2012-12-10

Exploring Supports Provided for Student ePortfolio Development in a Professional Development Context

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Recommended Citation

Exploring supports provided for student ePortfolio development in a professional development context

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Abstract

This small scale study aimed to explore and establish if support strategies implemented to enhance student ePortfolios were helpful to students and to identify useful ways of supporting ePortfolio development with future cohorts of students. This action research study was informed through focus group discussion and individual interviews with students.

The importance of reflection for the development professional practice and of creative abilities is discussed. The substantial benefits of creativity within education are investigated and characteristics of creativity that might be developed with students' ePortfolios are revealed. Specifically this paper seeks to foster Crafts (2011) four characteristics of creativity, pluralities, playfulness, possibilities and participation within ePortfolios, through student engagement with multimedia and peer-learning.

Findings describe how support strategies were perceived by students and if the activities were supportive of reflection and creativity. Recommendations for the future support of the ePortfolio will involve an increase in support for peer-learning; more support on reflective writing; workshops on developing artefacts with multimedia; exploration of meaning and characteristics of creativity with students.

Exploring supports provided for student ePortfolio development in a professional development context

Contents

Introduction

The MSc in Applied eLearning programme at Dublin Institute of Technology (DIT) is a two-year part-time programme, within which participants are required to develop ePortfolios to demonstrate their continuous learning on the programme. A previous exploratory study found that student ePortfolios were lacking in several areas: content; deep learner reflection; creativity; artefacts developed via multimedia; and peer-participation. In order to explore and address these issues I designed an action research project running over two years (2011-13, Appendix 1). During the first cycle (2011-12) of this ongoing study I developed and implemented a series of activities to support ePortfolio development with first year students of the MSc programme. This small scale study aimed to explore and establish if changes implemented to support student ePortfolios were helpful to students and also to identify useful ways of supporting ePortfolio development with future cohorts of students.

This study also provided me with the opportunity to pilot certain approaches to data collection and analysis. As a result I have used this study as an opportunity to reflect on my research practices, specifically those of data collection and analysis in order to design better research techniques and processes for the future.

This small scale study consisted of one focus group discussion (FGD) and two individual interviews with students. I also made reflective notes after the FGD and interviews and drew on these reflections during the analysis phase. Importantly the findings from this study will inform the next cycle of changes for supports in ePortfolio development within the larger action research project.

Background to research

I am an educational developer providing pedagogical and eLearning support to lecturing staff at my institution. Within this role I coordinate and teach on the MSc in Applied eLearning programme. The student cohort of this programme are comprised of lecturers from my institution, private sector trainers and independent training consultants wishing to professionally develop in the areas of elearning, teaching and training practices.

Engagement in reflection on professional practice is a major and ongoing requirement for students of the programme. To facilitate this, ePortfolios have been implemented so that students can record their assessed work on a continual basis, reflect on their continuous learning and make connections with their everyday practice.

Importance of Reflection for Professional Practice

Reflective practice enables learners to 'stand away' from problems arising and come to clearer understanding (Brookfield, 1995). Bolton (2001) states that reflection is useful when undertaken alongside discussions with peers, examination of appropriate literature and texts both within and external to the practitioner's own discipline. With this in mind the ePortfolio was proposed as a tool for evidencing learning and encouraging reflection on the MSc programme. Using the ePortfolio we aspired to shift from, as Klenowski *et al* (2006, p. 276) advocate, "*the collection of evidence to a focus on the analysis and integration of learning*" across the modules of the programme.

Research by Plaisir et al (2011) and Logar et al (2007) suggest ePortfolios add this further reflective layer to learning, fostering meta-cognitive reflective practice where students look back at achievements, question assumptions, and commit to improvement and change. Similarly Hallam & Creagh (2010, p. 181) state that "*the ePortfolio, as a process, allows learners to move beyond what they have learned to consider how they have learned and to understand the connections inherent in the creative process of learning*". However McIntosh (2010) warns against reflective practice that impedes student learning when students try to emulate and adhere to models of reflection rather than being truly self-directed about their own learning journey.

Exploring the Link between Creativity and Reflection

The development of reflective practice is a key component in development of creative abilities (Sternberg & Lubart, 1995; Jackson, 2006). Also Gibbs (1988) cycle of reflection involves identifying and solving a problem draws parallels with the creative application of the imagination in devising one's own solutions to problems (Cottrell, 2003; Lowry-O'Neill, 2011; Nordstrom & Korpelainen, 2011). Jackson (2006) urges that higher education play a more substantial role in supporting students in developing their

awareness and understandings of their own creativity, leading me to next explore the importance of creativity in student learning and appropriate activities to foster creativity.

What is Creativity and Why is it Important?

