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How can delivery of a Digital Media Technology ePortfolio, bridge the gap between Adult and Community Education and further education, training and employment, from a tutor and student perspective? (7,446 words)

City of Dublin Education and Training Board

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Abstract

This journal paper presents a Case Study on Digital Media Technology ePortfolios in Adult and Community Education from the perspective of students and tutors. Long-term unemployed students between the ages of 18-25 in the Ballymun area, and tutors who taught a diverse range of subjects from the City of Dublin Education and Training Board were volunteer subjects in my research.

The research investigates the adoption of ePortfolios and whether they could play a vital role in delivering the Digital Media Technology 4N1858 module in adult and community education. ePortfolios could be used to store the students' key elements learner artefacts, and assist in showcasing their work for potential work-placements, internships, further education, and employment. At present the use of ePortfolios is currently only associated with third level institutions (Jafari & Kaufman, 2006).

Some of the key findings of the research questioned how the use of new and existing technologies in the classroom could facilitate learning for both tutor and student. It also questioned the availability of such facilities. The research investigated the use of open-source software, and whether it could support teaching and learning in adult and community education; in the creation of ePortfolios, and a virtual learning environment.

Keywords: Adult and Community Education (ACE), ePortfolio, City of Dublin Education and Training Board (CDETb), Further Education and Training Awards Council (FETAC), Case Study, eLearning, Information Technology (IT), Unemployment, Open-Source Software, Virtual Learning Environment (VLE).

Introduction

Through my teaching in Adult and Community Education (hereafter ACE) over the last twelve years it became apparent that students between the ages of 18-25 years of age with low education attainment, have been left confined to the complexities of the Social Welfare System (Conway, 2002) and education with no alternative options of progression (Behan, et al., 2013). Some of the key factors were lack of guidance and support if the students had not completed their Leaving Certificate. Even those who had completed their Leaving Certificate, but did not achieve the required points were often denied access to further education (Byrne & Smyth, 2010). Not reaching the required points has huge implications for the students; as they are not able to meet the standardised requirements for Post Leaving Certificate courses.

Students are facing difficulties securing sustainable employment in lower skilled areas. To bridge the gap between adult and community education, and further education and employment, technology courses are needed to equip the learners with the knowledge, skills, and competencies to use a range of digital media technologies (Skiba & Barton, 2006). In May/June 2012 a new module for Digital Media Technology 4N1858 (hereafter DMT4N1858) was launched to meet the rapidly changing Digital Media Technology industry. By providing the students with ePortfolio skills via the module DMT4N1858 there is potential to address the skills shortages in the areas of Information Communication Technology and Science (Behan, et al., 2013).

Developing DMT4N1858 ePortfolios on the commencement of a course within adult and community education, City of Dublin Education and Training Board (hereafter CDETb) could help direct the students towards building and saving their own artefacts within a free open-source online platform. This in turn could assist Further Education and Training Awards Council (hereafter FETAC) to track and monitor students' learning outcomes. The students could display their different levels of engagement and abilities, and the use of reflective practice and intellectual growth as part of their progressive learning journey.

ePortfolios could assist both tutors and students as part of the continual assessments of their work. Although research suggests that ePortfolios are now widely used, in the CDETb at present the majority of the students' work is submitted in traditional hardcopy folders. These are presented as evidence that the students' met the required learning outcomes to be verified

by the tutor, the internal and external examiners, and the FETAC co-ordinator for quality assurance. However, in the digital age, students' folders should now be based on their skills to aggregate and maintain artefacts in an electronic form to assist in their career paths.

One of the key elements of DMT4N1858 is showing how the students have engaged and developed their technological skills to target job-specific industry areas where more employment opportunities are expected to arise as the economy recovers. The ePortfolio can showcase the students' technological knowledge and validation of their technical competence. Using ePortfolios in Community Education could enable the transition from the classroom environment to further education and employment on completion of their course. Students have the opportunity to publish their ePortfolio links to potential colleges and employers. ePortfolios could therefore assist in bridging the gap between further education and employment.

Through an adult community educational environment that is safe and conducive to learning, sociocultural barriers can be broken down by developing the students' ability to interact with their peers, tutors, digital media technology, and the culture in which they live.

This research into the use of ePortfolios in ACE has taken into account that both tutors and students could benefit from training and development in key areas of technological skills. Long-term unemployed students can avail of new training programmes such as the DMT4N1858 course. Embracing technology has the potential to assist both students and tutors with the use of community ePortfolios and online skills to enable student progression to further education, internship, work-placements, and employment. This research was concerned with key fundamentals such as the lack of IT resources, the reliability of the IT resources, and in turn the proficiency of tutors in using such technologies (Gillespie, 2014).

This paper explores the research question "How can delivery of a Digital Media Technology ePortfolio, bridge the gap between Adult and Community Education and further education, training and employment, from a tutor and student perspective?." This paper reports findings from the research, including the lack of use of technology in adult and community education, and the complexities that surround how ePortfolios could be encompassed into teaching and learning. It became apparent that funding for technology in adult and community education programmes is limited hence the rationale for my research to investigate open-source

software that could host community ePortfolios with no cost to the community education providers.

