privacy, and adheres to the guidelines provided by JISCinfoNet (2008).

12 Many tutors felt that it was important for students to share and discuss parts of their  
13 ePortfolio with their student colleagues in order to create a peer learning environment;  
14 however, tutors interviewed reported limited success in relation to ePortfolio sharing, as  
15 tutor 1 (group 2) illustrates:

16 ... tried to get them to think about sharing their blogs or folios or whatever with students from  
17 another programme with an idea that you become less vulnerable if you actually sharing it with  
18 people outside your programme because our students are quite competitive and so you know if  
19 they were sharing thoughts or uncertainty or whatever they might not want to do that with  
20 people on their own programme ... and they could perhaps learn from each other about reflection  
21 but again I don't think that that's really worked and it was something that we would have to push  
22 a little bit harder, but I do think that's something that would be potentially positive in the future.

23 While many tutors see the potential benefits for learners in sharing materials and  
24 receiving feedback, tutors also need to understand that for many learners, using an  
25 ePortfolio is a very intimate act, involving deep emotions. Therefore, learners will natu-  
26 rally have concerns about who has the ability to read such individual, private and  
27 personal reflections (Carney, 2002), and institutions must demonstrate how they are  
28 addressing such issues.

### *The requirement for tutor support*

29 All tutors implementing the ePortfolio, in whatever way in the learning environment,  
30 were supported to implement the new system. In most cases, this support was provided  
31 by an educational technology unit or by the careers service within their institution and  
32 this support was considered essential by all the tutors. Levels of initial training varied  
33 from a 10-minute introduction to the system to a specific four to five-session training  
34 programme. All tutors received training in the use of the system; some had more  
35 specific training in the use of PDP, ePortfolio and reflection. Many reported being sup-  
36 plied with paper-based manuals to support their training. Tutor 10 (group 2), for  
37 example, emphasises the usefulness of the training:

1 ... it was very useful, [the trainer] took us through the thing from start to finish and explained the  
2 different stages, the profiles and the schedules and resources and so on ... it was really quite a  
3 thorough session.

4 While tutor 2 (group 2) indicated that the training was a useful starting point:

5 I think it's just sort of getting my head round it myself first and working out what I need to do and  
6 how I need to do it ... the handouts that we got at the workshop were good I mean it gives me a  
7 starting point and there are some places where I can go and look up but it is very much gonna have  
8 to be self initiated. ...

9 Such support appeared to be highly valued by the tutors and was referred to regularly  
10 in the interviews. Levels of training seemed to reflect the levels of tutor knowledge and  
11 confidence in the use of PDP and the ePortfolio system.

### **What are the potential barriers to implementing an ePortfolio?**

12 Although *all* the tutors were very positive about ePortfolios, and especially about the  
13 role of ePortfolios in supporting personal development, they all identified lack of under-  
14 standing and buy-in of both staff and students, as a key barrier. For example, tutor 5  
15 (group 2) reported:

16 ... it's kind of being adopted universally by the university without maybe people understanding  
17 the ethos that's behind it ... could be done very badly if you've got people who have not kind of  
18 bought into the kind of concept or don't actually understand what it is about ... people might not  
19 value it in terms of its academic worth and again I think that is a sort of education in training  
20 issue ... it needs to be kind of handled carefully if people want to see it as valuable and that doesn't  
21 get like it's another bandwagon or another kind of box to tick. ...

22 Tutor 11 (group 2) concurred with this view, stating:

23 ... I think sometimes people [staff] don't really understand why they have to keep a portfolio and  
24 they get in a real tizz about it and they think that it is a great big onerous task when the reality is  
25 it's not really. ...

26 It was frequently mentioned that students failed to see the value of ePortfolios. In  
27 addition, a few tutors stated that lack of time was an issue, for example:

28 ... our students aren't familiar with the Blackboard environment so they were gonna have to  
29 spend a while getting used to that and I didn't want to put extra time and pressure on them to do  
30 that so what we've actually done is just transferred what we were doing on paper into word  
31 format—they were all issued with data pens to store it on (tutor 2, group 1).

32 Although for the FE tutors, integration of PDP work into the students' timetable would  
33 seem to have resolved this issue for many, as highlighted by tutor 9 (group 2):

1 ...more time built in for management and admin and the management of feeding back to students ...  
2 our senior management team need to realise that if they are going to give you a class of 21  
3 students and this is all online, they have to give you the equivalent admin time to manage that. ...