Researchers on creativity agree that it is an important but complex construct (Villalba, 2010; Lowry-O'Neill, 2011). Developing creativity of students is said to prepare students "*for an uncertain and ever more complex world of work; a world that requires people to utilise their creative as well as their analytical capacities*" (Jackson, 2006). Creativity involves divergent thinking skills, decision making (Sternberg, 2006), the capacity to give many answers to a similar problem and adaptability to deal with challenges arising (Villalba, 2010). From an economic point of view governments seek to increase creativity as it produces growth founded on entrepreneurial ideas (Villalba, 2010). In education nurturing of creativity leads to self directed, motivated learners fostering life-wide creativity (Craft, 2010).

While Villalba (2010) cited difficulties in determining the exact role of education in enhancing creativity, Sternberg's (2006) belief is that creativity is as much a decision about an attitude toward life as it is a matter of ability and believes students can be taught to think more creatively. Being a creative individual in the learning environment takes courage on the part of the student as risks are high when associated with assessment (Barrett & Donnelly, 2008). However Nordstrom & Korpelainen (2011) and Craft (2010) assert that creative individuals can be fostered given the right conditions and supported environment and learners will feel secure to express themselves in a creative way in the right environment (Villalba, 2010).

Craft (2010) describes creativity as a social process, dependent on participation in particular kinds of communities or environments; she asserts that a creative education involves engaging with four characteristics: pluralities, playfulness, possibilities and participation. Similarly Seel's seven conditions for creativity as cited in Lowry-O'Neill (2011, p. 486) are important in generating a space for creativity: *"(1) connectivity; (2) diversity; (3) rate of information flow; (4) lack of inhibitors; (5) good constraints to-action; (6) positive intention; and (7) watchful anticipation*".

With these conditions and characteristics in mind I endeavoured to build a learning environment for ePortfolio development conducive to nurturing creativity enabling learners to take risks in expressing their learning; encouraging them to connect with and 'participate' with other students; encouraging 'play' with diverse technologies and to become enthusiastic and excited about the 'possibilities' of technology and tools for learning. Activities to support these characteristics are discussed further in this paper and outlined in Appendix 2.

Common Issues in ePortfolio development

While research shows that ePortfolios can support reflection certain studies have highlighted that students found processes of reflection within the ePortfolio as overburdening them with extra layers of work (Ruiz et al, 2009). Plaisir et al (2011) findings indicated that students needed adequate time to enable development of ePortfolios. Taking this into account, activities to develop the ePortfolio were embedded and integrated with ongoing activities in other modules of the programme assisting additional student workload.

Interestingly, Cheng & Chau (2009) report that while reflection is widely viewed as a central component of the portfolio process, they also draw attention to some concerns about students' motivation and quality of their reflective practice. This correlates with findings of exploratory study preceding this action research study highlighting concerns surrounding students' ability to engage in deep reflective practice. As well as concerns with reflective practice, the exploratory study highlighted that the ePortfolios lacked creativity which specifically could have been demonstrated through the use of multimedia for content and peer-participation. Also highlighted in the exploratory study were student frustrations with the technology for ePortfolio development, correlating with findings from other studies (Plaisir et al, 2011; Nielsen et al, 2011).

Therefore as a result of findings from literature and the exploratory study it was essential to build supports and guidance for students using the ePortfolios so that their reflective practice and writing could grow and develop throughout the programme.

Building Supports for the ePortfolio

Many studies involving implementation of ePortfolios describe the crucial need for initial involvement and careful planning (Plaisir et al, 2011; Ruiz et al, 2009). Lee (2005) and Ruiz et al (2009) recommend coaching and provision of constant guidance, training, and support, so students develop an understanding of the ePortfolio and develop abilities for reflective practice within the ePortfolio.

Barrett & Donnelly (2008) note that pedagogic strategies are needed to arouse the imagination and engagement of students and that assessment, one of the most important influences on learning, needs to be constructively aligned (Biggs & Tang, 2007) with learning outcomes which encourage creativity and reflection. Therefore advance planning and development of appropriate activities to nurture creativity (Sternberg, 2006) that support collaboration, problem solving and articulation of reflection (Gibson, 2010) were designed. Similar to Bolliger & Shepherd's (2010) study it was decided that activities such as student induction, peer and tutor feedback and time for revision would be devised to encourage deeper reflective practice, creativity, enhanced content development, feedback and peer-participation. Activities to encourage the use of diverse technologies such as video editing, screen casting, podcasting were also introduced to students. The full sequence of activities for ePortfolio support and development are outlined in Appendix 2.

Research question

Research Aim: to explore and establish if support activities implemented were helpful to students in developing their ePortfolio and to recommend useful ways of supporting ePortfolio development with future cohorts of students.

The primary research question is:

1. Did students perceive that the support activities provided were useful in helping them develop the ePortfolio?

As part of this I also want to explore:

i.   If the students perceived that the ePortfolio held a useful purpose as part of their learning on the MSc programme.