Literature review

A search of relevant literature was undertaken to inform this project. This addressed the potential of ePortfolios, the place of learning theories, and the importance of tutors' skills.

Evidence for potential of ePortfolios

Satterthwaite & D'Orsi, state that “a portfolio is a collection of easily portable artefacts that serve to validate claims people make about themselves” (2003:252). One of the key elements of digital media technology is how the students have engaged and developed their technological skills to target job-specific industry areas where more employment opportunities are expected to arise as the economy recovers. The ePortfolio can showcase the student's technical knowledge and is a validation of their technical competence. Students as individuals or within a group could create a digital media technology portfolio as a fundamental part of their learning experience. McGregor (2007) highlighted the importance of skills such as group-working and problem-solving; something that was strongly evident in the existing works by students on DMT4N1858.

Recent research suggests that ePortfolios are still strongly relevant, and Hartman, (2013) discusses the fact that ePortfolios are relevant within digital media technology. This article provides an overall look at how the latest trends in technology, from past to present date, are still so relevant for the use of ePortfolios in education and employment. Hartman states that today it is assumed that all students will know how to create an ePortfolio by the time they finish college and are looking for employment (Ibid).

In considering the potential value of ePortfolios, I found the book by Flanigan and Amirian, (2006) invaluable. They give evidence that ePortfolios are of great benefit to students, and ask therefore why they are not used in adult community education systems prior to third level. If the idea of the ePortfolio being conventional for academia is a valid one, from the perspective of pathway from classroom to career, it follows that extending the use of ePortfolios to adult and community education, would assist students.

The use of e-tools could offer the students an opportunity to be intellectually challenged and stimulated while providing them with realistic insight. This is significant as these skills can be used beyond the course settings and will enhance performance in their work placement (Behan, et al., 2013).

Utilizing an open-source platform such as Yola www.yola.com, could assist both teachers and students in creating dynamic approaches to teaching and learning. It has a simple layout to host ePortfolios as it uses widgets for encompassing web tools. ePortfolios host numerous digital artefacts, allowing for the development of a reflective journal. Poore (2001) discusses the use of continual reflective practice in structuring career pathways. ePortfolios could help assess the students' engagement, and encourage them to gain their own abilities so that they become more confident and independent learners. By engaging the curiosity of the learner through digital media technology (Heick, 2013) students acquire the skills they need to survive in a complex, highly technological, knowledge-based economy.

ePortfolios and Learning Theory

Drawing on the literature discussing students' learning (Jordan, et al., 2008), I have developed a constructivist approach to my teaching. My perspective is that students need to be given meaningful tasks to guide them through their projects. In Vygotsky's theory of social constructivism, students' potential development is related to team-work and group-learning (Vygotsky, 1978). It stresses the importance of collaborative practice for students, through the exchange of social culture and drawing-upon their own prior skills.

Working in adult and community education, understanding the cognitive principles described by Gagné *et al.*, (2005) is vital for success. Gagné's nine steps - gaining attention, informing learners of objectives, stimulating recall of prior learning, presenting the stimulus, providing learning guidance, eliciting performance, providing feedback, and assessing performance and enhancing retention and transfer, all feature strongly in the delivery of DMT4N1858.

Developing the DMT4N1858 ePortfolios on commencement of a course could help to direct the students' towards building their project and tracking and monitoring their level of engagement (Harper & Quaye, 2009). ePortfolios encompass reflective practice and intellectual growth as part of the students' progressive learning journey. Flanigan and Amirian state that "digital portfolios provide a connection or a pathway, moving the student

along from the classroom environment into chosen careers” (2006:102-111). The intention of this research was to demonstrate that the students on the DMT4N1858 course could develop their own pathway to further education, training and industry related work by showcasing their ePortfolios for interviews and adding to their own professional development.

Armitage et al. (1999) argue that as learners try and adapt to a new classroom and teaching environment, the changed etiquette and structure must be made evident very quickly. Reinforcement of positive behaviour and creating an environment that is safe and conducive to learning is vital to my teaching practice. From my professional experience, it was likely that some students’ behaviour would be akin to secondary school students. It would be important to discuss adult classroom etiquette and establish a rapport with the students. Using these insights from learning theory, literature, and my professional experience, I sought to design a constructivist blended learning environment.

Importance of Tutor Skills

Unfortunately not all students get access to ePortfolios. There are a number of reasons for this, ranging from the cost of software, to the tutor/lecturer not implementing them due to their own lack of technological skills (Gillespie, 2014) and/or the students themselves not being aware of the relevance of how and why they should use them.

Having an ePortfolio is an excellent way for students in many disciplines to provide prospective employers with a glimpse of their work. ePortfolios can be used when applying for jobs in areas such as IT, graphic-design, internships, work placements, business administration, and teaching (Behan, et al., 2013).