4 'Initiative fatigue' was widely reported in the interviews and tutors stated that col-  
5 leagues could perceive the ePortfolio as yet another 'fad'. For example:

6 There's not a week goes by without another new thing arrives on their desk ... that is going to be  
7 a barrier in terms of staff ... (tutor 1, group 1).

8 ... it's something else to learn and the older you get these kind of IT things become harder to learn  
9 and it's fine for us who are you know sort of ... that's kind of part of life, but for people who  
10 perhaps not quite as ready to embrace technology I think it's probably harder ... (tutor 1, group  
11 2).

12 Many tutors anticipated technical issues to be a significant barrier. Lack of compatibil-  
13 ity of different ePortfolio systems and the functionality of the system were most fre-  
14 quently mentioned. For example, tutor 15 (group 2) raised concerns regarding  
15 compatibility:

16 ... finding ways of compatibility between the programmes you know if you go from one system to  
17 another ... are they compatible so that might be your only concern. ...

18 Some tutors mentioned lack of availability of computers and problems with access to  
19 the Internet as being barriers. For example:

20 ... groups won't necessarily have access to IT during that guidance hour you know there'll have  
21 to be an arrangement made for that ... (tutor 3, group 1).

22 ... computers are available for them to use sometimes, that's the problem here as well, there's not  
23 always a computer available when you've got some free time (tutor 12, group 2).

24 While tutor 9 (group 2) drew attention to lack of computer resources for staff:

25 ... I'm in a work room with nine staff and we have one PC. ...

26 If ePortfolio systems are not robust and readily available, engagement will be patchy, at  
27 best. Institutions need to ensure that ePortfolio systems are an integrated part of the  
28 institution's information technology infrastructure from the start of any implementa-  
29 tion and are maintained to a high standard. In addition, there also needs to be consid-  
30 eration regarding how learners will access the system (or a similar system) once they  
31 have completed their studies.

### **In what ways could the challenges identified when implementing an ePortfolio be overcome?**

32 Many tutors believed that wider use within their subject areas and educational pro-  
33 grammes would lead to better integration, improved implementation and more student

1 and tutor engagement with the ePortfolio. In order to achieve this, all the tutors felt that  
2 institutional commitment was essential. For example, tutor 5 (group 2) stated that  
3 implementation should be:

4 ... adopted universally, that people actually get some skill training to do it and that it's not kind of you  
5 know whitewashed in terms of you know a blanket approach ... I feel that if it's something  
6 that's considered worthwhile then it needs to be done with quality.

7 This institutional commitment would support structured staff development available to  
8 all tutors. Such development would focus both on the technical and pedagogical aspects  
9 of implementing an ePortfolio. Some tutors thought that there should be more focus on  
10 the technical aspects of an ePortfolio, for example, as tutor 9 (group 2) reported:

11 ... I think more training on the IT side of things because there's a lot of staff who could manage  
12 to work the ePortfolio with the links that are there, but when it comes to uploading files and  
13 adding images and photos and music and all the other wonderful things that we can now do. ...

14 ... a lot of our students can be are mature students and they're not used to working with  
15 computers in the way that they're asked ... we give them a lot of instruction in how to use basic  
16 computing skills and we do quite a lot with them ... not necessarily associated with ePortfolios ...  
17 (Tutor 7, group 1).

18 Others believed that there should be more emphasis on the role of an ePortfolio in  
19 supporting personal development and reflective learning, as stated by tutor 1 (group 2):

20 ... I think we do need some more on about PDPs in general because I don't really know very much  
21 about them ... there was little about PDP and about how you might actually use an ePortfolio or  
22 how you might implement an ePortfolio and I think that that's something that's been missing. ...

23 Almost all tutors felt that there was a clear link between ePortfolios, PDP and reflective  
24 learning, but many had been unsure about introducing PDP to students, especially at  
25 the beginning of their implementation, and needed time to learn about PDP, reflection  
26 and ePortfolios. Interestingly, few of the tutors participating in this study had engaged  
27 in using ePortfolio for themselves, although the consensus was that they 'planned' to  
28 participate in PDP in the future.