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ii. If the supports provided to students were helpful in developing their ePortfolios particularly in relation to the areas of

    a. Reflective practice
    b. Creativity

iii. How further supports could be designed and implemented for students.

Research design

This small-scale study is located within a larger two-year research project designed as an action research study (Appendix 1), which has a primary aim of improving student ePortfolio development by systematically investigating the learning and teaching activities that support ePortfolios contributing to future modifications of practice (Norton, 2009). Fundamental to this approach is an honest critique of my own teaching practices, identification of strengths of strategies in place as well as areas that need improvement.

Critics of action research claim it to be "*idle self-contemplation*" (McNiff, 2010), however other researchers assert action research to be a form of deep reflective practice (Greenbank, 2007) providing a rigorous and systematic research approach for educational enquiry. I consider that action research is a suitable approach as it enables understanding of the context, but also endeavours to make influential changes to the focus of the research (Robson, 2011).

This small scale study is the first cycle of the action research study (Appendix 1) and is informed by previous findings from a 2011 exploratory study which recommended actions be taken to improve supports for ePortfolio development. This cycle will enable me to understand the current context and allow me to recommended future purposeful action (Denscombe, 2010) within cycle 2.

This research is underpinned by a critical theory perspective but also influenced by constructivist and interpretivist epistemological beliefs (Crotty, 1998). This research philosophy recognises that I, the researcher, play a part in the research as I elicit responses from my participants and interpret meanings from their answers (Cresswell,

2011). It is intended that the findings from this study will be used to inform future implementations of ePortfolio support for students of the MSc programme. As this research is small scale and set within a distinct context, knowledge produced from this research may not be generalisable to other contexts (Robson, 2011). However it is hoped that through broader dissemination of this study that similar projects could learn from the findings and from the models of support in place within this context of student ePortfolio development.

Within this small-scale study I wanted to gain knowledge of student's perception of the supports provided for ePortfolio development. The focus group was chosen as it was deemed to provide the opportunity for busy students to contribute to this research in an efficient and timely manner (Stewart et al, 2007) and generate a rich exchange of ideas enabling participants to respond and comment (Peterson & Barron, 2007). It was hoped that students would feel comfortable discussing and drawing on each other's experiences within a group setting. Time constraints determined the availability of many student participants for the focus group and fortunately two other students made themselves available for interview at other times.

The focus group and interviews were carried out in a semi-structured manner. I wanted to explore '*a shopping list of topics*' (Robson, 2011, p. 285) with the participants but I also wanted to give freedom to participants to discuss areas that they believed to be important in the support of their ePortfolio development.

This focus group and one interview were audio-recorded and data was stored securely in a locked cabinet at my office.

Challenges of being an insider researcher

I recognise that I carry dual roles of being tutor of student ePortfolios and that of an insider researcher on this project. Brannick and Coghlan (2007) support the roles of researchers who are immersed in the research context and I believe that my rich background knowledge of this context benefits the research process. However I acknowledge criticisms existing that this closeness can be seen as problematic (Brannick & Coghlan, 2007; Robson, 2011) and I need to be aware of creating distance from the

context *"in order to see things critically and enable change to happen"* (Coghlan & Holian, 2007).

When planning towards the focus group and interviews I was acutely aware that I would need to gain honest and critical opinions from the participants to order to develop valid findings informing the larger action research project. I endeavoured to engage a researcher external to this study or another member of the programme team to facilitate the focus group and interviews, but due to resource constraints none were available.

As I am the assessor of the ePortfolios I was concerned that participant feedback could be biased as participants would want to portray their positive support for the strategies I had in place for ePortfolio development. To guard against uncritical feedback and to assist reliability of data I asked students to suggest new ideas for future ePortfolio supports, enabling them to think critically on what supports had worked or not worked for them and to suggest activities that would they deem more suitable for students in the future. Also over the past year I have endeavoured to create a learning environment where students are encouraged to provide constructive and critical feedback on teaching practices. I would hope that this has provided a strong foundation where students would feel 'safe' to reveal their honest opinions.

In action research, approaches to ensuring relaibility and validity occur through review and reflection (Coghlan & Brannick, 2001). McNiff (2010) asks how the judgements made by the action researcher are reasonably fair and accurate. I hope that through engaging in my own reflective practice on the research (Brannick & Coghlan, 2007) that I have explored my strengths and weaknesses as an insider researcher helping me to draw reliable findings and further informing my future research practices. Lastly I have planned to present the findings to a critical friend (Whitehead & McNiff, 2010) on the MSc programme team, in order to ensure trustworthiness and eliminate bias (Golafshani, 2003).

Ethics
The students are participants in the research and they have been made aware of this action research approach since the outset of their academic studies. As this study is part

of an ongoing larger action research project my institutional ethics committee was made aware of the study and ethical permission was sought from my head of department. I also received ethical approval from my supervisor and tutor for the use of data towards this paper 'Methods of Enquiry 2' as part of my Educational Doctorate studies.