JISC state that “ePortfolios are about people, rather than technology. The tools have to be unobtrusive, supportive, and flexible enough to accommodate the diverse needs and preferences of learners” (2008:12). ePortfolios no longer depend on fee paying software such as Mahara or Pebblepad as the e-tools and resources available on the web continue to evolve, there are more ways to create and use ePortfolios than ever before (Ibid). Digital media technology ePortfolios can take many different electronic forms such as blogs, websites, and social media tools. If an ePortfolio has a strong adult community education/academic theme it will help to ease students into the transition of creating a career ePortfolio (Ibid).

It is imperative that the tutors are given the relevant skills and kept abreast of the latest trends in technology to gain confidence in the use of interactive technology in their classrooms (Bennet, 2002). This will also enhance delivery of their modules in teaching and learning.

The literature has shown the potential of ePortfolios and the added value of constructivist theory but also the importance of tutor skills. Gillespie (2014) discussed the complexities of the barriers that are placed on tutors and students when using IT resources and how it impacts teaching and learning in an adult and community educational environment. While there is plenty of research into the use of ePortfolios at third level, there appears to be little or no research into their use in adult and community education.

Methodology

As a researcher I was influenced by Yin (2014) in his discussion on how best to use a single case study which was based on a revelatory study. The rationale for a revelatory single case-study was that at this point I had access to a cohort of students in an educational environment that would have been previously inaccessible to empirical study.

Objectives

My aim was to create and develop an online learning platform/ePortfolio using open-source software, Edmodo (Borg, et al., 2008). DMT4N1858 provided the learner with skills from existing and emerging technologies to effectively operate digital media devices in order to create digital media content (digital video/audio, social media applications and/or mobile technologies) (Carnell & Lodge, 2002).

It was imperative to factor in how digital media technology ePortfolios can be utilised in adult and community education, as a form of structured assessment (Chatham-Carpenter, et al., 2010). At present, ePortfolios are used in the third level education system, but not in ACE. As part of the delivery of the new module DMT4N1858, I introduced the use of ePortfolios to assist students in meeting the course requirements.

Initially I considered using action research but as this is based on a minimum of two reflective cycles (McNiff & Whitehead, 2006), action research was ruled out. Unfortunately I only had the opportunity to deliver the DMT4N1858 within one cycle. Action research would be valuable in further similar research for the future.

The aim of this research was to case-study how delivery of a Digital Media Technology ePortfolio could assist in bridging the gap between adult community education and further education, training and employment, from a tutor and student perspective.

Methods

The methods used to gather data for this research were online and researcher-administered surveys. There were two cohorts of participants: the first set of participants was the students and the second set of participants was the tutors. A full explanation of how the methods were implemented in relation to each cohort will be covered in this section.

Student participants

The students taking part in the DMT4N1858 course were long-term unemployed and aged 18-25 years of age. They volunteered to take part in the online and researcher-administered surveys (Guba, et al., 1998). Surveys were particularly useful for gathering data on the experiences and responses of the students. They helped identify best practices and highlighted problematic areas of the learner outcomes. Researcher-administered surveys were used, to explore students' ongoing use of their technological skills in the key areas of education, work, and industry. These surveys were read aloud to the participant and their responses documented by the researcher.

Researcher-administered surveys were used with this particular cohort of students from the Ballymun area. Although these students were not vulnerable, this approach was more appropriate as the students would not have been accustomed to meeting with researchers. This in turn helped with the accuracy of the findings.

Tutor participants

The tutor participants were employed by the CDET B and taught a diverse range of subjects in adult and community education. They volunteered to take part in the research through online and researcher-administered surveys.

I delivered a workshop to the tutors as part of the introduction to adult and community education ePortfolios and the tutors completed two online surveys. The first was completed prior to the workshop delivery, and the second on its completion.

Researcher-administered surveys were used, to identify how the use of IT resources influence their teaching and learning in the classroom and if tutors required further training and development in IT skills (Creswell, 2007).

A limitation was the small number of participants who actively took part in my online surveys and researcher-administered surveys. The researcher-administered surveys were not as successful as I hoped. The locations that I had chosen to host the researcher-administered surveys, face-to-face were problematic. The area I had selected for the tutors researcher-administered surveys was in the office of the Adult Education Centre. The office was busy preparing for the junior cert exams and the phones were constantly ringing, making it impossible to record the tutors' responses. The second limitation for researcher-administered surveys with the tutors was my timing as the tutors had completed their last term of teaching and had finished up work for the summer holidays. As a result it was not possible to administer the survey to the full cohort of tutor volunteers.

In relation to the students, I found that I should have left a bigger gap when scheduling the appointments, as when the students met each other they were shy, and just came in, answered the researcher-administered surveys, and left.

Both sets of online surveys were analysed through the use of open-source software and all the participants' responses were anonymous. The researcher-administered surveys were carried out face-to-face with the tutors and students. The data was analysed by inputting the data into Survey Monkey. In the analysis data were triangulated with the responses to the online questionnaires.