29 Protected time for programme-wide staff development, supported at an institutional  
30 level, would encourage tutors to develop an understanding of PDP and how this links to  
31 ePortfolios. Such staff development could outline the advantages of PDP and ePortfo-  
32 lios, such as employability, student progression and improved student academic perfor-  
33 mance (Gough, Kiwan, Sutcliffe, Simpson & Houghton, 2003). The tutors could then  
34 plan the implementation of the ePortfolio according to their specific programmes and  
35 debate about the role of assessment and PDP in ePortfolios. It would also allow time for  
36 tutors to engage in PDP for themselves, which would then increase their confidence and  
37 help them when introducing students to the concept and supporting students (Betts &  
38 Calabro, 2005). Tosh and Haywood (2005) suggest that if tutors can show their own

1 portfolios, it will encourage students to engage with ePortfolios. Tutor networks and  
2 forums could be used as a means of assisting in providing staff with support and  
3 encouragement. For example:

4 ... I think there's got to be interlinks with other colleges that would be great and see what  
5 everybody else is doing ... (tutor 7, group 2).

6 Technical departments may also wish to brief tutors in staff development events about  
7 how they are implementing and supporting the ePortfolio system and addressing issues,  
8 such as data protection. The aim of such institutional staff development would be to  
9 support tutors to develop a complex and rich picture of the role and purpose of the  
10 ePortfolio in the learning environment and to improve learner engagement.

11 Finally, all tutors agreed that students should have continued access to their ePortfolio  
12 once they had completed their studies. Some felt that students would be more inclined  
13 to engage with their ePortfolio if it became a useable document post-qualification. It  
14 was again believed that this must be addressed before an institutional ePortfolio imple-  
15 mentation. Tutor 14 (group 2) stated:

16 I'm slightly concerned about what we can you know offer if we've got somebody who is going  
17 through four years and they build up this massive kind of folio for themselves of all their ideas and  
18 thoughts and then they can't take it away with them ... I think as long as we can offer the ability  
19 to take the information with them I think that's important because otherwise there's no incentive  
20 to do it.

### **Rigour of the research**

21 Qualitative research is often criticised for being anecdotal and for its lack of rigour.  
22 Throughout the data collection and analysis procedure, we sought to demonstrate that  
23 our methods were reproducible, reliable and consistent. For example, the three  
24 researchers (SM, LG and SP) sought to cross-check the emergent themes, through  
25 numerous discussions after individual analysis of the data.

26 However, it must be acknowledged that our research is limited and has a female bias  
27 because:

- 28 • it is based on interviews with tutors involved in the ISLE project, who are mainly  
29 female. The tutors were predominantly early adopters of ePortfolios, and drawn from  
30 mainly vocational programmes and non-research-intensive institutions, especially in  
31 FE. There is also a slight bias towards subject areas which have traditionally female  
32 students, such as nursing, fashion and social sciences;
- 33 • all of the researchers involved are female.

34 Also, our research has sought to illustrate tutor perspectives at a general rather than  
35 specific subject level to help guide staff developers in supporting tutors across an insti-  
36 tution in implementing an ePortfolio. Future research may wish to focus on differences  
37 between subject areas and differences when using an ePortfolio for a specific role, such

1 as summative assessment. Finally, the purpose of this paper was to report only the  
2 findings of the ISLE project from the tutor perspective. It is hoped that this can compli-  
3 ment research into ePortfolios from the student perspective.

### Conclusion

4 This paper contributes to evidence-based research into ePortfolios and addresses a  
5 current gap in the literature regarding tutor response to implementing an ePortfolio in  
6 the learning environment. Tutors from both interview groups were positive about  
7 ePortfolios despite the different roles that the ePortfolio was found to play in the various  
8 learning environments. Furthermore, tutors identified specific advantages that ePort-  
9 folios offer, such as encouraging personal development, assisting student transition and  
10 supporting reflective practice. Pedagogical and technical concerns, many of which have  
11 been identified in current literature, were raised, however, including lack of tutor  
12 knowledge about using ePortfolios to support the process of personal development and  
13 general understanding of reflection. Crucially, the tutors suggested ways of overcoming  
14 such challenges, emphasising the need for greater institutional commitment, struc-  
15 tured training, protected staff development time, forums for staff-to-staff discussion,  
16 greater guidance for students regarding the role and purpose of an ePortfolio in their  
17 studies, with regular reinforcement of this guidance by teaching team members, and  
18 the provision for alumni access to ePortfolios. Accepting the limitations of our study, we  
19 recommend further research, for example, holistic research which examines the use of  
20 ePortfolios from both the student and tutor perspective. Such research could, for  
21 example, determine if students, postgraduation, have used their ePortfolio to improve  
22 employment prospects.

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