

An Electronic Personal Development Portfolio (ePDP) using Microsoft OneNote

Abstract

The aim of the study is the presentation of issues concerning the functionality of the electronic Personal Development Portfolio (ePDP) software solution Microsoft OneNote. Preliminary research followed a pilot conducted by the PGCE Secondary ICT module in the Education Department in 2012 in response to the need for flexible ePDP software within the Faculty of Health Social Care and Education. The project was initially conceptualised as a feasibility study and a pilot for using a shared Microsoft OneNote workbook on the institutional VLE. It also aimed at exploring the possibility of creating custom private or public libraries and shared folders for each VLE student and the requirements for non-institutional user access.

The research, conducted along the lines of the interpretivist paradigm and based on the results of the pilot, discusses some of the technical elements, examines the process from inception, presents identified benefits and drawbacks and evaluates the pedagogic effect of the solution on the basis of the views of the participants; it serves the interpretation of the meaning of lived experiences and focuses on the insights that will help to improve practices.

Keywords

learning technologies, electronic portfolio, personal development, lifelong learning, digital competence, digital literacy



Introduction

In 2012 the need for a more flexible electronic Personal Development Portfolio (ePDP) software solution arose within the Faculty of Health Social Care and Education. The PGCE Secondary ICT team in the Education Department had previously piloted an electronic portfolio software system; however, its highly structured design was hindering student creativity and made marking awkward for tutors. The faculty therefore decided to explore Microsoft's OneNote as an alternative means of generating an ePDP.

Microsoft has advertised OneNote as a note-taking solution that combines text, images, audio and video, including the ability to annotate, highlight, organise and present information in an organised, though unstructured, way. The technical characteristics of OneNote, especially its drag-and-drop functionality, the ability to incorporate other Microsoft Office files within it, and its compatibility with Anglia Ruskin's Virtual Learning Environment (VLE) (based on Microsoft's SharePoint), together with its cloud-based SkyDrive sharing functionality, presented it as an appealing unstructured, potential solution to pilot.

The purpose of the project was not to evaluate the existing PDP structure, nor was it focused on the creation of an entirely new portfolio structure. The sole aim of the project was to assess the feasibility of transposing the existing structure of the portfolio template into an electronic version. This was achieved by evaluating student teachers' experience of using OneNote as an ePDP solution to electronically assess the evidence of achieving competence in teaching.

This paper documents the pilot process from inception, preparation, deployment and evaluation, discusses some of the technical elements of the solution, presents the benefits and drawbacks, and evaluates its pedagogic appropriateness by examining the views of participants, thanks to the efforts and guidance of Dr Sue Sentance, Senior Lecturer in ICT Education, who acted as a liaison between the author and the students, thus assisting in the advancement of this research.

Electronic Portfolios

Recent consensus of a definition of Personal Development Portfolios (PDP), particularly ePDPs, concluded that they are both a product and a process (JISC, 2013). PDPs incorporate cyclical interactions of information research, reflection, authorship, publishing and responding to feedback (Sutherland and Powell, 2007). Butler (2006), in her comprehensive literature review of the academic use of PDPs and ePDPs, distinguished between learning (qualification-based) portfolios that contain both work in progress and finished artefacts, and showcase portfolios that can be used for employment and recruitment.

Abrami and Barrett (2005) described three types of ePDPs (i.e. process, showcase, and assessment), the characteristics of the audience and the purpose of the portfolios, while Wang (2007) described the earlier research based on 66 articles as, 'conceptual or implementation studies containing anecdotal evidence rather than critical evaluation of electronic portfolio effects' (Barrett, 2005, p. 37). Documentation of learners' progress was attempted through Hauge's (2006) model on translating theory into practice (cf. Smith and Tillema, 2003; Abrami and Barrett, 2005; Challis, 2005), while Madden (2007) suggested that a student e-portfolio was an archive of material relating to an individual, held in a digital format; this concept further establishes the principle that institutions, professionals and students are co-authors, stakeholders, consumers and producers of new knowledge.

From the perspective of implementation, ePDP systems tend to be flexible and used in a number of ways to store and share information, reflect, critically analyse ideas and generally facilitate academic and other formal (professional) and informal learning (c.f. Heath, 2002; Corwin, 2003; Hudson, 2004; Nickelson, 2004; Niguidula, 2005). Institutional approaches differ in scale and complexity, often involve multiple stakeholders and are used in a variety of contexts and for different purposes (Joyes, Hartnell-Young and Gray, 2010). The Joint Systems Information Committee (JISC) found (out of 21 funded electronic-portfolio research projects) that new initiatives fail to consider previous work done in the field; they concluded that more work is needed to enhance communication and dissemination of best practice for practitioners and institutions (JISC, 2006; JISC, 2008a; JISC, 2008b; JISC, 2008c).