The BERA (2011) ethical guidelines and my institutions ethical guidelines (DIT, 2011) note that it is the responsibility of the researcher to protect study participants from harm and to keep participants fully informed about the procedures and the purpose of the research. Therefore I sought informed consent (Robson, 2011) from the participants by providing a participant information sheet (Appendix 3) and consent form (Appendix 4). These included details on the purpose of the larger action research and this small scale study; how I planned to collect data; how the data would be used to inform future support strategies for student ePortfolios informing the next cycle of this action research project; and how confidentiality of participants would be respected and that participants could choose to could to opt out at any time.

Data collection

Data collection was facilitated through one focus group discussion (FGD) and two individual interviews with students. Before the end of the semester all fourteen students on the 1st year of the MSc programme were invited to attend the FGD, but due to end of academic year work commitments, only six were able to be participate. I subsequently asked students who could not attend if they could be available for interview. As a result one student agreed to be available for a face-to-face interview, and another student volunteered to be interviewed over the phone for the study.

Keeping in mind Stewart's et al (2007) recommendation of not including too many questions and using subtle indirect approaches to questioning I developed some semi-structured questions established from the aims of the research (Robson, 2011) which would attempt to retrieve information pertaining to the support of the ePortfolios. At the FGD and interviews[1] the students were given copies of the semi-structured questions (Appendix 5) in order to introduce and stimulate discussion (Peterson & Barron, 2007).

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[1] For the phone interview I emailed a copy of the questions to the student prior to interview

The students were given a few moments to read the questions, and then I started a general discussion based around the questions provided. At the end of the FGD and interviews I asked the participants if they felt there was anything that I had not discussed that they thought was important. The focus group and face-to-face interview were audio-recorded and transcribed. Notes were taken from the phone interviews as audio-recording was not possible. After each episode of data collection I noted down my own reflective comments.

Data analysis and interpretation

I analysed the data using the 6 phase guide recommended by Braun & Clarke (2006).

Phase 1: familiarising yourself with the data

Phase 2: generating initial codes

Phase 3: searching for themes

Phase 4: reviewing themes

Phase 5: defining and naming themes

Phase 6: producing the report

I used the thematic analysis software NVivo to code the data. While NVivo provides the opportunity to codify audio data (Russell & Wainright, 2010), on reading Braun & Clarke's recommendations I decided that by transcribing the audio data I would begin to immerse myself in the data and effectively begin the coding process. After transcription I repeatedly read the transcripts before moving onto generating initial codes from the data. I created codes for as many categories as I could identify within the three sources of data. However as I was seeking information on pre-determined topics, I looked out for anticipated instances (Bazeley, 2009) of data relating to the students opinions on the purpose of the ePortfolio, support, reflection and creativity. This initial phase of coding provided 31 categories of data. I then refined these codes into overarching themes, and generated thematic maps (Appendix 6) which I later reviewed and defined into specific named themes. During the data analysis I also reviewed the reflective notes that I made after each collection episode in order to check the data and ensure reliability.

The themes that I refined from the data are discussed as follows:

The purpose of the ePortfolio and student motivation for engaging with it.

The majority of participants said that the ePortfolio served to demonstrate work *"a record my progress throughout the year"*. One student described it as a repository for work while another said it acted like a '*mirror*' reflecting learning.

The participants described that deadlines for continuous assessment and feedback motivated them. One participant stated that at the end of the academic year, she had a more mature ePortfolio which she was using for career reasons. Another participant described that at the academic year her ePortfolio had become a revision tool, and seeing the products of the learning in the ePortfolio in turn was motivating to do more work towards the ePortfolio.

Interestingly none of the participants explicitly said that becoming aware of their learning (Beetham, 2006) or making connections between learning (Tosh et al, 2005) was a motivation or a purpose of the ePortfolio. However in year two of this MSc programme there is a specific activity requesting that the students look back over learning and critically describe their progress with reference to the modules and their own practice.

Reflective writing and impacts on student learning

Overall it seems that the participants did see the value of writing reflections:

> *"I've never written reflective pieces before, but can see their value, as it helps me to clarify my position on things, or look at it from a different point of view, definitely a good thing , good way to see progress"*

The students claimed that they did reach deeper levels of reflection or critical reflection (Hatton & Smith, 1995) in their writing. They spoke about how their reflections presented action plans and that they used the Gibbs (1988) cycle of reflection as a model to help them achieve this.

However assessment and encouragement from the tutor seemed to be the motivating factor in getting the students to write reflections. Participants said that writing exercises were useful at the beginning of the academic year but they wanted more of these in the future. One participant requested that sample reflections be provided so they would know what to write. At programme induction students were introduced to models to

support reflective writing and example accounts of reflective writing. However taking McIntosh's (2010) view into account that too much direction to students could impede expression of individuality or critical thinking in reflective writings, I wished to be cautious of providing too much structure for reflective writing to avoid being overly prescriptive.