Ethics

A full application was submitted to the DIT Research Ethics Committee, and was approved.

Community Links

A full application was submitted under the umbrella of Community Links at DIT: Students Learning with Communities encompasses DIT staff and students working with community partners. My community partner was the CDET B as I was an employee teaching in adult and community education, and also a student at DIT. My application was successful. When all parties were in agreement, a community, student and DIT collaboration agreement for

Students Learning with Communities project was signed by each person. This in turn allowed each person to actively participate and be kept up-to-date on my research on a continual basis.

Implementation of the Project

As part of the implementation phase, I had to consider how best to promote and enhance the content and creation of a Digital Media Technology ePortfolio. Through research of open-source software as a tool to improve teaching and learning, I hoped to enable sharing of resources among tutors of the CDETB. I also had to evaluate how to share a community education resource in a virtual learning environment (hereafter VLE) for both tutors and students through open-source software while ensuring privacy.

Initially I had to interpret the module descriptor and assess what the requirements were. This is usually the only guidance a tutor is supplied with. It is then left solely to the tutor to interpret the module descriptor and decide how to develop and structure the course materials to equip the students to meet the learning outcomes. Where the tutor and students interact with each other, the learning trends are usually governed and led by the tutor.

While reviewing online platforms, I had to research what resources were freely available to host the online content, and could be freely accessed in a safe and secure environment for both tutors and students (Harper, 2005).

As part of my research I evaluated the following resources that might host a Digital Media Technology ePortfolio:

1. Mahara (www.mahara.org) is an open source ePortfolio however it is confusing with no defined navigation and also has compatibility issues using different web browsers.
2. PebblePad (www.pebblepad.com) is not an open-source ePortfolio and charge a licence fee per individual account and organisational account.
3. Voki classroom (www.voki.com) is not an open-source ePortfolio and charges a yearly subscription.
4. Edmodo (www.edmodo.com) is an open-source VLE both for tutors and students and allows the set-up of private accounts, while users can invite other tutors and students to access their e-portfolios.

Edmodo was selected as the VLE to support the students and tutor and further details of this will be given later. If the tutors had standardised digital repositories to work from, it would

decrease their workload and help to set a standard which tutors and students could adhere to. This could establish an appropriate level for DMT4N1858 across all learning-platforms for quality assurance, so that the tutors would not have to keep reinventing the wheel. This would help to encompass guidance on the effective pedagogical practice that is required to support the curation of digital media technology ePortfolios (Beetham & Sharpe, 2007) and might encourage the use of conventional, structured, and linear approaches.

The Module

In order to help promote the importance of adult and community education, the course was delivered in the Ballymun CDETB Adult Education Centre. The students' attendance and engagement was critical in assisting them expand their digital media skills.

Reflective online journals were used as part of learners' assessment as evidence of their work (Visser, 2010). The ePortfolios were implemented with open-source software called Yola with the intention of supporting my constructivist blended-learning model (Bennet, 2002). ePortfolios were to be used as an assessment space for each individual cohort of students. As there was no designated project topic, the students had the option to choose their own.

Examples of the students' topics

Two students mind-mapped their project ideas and decided to amalgamate their projects into one, to create an online identity called *Killjoy Gaming*. One student had an interest in astronomy and developed an online identity to showcase his skills in order to target a specific college interview. Another student came up with her project topic to review books that had been turned into movies. Blended methods were used with significant variance in detail depending on the students' individual projects. This in turn allowed me to provide the students with the relevant support methodologies and technologies in their own individual project work, ePortfolio and folder work, and to mix and match them as appropriate to achieve optimal results.

Tables 1 & 2 illustrate the assessment techniques and grading of the DMT4N1858 course.

Table 1: Assessment Techniques:

Assessment Techniques:	
Project	40%
ePortfolio/Collection of work	20%
Skills Demonstration	40%
Credit Value:	10 credits
Duration in Hours	100 hours of learner effort to include both directed and self-directed learning.

Table 2: Grading:

Grading	
Distinction:	80%-100%
Merit:	65%-79%
Pass:	50%-64%
Unsuccessful:	0%-49%

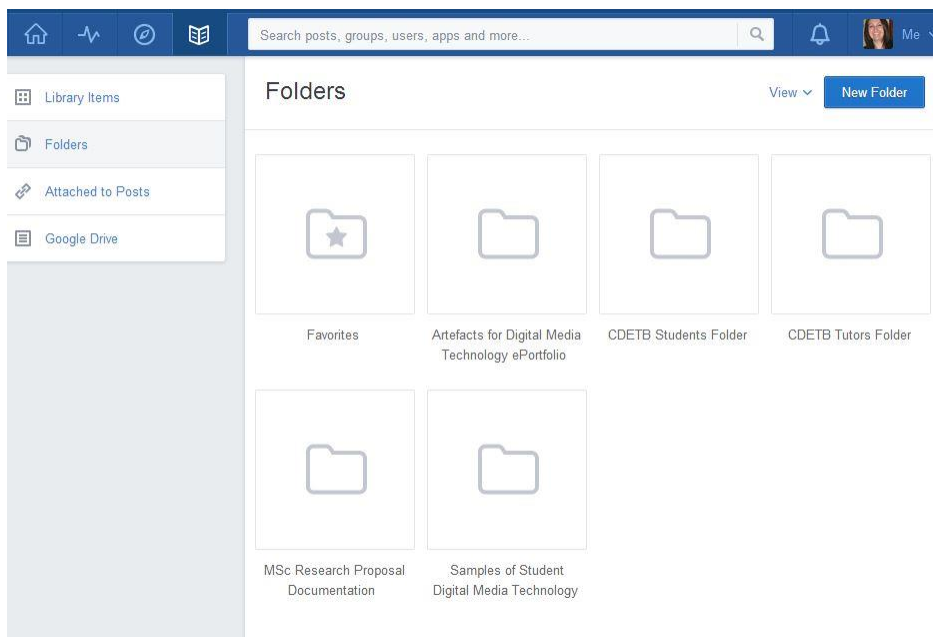
The DMT4N1858 course aimed to equip the learners with the knowledge, skills, and competence to use a range of digital media technologies in an ePortfolio, in a supervised environment, and to comprehend their uses from the perspective of the field they would be working in. Throughout the delivery of the DMT4N1858 course I was overseeing the students' ePortfolios, through continuous assessment and supporting learner-achievements with continuous feedback.

The Edmodo VLE

At the beginning of my project, I curated a DMT4N1858 VLE to host all individual groups and folders with templates, resources, and supports, and quality assurance paperwork using the online learning platform Edmodo. It also hosts artefacts, samples of students' work, links to resources, audio, video, text, photographic evidence; PowerPoint presentations, tutor resource packs and assessment briefs that are free to download.

Figure 1 illustrates the Open-Source software VLE called Edmodo.

Figure 1: Edmodo screen shot of downloadable files



I selected Edmodo as a VLE, as it provides an easy, environment for tutors and students to connect and collaborate and can be accessed by private view and invitation only. They can share content, access resources, grades and notifications, participate in polls and quizzes, engage with tools that bring the course to life through interactive learning. It allows the user to connect with other educators and recommend resources in a user-friendly environment. The resource itself is easy to navigate and, in terms of ethical considerations it is a safe and private environment. It has built-in facilities to engage the students with polls and quizzes as part of classroom discussions, awarding badges to individual students based on their performance or behaviour. Edmodo was also used to deliver workshops and training to the tutors of the CDET B. This highlighted the need to move from old digital media technology trends, and comparing them with the new, and looking at the possibility of blending them together. A collaborative environment using Edmodo to host the ePortfolio framework would need staff engagement to be successful. I curated numerous standardised templates, to be integrated into adult and community education and have made the course available online on a continual basis to assist the tutors in developing their own online modules.

The tutors submerged themselves in the resources delivered throughout the workshop, and evaluated how these technologies could be utilised by their students to develop and enhance their learning. They looked in particular at the possibilities for continuous assessment through an online digital media technology ePortfolio.

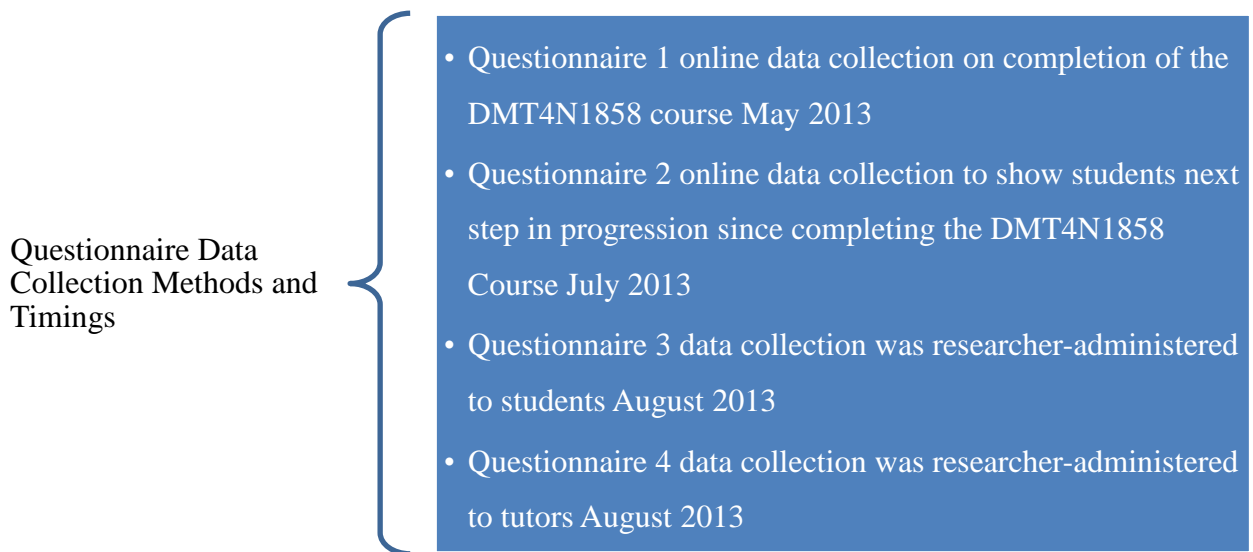
Promotion and Communication:

The tutors were invited to participate via email, and social media was used to maintain communication with tutors and students.