Previous research on the use of portfolios in higher education showed a number of challenges when used for academic assessment. The introduction of electronic systems alleviated some challenges and created others. Smith and Tillema (2003) highlight the importance of guidance, clarity of structure and exemplars of good practice (Darling, 2001). Structure, guidance and support are necessary ingredients for a

successful implementation. Students often lack skills of reflection and supervisory intervention is required to provide feedback for improvement. Zeichner's and Wray's (2001) study revealed a mismatch of students' and tutors' perceptions because tutors tend to perceive portfolios as tools for professional development and students primarily regard them as employment aids (Zeichner and Wray, 2001). Smith and Tillema (2003) also raise concerns over the marking of portfolios, as the assessment criteria do not always map neatly onto the learning outcomes.

Methodology

This inquiry lies within the interpretivist paradigm, as it serves to comprehend the meaning of lived experiences with focus on the insights that will help to improve practice. The validity of interpretivist methodologies is based upon the nature of socially negotiated and collaboratively constructed co-creation of knowledge and it is based on the principle of consensus. Reliability, in qualitative research, can be better expressed as 'dependability' which, among other things, includes processes of debriefing, triangulation, respondent validation and independent audits (Lincoln and Guba, 1985; Anfara, Brown and Mangione, 2002). As Cohen, Manion and Morrison (2007) argue, 'reliability includes fidelity to real life context-and-specificity, authenticity, comprehensiveness, detail, honesty, depth of response and meaningfulness to the respondents' (2007, p.149). The interpretivist paradigm also raises additional considerations of ethical and utilitarian legitimacy, especially when using naturalistic methods of data collection.

A characteristic of the interpretative methodologies is the investigation of the perceptions of the participants in a natural, dynamic environment or situation and case studies are methods compatible to interpretative methodologies. Studying social interactions in context is a good way to elucidate causes and effects in situations where statistical analysis is not appropriate. The case study can be described as a scrutinised account of events relevant to temporal and situated instances with the focus on the participants' perceptions, experiences and interpretations of events relevant to their particular experience of this electronic portfolio system; it will be presented in a manner that retains the authenticity and richness of these instances (Hitchcock and Hughes, 1995). Case studies can be categorised according to their purpose and methodological approaches. This project methodology resonates with Yin's characterisation of 'exploratory' and 'interpretative' (Yin, 2011).

Trainee teachers on the module were invited to use OneNote to produce their ePDPs instead of the usual paper-based version. Five students aged 23 to 38 participated in the project. Details from existing paper-based workbooks were used to create OneNote templates for each user. Their views on its use were collected through face-to-face interviews. Demographic data was collected via a questionnaire. However, due to the small sample size, the demographics section was treated as a pilot. The structured interviews were recorded, transcribed, and analysed using QSR NVivo and the results are discussed in the results section below.

The Technical Element

This project was initially conceptualised as a feasibility study and a pilot for using a shared OneNote workbook on the institutional VLE, which is a custom development of Microsoft SharePoint. It also aimed at exploring the possibility of creating custom private or public libraries and shared folders on the VLE for each student, and the requirements for non-institutional user access. User authentication and the storing and sharing of the data was done through the use of the SkyDrive service.

A major concern was student training and the technical support implications. Since the number of participants was small the risk was low, as one-to-one training and/or support was possible. In a larger scale pilot or implementation, student training and support resources must be carefully considered. In this instance, two face-to-face introductory training sessions were offered in addition to step-by-step instructions that were put on the VLE (available from the author on request). The users chose to use SkyDrive to share their OneNote workbook with their workplace mentors (non-institutional users) who required regular but infrequent access. Credential management and free storage space were provided by Microsoft's Outlook / Live cloud system.

Results

The interviews produced a wealth of information that was steered, as planned, by the choice of the structured interview instrument. The interviewees' replies can be broadly summarised under the following areas:

- Usability
- Portability
- Multimedia
- Ease of Use
- Sharing
- Digital vs. Paper
- Structure
- Recommendation
- Cloud Computing
- Enforcement
- Policy
- Beyond ePDP

Users found the 'drag and drop' functionality was easy to use. They also liked the tabular structure and the fact that sharing the ePDP with placement mentors was very easy and quick. Portability was also very popular with users as not having to carry around bulky and difficult to backup, large paper folders was a definite advantage. All participating trainee-teachers were aware of the audio and video multimedia functionalities but they had not used them because they had not been explicitly told that they were expected or even allowed to use them. One participant voiced concerns on copyright, intellectual property policies and the multimedia allowed for use. Concerns of this kind make obvious the need of prior agreement between Anglia Ruskin and the participating institutions on the policy and the recording of multimedia allowed at the work placement.

Users found OneNote easy to use and that they could use it to collaborate and include digital assets such as lesson plans, or to meet the requirements of the professional standards. One student referred that she was initially troubled by technical issues that derived from sharing her workbook incorrectly, but after these were resolved the initial apprehension was quickly converted to a positive user experience. Some students even stated they would not like going back to paper-based portfolios.

