



ePortfolios and unfamiliar spaces: Exploring the unknown, together

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When decisions are made to implement initiatives using e-portfolios, anxiety is sometimes expressed because of the challenge of exploring 'new spaces'. This can occur, for example, when academic practitioners are required to re-address learning, teaching and assessment practices, and upskill in ICT.

This paper has three main aims. The first is to ground the subject in current literature. Reference will then be made to two research studies conducted at Dubai Men's College where the use of e-portfolios was proposed and in one case implemented. The barriers identified around e-portfolios are described, along with an overview of current attitudes expressed at Unitec NZ during small-scale trials. To date, a comparative research study has not been conducted, but the collation of findings offers a rich picture of potential challenges for academic practitioners around adopting e-portfolios. Finally, the paper draws the threads together to recommend ways of avoiding some of these possible pitfalls.

Keywords: e-portfolios, professional development, academic practitioners, ICTELT

Introduction

Until relatively recently, portfolios have been paper-based, and although they share some key principles with e-portfolios (including selecting, synthesising, reviewing, organising and planning), aspects such as sharing and collaborating, and development over time, are not easy to exploit. However, when educational institutions make the decision to implement e-portfolio initiatives they are sometimes confronted with a negative transition period. In particular this can be experienced when academic practitioners are required to explore new spaces and ways of communicating, and re-address learning, teaching and assessment practices, while also feeling their level of ICT skills is an issue. Information, Communication Technology Enhanced Learning and Teaching (ICTELT) could, in theory, provide a way of not only supporting the development of portfolios, but could potentially offer academic practitioners scaffolding they require during the adoption of e-portfolios, while also encouraging lifelong learning tendencies and global collaboration.

This paper has three main aims. The first is the grounding of the subject in current literature. Reference will then be made to two research studies conducted between 2004 and 2007 at Dubai Men's College (an English-medium, tertiary vocational institution in the United Arab Emirates) where the use of e-portfolios was proposed and in one case implemented, along with some of the findings and associated implications. The barriers identified by academic practitioners toward e-portfolio use are described and briefly discussed, with further reference to current attitudes expressed at Unitec NZ where small-scale trials are underway prior to introducing e-portfolios on a wider scale. To date, a comparative research study has not been conducted, but the collation of findings from both institutions offers a rich picture of challenges faced by academic practitioners adopting e-portfolios. Finally, the paper draws the threads together to suggest recommendations for avoiding some of the possible pitfalls identified.

Literature review

Opening with an overview of what is understood to comprise e-portfolios and some of the benefits identified in current literature, this section concludes with findings around practical and affective factors for academic practitioners involved in e-portfolio initiatives.

The diversity of definitions for e-portfolios (Hallam et al., 2008) is an indication of the range of purposes, formats, and tools being discussed and used. Most definitions describe e-portfolios as “a collection of ‘works’...that represent physical evidence of achievements” (Mason, Cochrane, & Owen, 2008). Other definitions suggest “a tightly integrated collection of Web-based multimedia documents that include curricular standards, course assignments, student artifacts in response to assignments, and reviewer feedback to the student’s work” (Gathercoal, Love, Bryde, & McKean, 2002, p. 29). This paper also considers e-portfolios to have the scope to be “a multi-faceted forum, with areas for collaborative development, private reflection, and showcasing of achievements” (Owen, 2009) – for both students *and* academic practitioners (Klenowski, Askew, & Carnell, 2006). Six key purposes have been identified for e-portfolios (Abrami & Barrett, 2005; Hallam et al., 2008; Ward & Grant, 2007; Zeichner & Wray, 2001): presentation, learning, assessment, personal development, multiple owner, and working (which includes some or all of the characteristics of the others listed here).