Findings

The following section discusses findings that arose from data analysis and are presented below in the sequence they were carried out.

Figure 2: Questionnaire Data Collection Methods and Timings



Questionnaire 1

All online student surveys were anonymous. The first was carried out when the students had completed the DMT4N1858 ePortfolio Course. The students that voluntarily participated in the surveys were all long-term unemployed and their age range was 18-25. Five out of nine students completed the online survey. Four respondents were male and one was female. All of the students came from the Dublin areas between Dublin 5, 9 and 11. These students are from disadvantaged areas of Dublin and were my desired target group for the survey.

The questionnaire asked students what was their motivation for attending the course every day. The responses are shown in Table 3.

Table 3 Students' Motivations for Attending the Course:

Wanted to improve job prospects	3
Enjoyed attending class each day	3
Wanted to improve prospects of getting a college place	2
Wanted to improve prospects of securing an internship	1
Somewhere to go	1
Had no choice	0

The result indicates a range of reasons for attending the course, with no respondents saying they had no choice.

The students were asked whether they thought the course was a good starting point for college, work placements, internships, or jobs. They could indicate agreement or disagreement with this statement. All students either agreed or strongly agreed with this statement, suggesting that the course was well-suited to its aims.

All five respondents said they enjoyed using the online resources. Students were asked to rate resources used to deliver the course, one being the lowest and ten the highest. The responses indicated ratings between 8, 9, and 10 which suggest that they enjoyed using new resources. The students were asked had they used any of the online resources of social media since finishing the course. All five respondents said yes. The students were asked to rate how easy or difficult it was to use the online resources throughout the duration of the course and the response varied between average responses – easy to very easy.

The questionnaire asked the students whether they found the PowerPoint presentations or interactive demonstrations more helpful, Table 4 shows the results here, with most students finding the interactive demonstrations more helpful. This suggests that the interactive demonstrations held the students attention, with a hands-on practical approach.

Table 4 Student responses to different teaching methods.

PowerPoint Presentations	1
Interactive Demonstrations	3
No response	1

The students were asked to rate between one and ten, the levels of support they were provided with throughout the duration of DMT4N1858 by their main tutor, with one being the lowest and ten being the highest. All four responses rated the levels of support at ten.

When asked if they would recommend the course to their friends and family, all five students said yes.

The students were asked to indicate what category of skills development best described them on completion of the DMT4N1858 ePortfolio Course. Table 5 shows the results.

Table 5, Category of skills development on completion of DMT4N1858

	Vey Insignificant	Insignificant	Neutral	Significant	Very Significant
College	0	0	2	1	1
Work Placement	1	0	2	1	0
Internship	1	0	3	0	0
Jobs	1	0	3	0	0
Unemployed	1	0	2	1	0

The responses in Table 5 indicate that students varied in their answers and were unsure of their technological abilities with regard to college, work placements, internships, and jobs.

Questionnaire 2

The second set of student surveys were online and anonymous, and showed the students' progression six weeks after completing DMT4N1858. Four out of nine students completed the survey. Although the profiles are similar to the first survey, it was not possible for me to confirm that participants were the same.

The questionnaire asked the students to indicate their current status on completion of the DMT4N1858 course. The results are shown in Table 6.

Table 6 Current status on completion of the DMT4N1858 course

Unemployed	2
College	1
Internship	0
Job	1
None of the above	0

The questionnaire asked students whether the DMT4N1858 course changed their perspective of how technology can be used. All four respondents said yes.

The questionnaire asked the students to indicate if they have been unemployed since the course finished, and to indicate if possible the reasons why. The results can be seen in Table 7. While all four respondents replied ‘none of the above’ unfortunately they did not put any additional comments with their responses to explain this. However, it does indicate the support systems that are currently in place were not needed by this particular cohort at this time.

Table 7 Reasons for Unemployment.

College wasn't an option	0
Wasn't offered a place in college	0
Lack of financial support	0
No placement for internship	0
Not enough qualifications to get a job	0
Need to up-skill	0
None of the above	4

The students were asked if they had progressed on to college for further education, and if so, at what level? One student progressed on to Level 6.

Students were asked whether they gained employment with the skills that they had acquired on the course. One student said yes and two students said no.

The students were asked if they had used their Digital Media Technology ePortfolios to showcase example of their work in interviews for college, internship, or work. One student said yes, for work. On the questionnaire this question was not a required question to be answered and it is possible that some of the students skipped answering the question as there was only one response.