As a reflective practitioner I strongly advocate reflective writing as a means to come to clearer understanding (Brookfield, 1995) however I think that tension exists between students working towards fulfilling the assessment goals rather than thinking about developing an awareness of their own learning (McIntosh, 2010). As these students have one more year to complete on the MSc programme I can further investigate if the focus of their reflective writing is about meeting assessment criteria or as a tool to direct their own learning futures.

Challenges the students encountered in developing their ePortfolios

While challenges of developing the ePortfolio was a not a specific topic that I intended to explore with the participants, nonetheless it was a recurring point of discussion in the FGD and the interviews. The participants revealed multifaceted challenges: understanding the purpose of the ePortfolio, what was needed within the ePortfolio for assessment purposes; using technology for the ePortfolio; using multimedia to present information in diverse ways; and the time consuming nature of the ePortfolio work. Overall the participants expressed that despite challenges the ePortfolio was a worthwhile endeavour as reflected by this participant:

> *"It is a necessary evil! Times when I found it cumbersome, you just have to keep at it and you get better at it, I struggled with it at the beginning".*

Overcoming challenges through support provided

The support activities were specifically discussed and the participants seemed satisfied with the ePortfolio induction, technical support for the ePortfolio platform, reflective writing prompts and scaffolding and tutor feedback they were given.

However what arose most prominently from the discussion group and interview data was the focus placed on the support from their peer students. Learning by example from

others and seeing other students' use of technology in the ePortfolio gave students an incentive to try out new things in their ePortfolios. They claimed that opportunities provided for online-peer feedback and in-class presentations were valuable in learning from each other and advancing their ePortfolios. This participant said of the in-class presentation:

> " I think it fell after a module where we had a lot of stuff to show in the ePortfolio, it was good to see how others had used the ePortfolio at that time, it was a half way stage to get good ideas to do for rest of year"

Evidence from the data indicates that students were helping each other, problem solving their ePortfolio issues together becoming like a community of practice (Wenger, 1998).

Students perceptions of their creativity

I asked the participants if they thought that they were being creative with respect to the four characteristics used from Craft (2010): Plurality, Participation, Play, Possibilities (Appendix 5). The participants were able to connect their use of multimedia with the characteristic of plurality; the use of new technologies with play; and they were able to demonstrate very obviously where they participated with others. Overall however most of the participants seemed not to think of their work for the ePortfolio as creative.

> "I need to be more creative, I haven't been creative"

> "I think for the ePortfolio I particularly found it hard to be creative... I don't know if there is any way of inducing creativity"

At this point I cross-checked all of the data from these participants and found other responses from the above participants indicating examples of where they problem solved with peers in using technology for their ePortfolio. Problem solving according to Jackson (2006) is an integral aspect of creativity, however the data shows that the participants understanding of creativity seemed solely related to the visual display of artefacts, use of diverse multimedia and layout of the ePortfolio. The term 'creativity' seemed to conjure up negative beliefs about their own work; they didn't think that they were 'being creative'. Overall I think that these students were disparaging of their own creative work or perhaps had not formed their own understanding of what creativity is. I believe this to

be an important finding and I aim to pursue a critical exploration of creativity with the students in the future.

Suggestions about future changes for ePortfolio support

The students had plenty of recommendations for supports to assist future students developing ePortfolios. Suggestions were as follows: multimedia and technology workshops *"How to do a Wordle, do a podcast, some training sessions, how to do a few small practical things"*; further opportunity to see exemplar ePortfolios were requested and more supports for reflective writing were asked for. Also some participants said that more recognition should be given to the time consumed by the ePortfolio as part of the overall workload in the programme. This comment has led to the programme team to consider increasing the amount of credits available for the ePortfolio module within the MSc programme.

Reflections

I believe that the FGD and interviews were useful methods in eliciting information about the supports provided for the ePortfolio development, reflective practice and nurturing of creativity with the students. I aim to use the findings to work towards making improvements in ePortfolio support activities for future cohorts of students.

I thought that the data from the FGD was particularly rich as the participants listened to one another's views, engaged in group discussion and voiced different opinions. This reflected a social constructivist means of building knowledge together on the topics for discussion. The interviews, while valuable to this study, lacked deeper comments that were made in the FGD, perhaps because the group dynamic allowed ideas to be bounced around (Peterson & Barron, 2007) and enabled critical thinking on their opinions towards the topics discussed. In future I think that FGDs are the most favourable means to gather data but in this situation time constraints nearing the end of semester allowed only 1 FGD. In future I aim to organise at least 2 focus groups so that all students can be invited and included at a time earlier in the semester.