Sociocultural theory indicates that learning occurs in social settings and spaces (Tharp & Gallimore, 1989) comprising communities, rules, tools, and activities, where there is scope for an individual’s higher mental functions such as logical memory, verbal and conceptual thought, and complex emotions to develop (Kublin, Wetherby, Crais, & Prizant, 1989). Where Sociocultural principles are utilised around the use, design and development of e-portfolios, a large range of benefits can be observed. For example, there are increased opportunities to scaffold academic practitioners and students to become more focussed critical thinkers who apply theories and concepts to their own practice (Hauge, 2006), while also developing a record of learning over time (Smith & Tillema, 2003). Sharing this learning record (especially reflections) with trusted mentors and peers can increase insights (DiBiase, 2002), creativity, design, and planning skills (Brown, 2002). Where relevant, active involvement from other stakeholders, including employers and professional organisations, can be encouraged (Hallam et al., 2008). The embedding of the use of e-portfolios in programmes, furthermore, has the potential to alter academic practitioners’ professional identity and practice (Hughes, 2008), and can raise awareness for the need for, and planning of, associated Professional Development (PD) (Hallam et al., 2008).

In contrast to the positive aspects of using e-portfolios in tertiary education, there are a range of barriers and negative affective factors identified by academic practitioners that have been recognised in the literature. These can be categorised into five main areas: 1) identity, 2) support, 3) skills, 4) programmes, and 5) resources. The use of e-portfolios can alter an academic practitioner’s role(s), which can, in turn lead to discomfort around their identity as an educator (King, 1993) especially in situations where their education institution “treasure[s] tradition at the expense of...knowledge, research, and needs” (Smith, 2004, p. xxii). Support was referred to in two respects; firstly, lack of peer, department, managerial or institutional support (Aalderink & Veugelers, 2005), and secondly, intermittent ICT support (Aalderink & Veugelers, 2005). Both of these can leave academic practitioners with feelings of isolation, resentment, and fear. Closely allied to these aspects are worries about pragmatics such as how to use the technology and the time investment required to upskill, often on top of a full teaching and research load (Cho, Ater-Kranov, & Brown, 2008). Comments related to programmes highlighted concerns that e-portfolios may not be relevant for all disciplines (Aalderink & Veugelers, 2005), and that a large investment of time is required to embed e-portfolios (JISC, 2008). These factors are underpinned with a perception that students resist developing e-portfolios (Cosh, 2008), and that diversity of evidence can make assessment and feedback tricky and time-consuming (Strivens, 2006), especially with large classes (Cho et al., 2008). Finally, resource development (for example, instructions, models, and examples) was perceived as a burden (Aalderink & Veugelers, 2005).

E-portfolio initiatives: Background and research

I am going to discuss three instances (two at DMC, and one at Unitec, NZ) where e-portfolio initiatives were proposed, and the associated reactions from academic practitioners. I will describe the education setting of the two institutions, as well as giving an overview of the initiatives and associated results.

Dubai Men’s College

Dubai Men’s College (DMC), one of fourteen colleges in the Higher Colleges of Technology (HCT) system, is located in the United Arab Emirates (UAE). A selection of career-oriented and vocational qualifications (such as media studies, business, IT, aviation, and engineering) is offered ranging from certificates to Bachelors’ qualifications. All students at DMC are Emirati male nationals, whose first language is Arabic, and the majority of whom are between the age of seventeen and thirty, with approximately ten percent of students also employed in full-time jobs.

The decision to implement eLearning at DMC was made by senior management following a directive in 2005 from the Chancellor of the HCT (who was also the UAE Minister of Education), H.E. Sheikh Nahayan. In response, several projects were undertaken, some of which trialled the potential of e-portfolios.

Higher Diploma Foundations

In Higher Diploma Foundations (HDF), one such project was the embedding of a career e-portfolio into the Computer, Research Skills and Projects (CRSP) course. Students participated over forty weeks in a range of activities and tasks associated with four key projects: The Country Project, The Famous Person Project, The Career Project, and the Inventions, Developments and Change Project. The Career Project was the main period where students were given direct input and support around developing an e-portfolio.