The cloud-based sharing functionality was evaluated as easy to use; the participants successfully shared their electronic portfolios with their placement mentors and university tutors. Several students commented on the advantages of digital versus paper-based solutions. However, one of them said that some actually preferred paper as they felt more at ease and that it better matched their physical work flow. Further investigation revealed that this was because the placement mentor preferred to work on paper. All users agreed that the use of ePDPs was an ecological advantage as it is paper-free. Users found the ePDP easier to produce, organise and archive and, most importantly, search. Some voiced concerns and uncertainty on the policies around e-signatures, university backup and validation.

The comments concerning structure were positive: the template was easy enough to understand and easily matched the user's needs; most participants found it easier to evidence their resources by embedding digital assets into OneNote. For example it was common practice to drag and drop Microsoft Office (i.e. Word, Excel, PowerPoint) and other files such as, images and audio recordings into OneNote. When students were asked whether they would like more or less structure, they replied that structure of a certain degree was needed; less structure was preferable to more and that they would welcome more time and training on how to formally fill in a PDP and qualification management.

When students were asked if they would recommend the introduction of ePDP across the institution, they replied that it was considered a necessity but all participants recognised the difficulty of having everyone

aboard; they thought that many of their peers would not like it and/or engage with the project. They also clearly preferred this to be driven by their tutors as they felt that it was the tutors that were the enablers in the use of technology. One student encouraged potential enforcement of the ePDP solution; all students would have to submit electronically because this practice would drive them to becoming competent in the use of Information Communication Technology (ICT) systems. This case was of particular interest as the student was initially reluctant to use the system and the first placement was paper-based. By experiencing the difficulties of paper-based PDP he tried OneNote and was converted into a 'Champion' of the system. The student suggested that an enforced ePDP system for coursework and assessment should be introduced as it would, indirectly, force the development of digital literacy of the participants.

Although some of their peers might not have the same attitude towards technology, students were of the opinion that these were skills that all graduates, and especially tutors, should have. The majority managed to share their ePDP with their tutors and use the online OneNote web application to access their work online. They were vaguely familiar with the term 'Cloud Computing' and they understood, on principle, the provision of web applications as a service.

Most users also decided to use OneNote for other projects, including personal ones, as they saw the potential for it to be used in a variety of ways: the advantage of an online user-owned showcase to demonstrate their work to potential employers; the ePDP to access support and as a tool for self-directed study that could facilitate their professional development, and for the dissemination of knowledge in their own practice. They were interested to learn how the free Outlook account would allow them to access the ePDP online without having to worry about the availability of the software at the school, and how the students would also be able to access it from home at no extra cost. They also spoke about pedagogical advantages that were to be gained directly through the utilization of continuous feedback and, indirectly, by enhancing exposure to creative use of digital technologies.

Conclusion and Recommendations

The student experience was positive; all participants declared that they were happy they had participated in the pilot and overwhelmingly declared they would not return to paper-based solutions. They particularly liked the portability, wealth of functionality and multimedia provisions, such as the Images and audio files on which they had experimented (although it was decided these not to be used in the finalized ePDP), as well as the ease of use and the extra security that was afforded by electronic backing-up. They found sharing via the cloud-based SkyDrive easy to use; most importantly it allowed them to share their ePDP easily and effortlessly with their mentors at work placement and with their academic tutors for feedback and marking and appreciated the fact that the online web-application version of OneNote was free to use. This fact created opportunities for them to use the system beyond the pilot project in their own settings and in different contexts.

It readily became apparent that the students preferred to own and keep for life the institutional, cloud-based student email address, manage their email and associated storage directly with a third party provider (i.e. Microsoft at Anglia Ruskin) and retain ownership even after leaving the institution, bearing in mind Anglia Ruskin's clear Intellectual Property rules. This was a particularly important conclusion if combined with the online space storage facility and access to the accompanying online software for storing data and evidence of assessment.

In a larger scale study the collection of demographic information could enable the identification of differences existing among various groups of participants. In this project, the sample size was not significant or representative and it was only used as a baseline. Before wide spread use, there is need for the introduction of formal policies and terms of agreement between the institution and the placement partners that clearly clarifies the requirements for access and use of certain technologies. Training and support proved very important to students as well as engagement and demonstration of technology use by academic tutors.

This pilot project within the Faculty of Health Social Care and Education at Anglia Ruskin was aimed at investigating the potential benefits and limits of using OneNote as an ePDP solution. It was considered successful as it clearly demonstrated the feasibility of using OneNote for the development of unstructured or semi-structured personal portfolios. There is further interest within the faculty for a similar pilot project to be conducted among the nursing students, and also in the Faculty of Arts, Law and Social Sciences.

Initially it will be extended to include the interested nursing student cohort in early 2015 but will still remain a pilot until an ePDP system is officially adopted by our University.

Please contact the author for further details

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