On reflecting on the FGD and interviews I revised Robson's (2011) advice on facilitating semi-structured interviews. I realised that my questioning approach was quite often

biased asking 'loaded-questions' of the participants. In future I will need to practice phrasing questions in a more objective manner. I presented the findings to a critical friend, (a member of the MSc programme team); however in future I will also present my planned data collection processes (questions and methods of analysis) to the critical friend for comment.

Also while I set out to capture information regarding the ePortfolio supports provided to students, the data provided me with extra valuable information about student awareness of creativity. This correlates with what Bryman (2007) alludes to in social research, that the methods cannot be completely subservient to the research question and Robson's (2011) philosophy that social research needs to be flexible in design. As a result of this flexibility I gained new information on student's perceptions of creativity which I will explore and develop in the future.

To conclude my reflections, as the tutor and assessor of the ePortfolios I am very aware of the excellent work completed within the student ePortfolios. However the FGD and interview data indicate students criticising their work. While it is good that the students are making plans for the future and suggesting changes they will make, it is also very important to celebrate the work completed. In future I hope to positively reinforce the excellent work contributed by the students towards the ePortfolios and organise a workshop or event to mark this.

Conclusion and moving forward with findings

This research study aimed to explore and establish if support activities implemented were helpful to students in developing ePortfolios and to recommend useful ways of supporting ePortfolio development with future cohorts of students. The findings from this study indicate a number of recommendations for the future support of the ePortfolio informing the second cycle of action research commencing in September 2012:

- Peer support between students is held in high regard; this should be continued and encouraged. I would like to encourage a community of ePortfolio participants where they solve problems or issues associated with the ePortfolio together. This could be facilitated face-to-face and online.

- More support on reflective writing will be provided at various times throughout the academic year, with an intention of incrementally supporting reflective writing in order to get students to transform from descriptive narratives toward critical reflections.

- Some workshops on developing artefacts with multimedia will be timetabled. I plan to structure this in a student centred way, getting students to offer their knowledge or expertise on a technology or tool to others. This can be recorded via a podcast or screen cast and then be offered to future students.

- Creativity is a concept that is not well understood by the students. However in the past few months I have developed a module on 'creativity and critical thinking' and I have suggested that this module be validated for recognition on the MSc programme. This module could work towards involving students of the MSc in critically thinking about their learning and increasing their awareness of creativity.

- Much time and hard work goes into the ePortfolio by the students, I have started programme team discussions on increasing the credits given to the ePortfolio to recognise this substantial work as part of the overall MSc programme.

Finally, as I work on the MSc programme with other team members; these recommendations shall be passed to them for their discussion and agreement so that I can begin the next cycle of action research in September. While this study has been completed within the context of a specific group of postgraduate students I believe it could be of interest to other similar projects such as those who wish to learn from the findings or need to investigate models of ePortfolio support. Therefore for wider dissemination purposes I wish to make a submission of this study to a conference and to the International Journal of ePortfolios.

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Appendix 1 – Cycles of Action Research Project

Timescale	Activity	Cycle of action research	
Jan – May 2011	Exploratory study: Investigation of student ePortfolios and supports provided for 1st year students	Preparatory stage	
June/July 2011	Findings, recommendations for future improvement	Preparatory stage	
Sept 2011 – May 2012	Implementation of activities to support ePortfolios	Cycle 1	
Sept 2011- May 2012	Researcher reflections on and review of support activities.	Cycle 1	MOE 1: small scale research design, proposed data collection, future intentions for findings
May 2012	Investigation of supports – were they effective (Student questionnaire, focus groups...)	Cycle 1	
June-July 2012	Findings and recommendations	Cycle 1	
Sept 2012- May 2013	Implementation of activities to support ePortfolios	Cycle 2	
Sept 2012- May 2013	Researcher reflections and review of support activities	Cycle 2	
May 2013	Investigation of supports – did they work (Student questionnaire , focus groups)	Cycle 2	
June-July 2013	Findings and recommendations	Cycle 2	

Appendix 2 - Support activities for ePortfolio 2011-12

	Support implemented	Intended purpose	To support:	Student Activity
Week 1	EPortfolio induction workshop (led by researcher and coordinator of ePortfolio)	To describe purpose of ePortfolio to students. To showcase examples of previous ePortfolios	Awareness and understanding of ePortfolio. Develop writing skills	Exploring other ePortfolios. Writing activities: prior learning and motivations.
Week 2	Reflective writing support (led by researcher and coordinator of ePortfolio)	To encourage and foster critical reflective practice on learning	Supporting reflective practice	Writing activities: reflective blog post scaffolded by Gibbs cycle reflection (Gibbs, 1988).
Week 3	Workshop introducing Mahara ePortfolio tool (led by researcher and coordinator of ePortfolio)	To get the students using the ePortfolio software tool (Mahara) and answer technical questions	Supporting technology skills	Students upload written activities from previous activities into ePortfolio
Week 7	Exploration of different multimedia media to encourage video, imagery as representations of learning.	To encourage representation of learning by other means rather than just text. Investigation of video, mind-mapping, imagery, animation, screen casting etc.	Supporting technology skills in developing artefacts	Students embed artefacts such as imagery, video into ePortfolios
Week 11	Online peer and tutor feedback and support	To encourage peer-engagement , students learning from each other, sharing experiences Tutors providing timely feedback and support for students at initial stages of the programme	Development of reflective practice through feedback	Students divided into 4 groups, each assigned a tutor. Each group posted comments on what they liked about each other's ePortfolios so far, and ideas for improvement.