Questionnaire 3

The third questionnaire was researcher-administered: I asked the questions directly to the student and noted their responses. All of the students came from the Dublin areas between Dublin 5, 9 and 11. Although the profiles are similar to those in the first survey, I cannot be sure they were the same people.

Each student was asked how well the DMT4N1858 ePortfolio prepared them for further education, work placement, internship, and employment.

Table 8 The Success of ePortfolio in Preparing for the Future:

Questions 4, 5, 6 and 7 Below:	Extremely well	Quite well	Fairly well	Mildly well	Not well at all
How well did the Digital Media Technology ePortfolio prepare them for further education?	1	2	1	0	0
How well did the Digital Media Technology ePortfolio prepare them for Work Placement?	0	2	1	1	0
How well did the Digital Media Technology ePortfolio prepare them for Internship?	0	2	2	0	0
How well did the Digital Media Technology ePortfolio prepare them for Employment?	0	2	1	1	0

The questionnaire results indicate that from a student’s perspective Digital Media Technology ePortfolios directed them more towards education and internships.

Each student was asked the following whether DMT4N1858 and their ePortfolio, bridged the gap between further education and employment. Three students said yes and one said no. One of the students gave a comment that he gained useful keyboard skills and an overall better knowledge of computers.

Each student was asked whether they felt they would have been less equipped for further education/work placement/internship and employment if they had not taken part in DMT4N1858. Three students said yes, none said no and one student opted to skip the question.

Questionnaire 4

The tutor survey was a researcher-administered survey in which I asked the questions directly to the tutor directly and filled out their responses. The tutors that voluntary participated in the surveys since completing the Digital Media Technology ePortfolio Course workshop were employed by the CDETb, and were teaching in community education.

The opening question in the survey was, how often does your current employer provide you with training to update your technological skills? Table 9 shows the results here.

Table 9: Provision of Technology Training

Almost never	2
Once in a while	2
Sometimes	1
Frequently	0
Almost all the time	0

Each tutor was asked whether the IT resources in their centre were adequate to allow the use of teaching technology such as ePortfolios. Two tutors said it was, but three said it was not. The responses to question 3 and 4 have been displayed together in a table format and the results are displayed in Table 10.

Table 10: Adequacy of Teaching Technology

Questions 3 & 4	Yes	No	Comment
Question: 3 Have you been adequately trained in the use of teaching technology such as ePortfolios.	1	4	One tutor suggested having more training sessions.
Question: 4 Are resources and training adequate to allow this? Do you think the use of ePortfolios would complement your teaching styles?	4	1	“They could be helpful in some instances, but generally students IT skills may not be adequate. In many of the modules I teach, technology really isn't a priority, even in the workplace i.e. childcare”

The tutors were asked what were the challenges they faced in utilising technology in teaching and learning

The responses varied from lack of training and resources, where technology is a challenge to some of the tutors, to not having continuous access to rooms fitted with computers and Wi-Fi. They also felt they needed more training in the use of Whiteboards and ePortfolios. Problems such as interrupted internet connection in the school, and un-networked printers also caused difficulties for the tutors.

The responses to question 6 and 8 have been displayed together in Table 11.

Table 11 Problems with Utilising Technology

Questions 6 & 8	Extremely useful	Very useful	Moderately useful	Slightly useful	Not useful	Comment
Question 6: Do you believe that technology such as ePortfolios are more use in some subject areas than in others?	1	1	3	0	0	
Question 8: To what extent would an ePortfolio benefit or improve your professional practice?	2	0	1	2	0	“We find that technology benefits all our learners from the Beginner-reader (use of iPads), our Introduction to Computer learners, our Junior Cert English, and History to our level 3 and 4 ESOL, Communications, Computers, and Childcare learners.”

The questionnaire results indicate that, from a tutor’s perspective, ePortfolios are more relevant in certain subject areas than others. The subjects that each individual tutor teaches have to be factored into the discussion as the results include subjects such as Junior Cert English and History, and not just technology-based subjects.

The tutors were asked whether students would be better prepared for further education, work placements, internships, and employment, if they had been making use of this technology during adult community education. Their answers are shown are in Table 12

Table 12: Would Technology Better Prepare Students for Further Education, Work Placement, Internship, and Employment?

Yes	4
No	1
Comment	Again, this very much depends on the area of work they will be involved in
Comment	More and more Further Education is conducted using new technologies, such as Internet, Email, and Moodle. There is an expectation that students can research on-line and can provide computer based assignments. By ensuring that Community Education students are trained using these technologies the chances of success when they progress to Further Education enhanced.

The questionnaire results indicate that from a tutor’s perspective the students should be better equipped using the technology in an adult community education environment. This in turn would enhance the students’ educational progression on to further education.

Discussion

This research set out to examine the use of ePortfolios within adult and community education to bridge the gap between unemployment, further education, internships, work placements, and employment.

The students’ had a variety of motivations for participating in the course which explains why they attended on a daily basis. Some students indicated that they wanted to improve their prospects of getting a job, college and or internship, enjoyed attending the class, and one said it was somewhere to go. This research has shown that DMT4N1858 is a good starting point for jobs, college, and internship prospects.