A research study was conducted around the CRSP course to gather attitudinal and evaluative feedback (Silverman, 2001). The study was cross-sectional, with data collected in the 2003-2004, 2004-2005, 2005-2006 academic years and semester one of 2006-2007. The aims of the study related to e-portfolios were 1) to investigate whether changes made to the initial programme design were effective, 2) to make recommendations as to whether e-portfolios should continued to be utilised, and 3) to explore stakeholder attitudes toward the use of e-portfolios. A variety of data collection tools were used, including questionnaires and semi-structured interviews. The quantity of data collected, collated, analysed and interpreted is substantial; therefore, reference is made only to results and findings when they bear relevance to academic practitioners' feedback concerning e-portfolios.

In HDF, 75% of academic practitioners involved with students' development of e-portfolios (but who did not have their own e-portfolio) agreed, and 25% strongly agreed, that the use of e-portfolios helped students acquire and apply self-directed, relevant skills for learning. The majority also found students were "comfortable using technology". Furthermore, they felt "different learning styles...[were] catered for", and that e-portfolios supported knowledge transfer from life experiences and previous education (especially through reflection and peer feedback). Twenty-five percent recommended that e-portfolios be "used in moderation, otherwise...[they are] a distraction".

Some academic practitioners referred to increased workload, effort that had to be devoted to ongoing feedback and assessment, and time it took students to develop e-portfolios, especially when they were so motivated that they neglected tasks in other parts of the HDF programme. There were also questions raised about the appropriateness of Foundations students developing e-portfolios, which were occasionally seen as something that should only be used in a student's final years. Practical and technical problems, and personal ICT skill challenges were identified as major frustrations, as was the timing, form and relevancy of PD offered.

Diploma Foundations

The Diploma Foundations programme already used a fully-integrated paper-based portfolio. As part of the eLearning implementation project it was proposed that an e-portfolio be piloted. Due to strong resistance from the Diploma team, the suggestion was not adopted, although they did work towards integrating eLearning into their programme and classroom practice, and a research study was conducted throughout this process. Barriers mentioned included several of those identified in the literature above. Other issues stated were top-down pressure and no sense of 'ownership' of decisions or design. Reference was also made to the lack of technical skills (their own and those of the students), which would necessitate upskilling, as well as having no practical experience using e-portfolios. Closely linked to these concerns, were questions around the pedagogical and practical value of changing to an e-portfolio, especially as it would complicate planning, make teaching more time-consuming due to design and e-portfolio skills development, and it was suggested that students may be resistant to the change. Fears around potential technology and technical problems were expressed, along with perceived lack of IT support. All of these factors were compounded by a lack of time release that ultimately led to the team to decide not to make the transition from paper to e-portfolios.

Unitec, NZ

At Unitec NZ, a large proportion of students are studying on courses with a vocational focus such as architecture, vet nursing, horticulture, business, IT, design, dance, boat building, and architecture. The student population comprises a variety of ages, ethnicities, backgrounds, levels of ICT literacy and access to ICT. Potentially, e-portfolios have the flexibility and customisability to meet the diverse requirements

of learners in a range of life circumstances and careers. One aim, therefore, was to offer options around the development of e-portfolios that recognised cultural diversity and personal study preferences. In addition, the portability engendered by Mobile Learning (mLearning) and Web 2.0 e-portfolios was seen as a potential way of empowering learners to access learning experiences without having to take time off work, while also being able to fulfil their family or community commitments, thereby improving completion rates and professional progression. Several pilot e-portfolio trials have been implemented at Unitec NZ, although research specifically into the effectiveness of e-portfolios is not extensive. Cochrane (2009) is, however, conducting ongoing research around mLearning and Wireless Mobile Devices with a sub-focus on e-portfolios.