Week 18	Student presentations of ePortfolios	To encourage sharing of learning experiences of the programme half day through the academic year to encourage peer-engagement sharing of experience, learning from peers	Development of reflective practice through feedback	Students demonstrate their achievements with ePortfolio, and state further work and directions. Peer and tutor discussion also.
Week 20	Students invited to Year 2 presentations	To show examples of ePortfolios in year 2	Peer-engagement and learning	Students ask questions about ePortfolios, generate ideas for ePortfolios, build relationships with year 2 students
Week 36	Formative feedback sheets (led by researcher and coordinator of ePortfolio)	To indicate to each student strengths and weaknesses of ePortfolio and what areas they must make improvements on in Year 2	Formative learning	Students receive formative written feedback from tutor/ coordinator

Appendix 3 - Participant Information Sheet

Research Title A review of supports provided to assist the development of ePortfolios within the first year of the MSc in Applied Learning.

Invitation to take part in a research project

May 2012

Researcher: Muireann O'Keeffe

I am currently undertaking doctoral study at the Institute of Education, University of London, and as part of this programme, I am hoping to conduct some research with MSc in Applied eLearning students. I am inviting you to contribute to the research project and in order for you to decide it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information and contact me if there is anything you would like clarified or if you would like more information.

What is the purpose of the study?

My proposed research is based on findings from an exploratory study (Jan –May 2011). Using an action research methodology I will implement recommendations from that study starting in September 2011. This study will examine how novel interventions in the support and development of ePortfolios can help and enhance the ePortfolio development process and product of students. I am interested in the process and the product of the ePortfolios and I will be asking for your opinions via focus groups and questionnaires in the coming months.
Ultimately I want this study to improve the process of ePortfolio development for you and future students of the MSc in Applied elearning.

Do I have to take part?

No, it is up to you to decide whether you or not to take part. You will be given some time to consider this, and I will follow up this contact to you in a few days. If you do decide to take part, I will discuss additional details with you. You will be free to withdraw at any time without giving a reason.

What are the benefits of taking part?

The research may provide valuable information to improve support for the ePortfolio development process for the MSc in Applied eLearning and generally for ePortfolio development DIT.

What will it involve?

If you decide to take part in the study, you will be asked to participate in a focus group and/or individual interviews. I propose that the focus group will take place at 1pm on the 29th of May or at another time that is convenient for you. I will alos disseminate a short questionnaire asking about specific support activities you found useful. I will also investigate the content of your ePortfolio as part of this research.

Will my taking part in this study be kept confidential?

Yes. All information that is collected from you will be kept confidential. The general findings of the research will be presented as part of a small scale research study that I am completing at the Institute of Education, University of London. Your name and personal details will not appear, and I will ensure that it will not be possible for anyone to identify you from your responses. When completed, a copy of the research will be sent to you. I will also disseminate the broader findings from this study at learning and teaching conferences in the future, your confidentiality is assured in this case also

If you have any questions, you can contact me for further information:

Muireann O'Keeffe
Learning Development Officer
Learning, Teaching & Technology Centre, DIT
14 Upper Mount Street,
Dublin 2
Tel: 01 4027872
E-Mail : muireann.okeeffe@dit.ie

Thank you for reading this and for taking the time to consider participating.

Appendix 4 – Participant Consent form

Learning, Teaching & Technology Centre
Dublin Institute of Technology
14 Upper Mount Street
Dublin 2

Title: A review of supports provided to assist the development of ePortfolios within the first year of the MSc in Applied Learning.

Researcher: Muireann O'Keeffe

1. I have read and understood the attached information sheet giving details on the research project.
2. I have had the opportunity to ask the researcher any questions that I had about the project and my involvement in it, and understand my role in the project
3. My decision to consent is entirely voluntary and I understand that I am free to withdraw at any time without giving reason and that I will suffer no adverse consequences from withdrawing.
4. I understand that data gathered in this project may form the basis of a report or other form of publication or presentation.
5. I understand that my name will not be used in any report, publication or presentation, and that every effort will be made to protect my confidentiality.