On completion of the course, the students were asked to rate the resources and whether they had used the online resources since finishing the course. The students’ responses indicated that the course had enhanced their technological skills and that they continued to use their skills after they finished. This finding is supported by the work of Carnell and Lodge, (2002) which demonstrates the ways in which students retain and implement new knowledge and understanding of new technological skills. The students indicated that interactive skill demonstrations enhanced their learning of how to use technology. This finding supports Gibbs’s, (1998) theory that meta-cognitive teaching styles enhanced students’ learning. I found in my teaching practice that this was a very successful approach. Students also indicated a strong preference for this approach and reported better learning outcomes than

with other resources such as handouts and PowerPoints. They also reported decreased engagement when the latter are used.

My research results were drawn from a very small number of students.

The limitations of working with small groups was highlighted when not all of the students who agreed initially to be involved, contributed to the research after they had finished the course and had received their certificates from FETAC. However in terms of my research question, and the link to employment, the research showed that:

- Two of the students remained unemployed
- One attained a job
- One took up a college place

All of the students clearly indicated that existing skills, gained from leisure-time use of technology, were transferred and adapted to multiple and more formal uses since completion of the course. The student who gained a college place submitted his ePortfolio prior to interview for a level 5 course. On previewing his ePortfolio, the college awarded him a place on a level 6 course instead.

The student who gained employment indicated that this was due in part to the skills acquired on the course. This supports Flanigan and Amirian's, (2006) finding that ePortfolios can support students' career pathways. Although this was a small group, these results indicate that ePortfolios within adult and community education do have potential to bridge the gap between unemployment, further education, internships, work placements, and employment.

Limitations and Challenges

From a researcher's perspective, limitations in conducting interviews or focus groups were identified. There was limited participation in this research, and as has already been reported, the researcher had to administer some questionnaires in person to obtain any participation in the research from particular groups. Although these students were not vulnerable, this approach was more appropriate as the students would not have been accustomed to meeting with researchers. Even with this approach, there were challenges. It quickly became apparent that the location was noisy and unsuitable. The researcher should also have left more time between the appointments as the students were shy in front of their cohort, they just came in, answered the questionnaire and left. On reflection, this is likely to have

restricted the students from giving additional details to contribute to the comments section and richness of the data overall. The key element I also had to take into consideration was that, as the online surveys were completed anonymously, the data varied in the students' responses and there was no way of knowing if the same students had answered all, some or none of the surveys.

Based on my professional experience, I had anticipated that the tutors would not receive regular IT training with their current employer and that they might not have good levels of access to the technologies. The research indicated that the tutors are restricted due to the lack of IT resources that are available in the classroom and both the equipment and internet access can be unreliable. As this in turn creates technical barriers for the tutors, they omit the technological elements from their lesson plans and stick with more traditional methods of teaching and learning. The results show that the tutors would benefit from additional training in the use of technology and this in turn would enable them to pass on their new skills to their students. Primarily the emphasis of training for tutors is usually based on literacy and numeracy in adult and community education. The benefits of encompassing technology to assist teaching and learning would enhance both the tutors and students quality of learning.

Again, gathering data with tutors was very challenging. They were willing to answer the questionnaire face to face but the locations were unsuitable and noisy. The area I had selected for the tutors' researcher-administered surveys was in the office of the Adult Education Centre. The office was busy preparing for the junior cert exams and the phones were constantly ringing, making it impossible to record the tutors' responses. The other limitation was timing. The tutors had completed their last term of teaching and had finished up work for the summer holidays, which diminished the number of tutors actively taking part. This resulted in a smaller amount of data being generated in my research. This in turn highlights some of the difficulties for anyone considering research in this area.

The research results indicate that there is a value in using ePortfolios in adult and community education and shows how students can learn new technological skills to showcase their work at interview. However, the research also indicates a range of significant challenges in researching the effectiveness of this approach. I would identify the main challenges as follows:

- ePortfolios are not currently used in adult and community education

- Resources at adult and community education level are limited
- These learners face additional challenges related to social disadvantage, and little previous experience of participating in educational research.

Conclusion

The use of digital media technology ePortfolios was beneficial to extending the students' career pathways to bridging the gap between further education, and employment, this showed that there is a need for ePortfolios to be established in adult and community education.

The challenges of the research with a cohort of students who had been long-term unemployed indicated that some of the students had a desire to progress further, while others needed further guidance and support services in place to meet their own individual needs.

The DMT4N1858 workshop highlighted the potential value of technology within the classroom, and the need for additional workshops to further assist the tutors' technological abilities. By dealing with issues, such as the lack of IT resources in the classroom, and improving their reliability, tutors could potentially see the value and relevance of technology in their teaching and learning.

Further research is required to determine if open-source software assists learning-environments and ePortfolios to become integrated into the assessment process of adult and community education for FETAC. The feasibility of including technological skill-based modules during FETAC's transition into Quality and Qualifications Ireland should also be investigated.

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