Participant's signature _____ Date _____

Participants Name in capitals)

Researcher's signature _____ Date _____

Appendix 5 - Focus group and interview semi-structured topics/questions

Aim: To review support activities provided for ePortfolio development for 1st year of the MSc in Applied Learning.

Overall question: Do the students perceive that the support activities in place were useful in developing the ePortfolio?
The FGD and interview will be semi-structured and loosely allow for discussion on supports, reflection and creativity, hopefully enabling other comments and opinions also.

Reflective writing
At the induction session you were introduced to some writing activities and blogging for reflective writing.

Have you continued to create blog posts with your reflections throughout the year?

Do you find that reflective writing helps your learning? In what way?

Looking at the Gibbs cycle of reflection (Gibbs, 1988) do you think your reflections achieve the following:

1. Analysis or evaluation phase
2. the action planning phase

Have you any other comments on reflective practice writing?
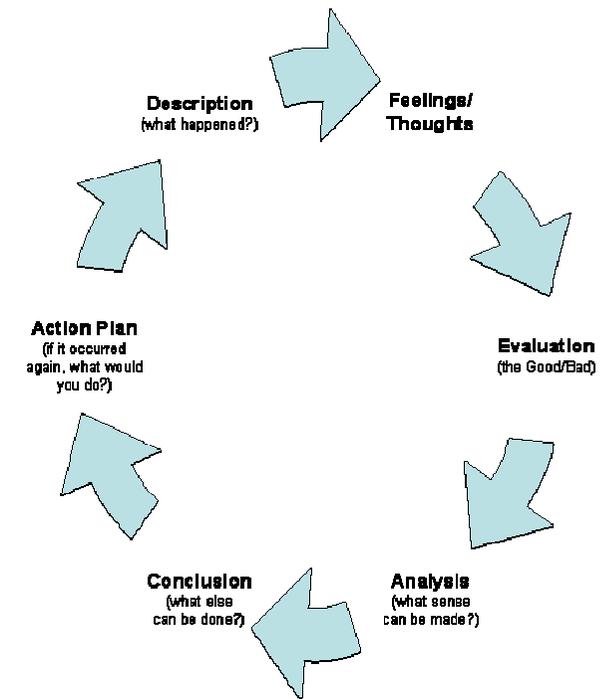
Creativity

Anna Craft (2010) defines creativity as engaging in 4 characteristics – Pluralities, Playfulness, Possibilities, Participation. We will now have a short discussion about these 4 characteristics. Look at the diagram and read the statement beside each characteristic.

1. Pluralities
2. Playfulness
3. Participation
4. Possibilities
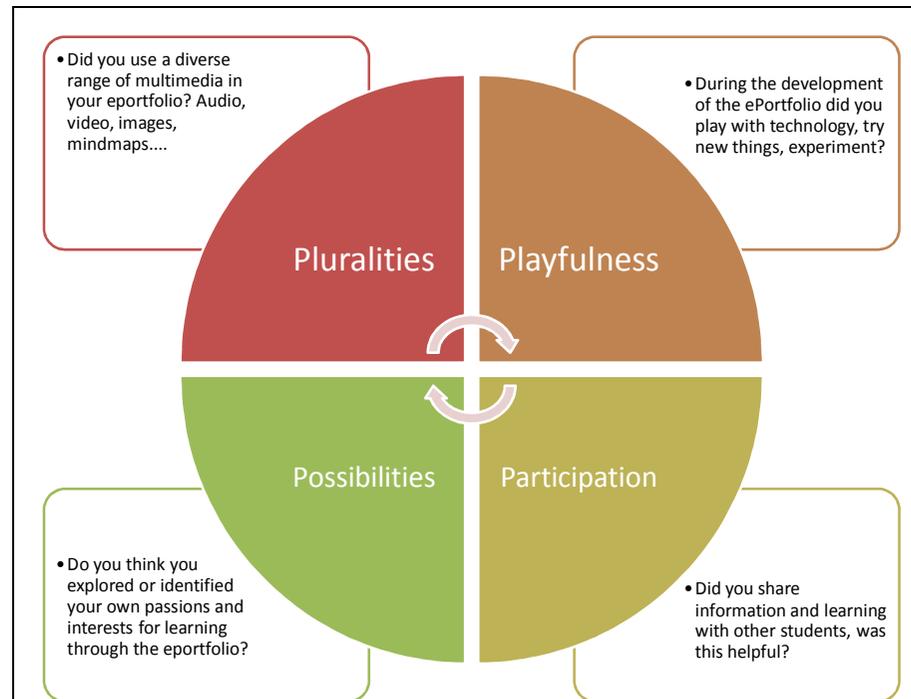
Are there any other comments that you have in relation to ePortfolio? Is there anything that you have not been asked that you think that you should have been included here?

Appendix 6 - Thematic Maps

Thematic maps were generated based on recommendations from Braun & Clarke (2006).