Based on findings from the research conducted in Dubai, as well as issues identified in the literature, decisions were made about how to support academic practitioners who were interested in developing their own ePortfolio, and/or were working with learners in the trials using e-portfolios. Rather than offering only generic workshops, several other forms of PD were provided. The most effective approach has proven to be incremental, and collaborative, with interventions spread over about 6 months, with plenty of time to build a 'community' and for self-reflection and reinterpretation of professional identity. The cycle is started with department-specific workshops tailored to the discipline (approximately one a month, with tasks to be completed between sessions), during which practitioners set up their own e-portfolio, or a multiple-owner, department e-portfolio. A suite of online resources pertaining to e-portfolios was also developed for participants, which included models, examples, case studies, and 'how to...' videos, that are accessible independently as well as being used in face-to-face sessions. Workshops were followed by informal brainstorming and planning sessions, guidance for e-portfolio programme integration/development groups, and, where possible, the fostering of Communities of Practice (CoPs) (Cochrane, & Kligyte, 2007). Formal PD was augmented by the offer of team-teaching (where a teaching and learning advisor co-facilitated sessions with students around the use of e-portfolios), and 'just in time' training (for when an academic practitioner encountered a pedagogical or technical challenge). Once initial trials were underway, relatively informal mini-symposia were organised that encouraged academic practitioners to share effective practice.

Academic practitioner reactions have been mixed. Positive feedback includes the acknowledgement that targeted, flexible PD has been relatively effective. Also there was recognition that the dynamics of face-to-face sessions with students shifted, whereby students became much more active, vocal and engaged, and there was an increase in direct interactions between themselves and students as well as peers with peers. Interestingly, there was no overt expression of discomfort around corresponding shifts in academic practitioner role(s) (King, 1993). Perhaps this could be attributed to the focus on creating learner-centred experiences; thus, even though practitioner identity has been challenged (and this could be uncomfortable or threatening for some) the improvement in the learning experience is seen as a positive outcome. In addition, some academic practitioners noticed that their students became increasingly self-directed and reflective, as well as motivated to complete assignments. Comments were made about their own (and their students') improved confidence with a range of technologies.

On the other hand, there was uncertainty about how to embed e-portfolios into a programme in a way that meant they were relevant and meaningful, as well as issues with the time this required (JISC, 2008). Some academic practitioners were also worried that students with zero or low ICT literacy and access would be excluded or disadvantaged. There were concerns raised around the digital, accessible nature of ePortfolios in relation to audience, appropriacy, privacy and identity theft, and also the permanency of a 'digital footprint'. Practical issues included increased workload and time to upskill.

Discussion and recommendations

The collation and comparison of experiences and findings from implementing e-portfolios at DMC and Unitec NZ offers a valuable informative view of some of the issues for academic practitioners around the use of e-portfolios. The mixed attitudes and variety of barriers that were highlighted were similar across the two institutions, and are consistent with other studies (for example Aalderink & Veugelers, 2005; Hartnell-Young et al., 2007; Strivens, 2006). The following recommendations are drawn from the trials described above and represent flexible guidelines that could be adapted according to context.

The initial eLearning implementation process at HCT was top-down, and resulted in few major curriculum changes or adjustments in teaching practice, in particular because PD and development had to be carried out on a full teaching load of twenty (or more) hours per week (Owen & Allardice, 2007). To help address some of the problems illustrated here, once a policy has been formalised, a detailed project plan should be devised that recognises the range of barriers and issues, thereby ensuring, for example, that

provision is made for training (Cho et al., 2008), time release, and other incentives (JISC, 2008). In particular, it is important not to underestimate the effort (in hours) required for embedding e-portfolios within a programme, and associated resource and skills development (Aalderink & Veugelers, 2005).

At an institution level all stakeholders should be involved in the preliminary stages of any e-portfolio initiative - something that has not occurred at either DMC or Unitec NZ (see Figure 1), especially given the reticence some higher education institutions toward implementing change (Smith, 2004). Openness, ownership, collaboration, and sharing can mean different things to different people, and any statement around these aspects needs to interface with an institution's culture, as well as being suitable for the communities it serves (Hallam et al., 2008). As such, all stakeholders need to be aware of associated legal and cultural issues relating to privacy, appropriacy and accessibility (Australian Flexible Learning Framework, 2009). Concerns around these factors were voiced by academic practitioners at Unitec NZ, and one suggested recommendation was to build into the e-portfolio implementation process awareness-raising strategies for practitioners and students to scaffold the development of their digital identity. These would be augmented by resources and activities around, for example, staying safe online. Furthermore, an iterative evaluation process around the use of e-portfolios enables any practitioner or student resistance to be mapped and responded to.

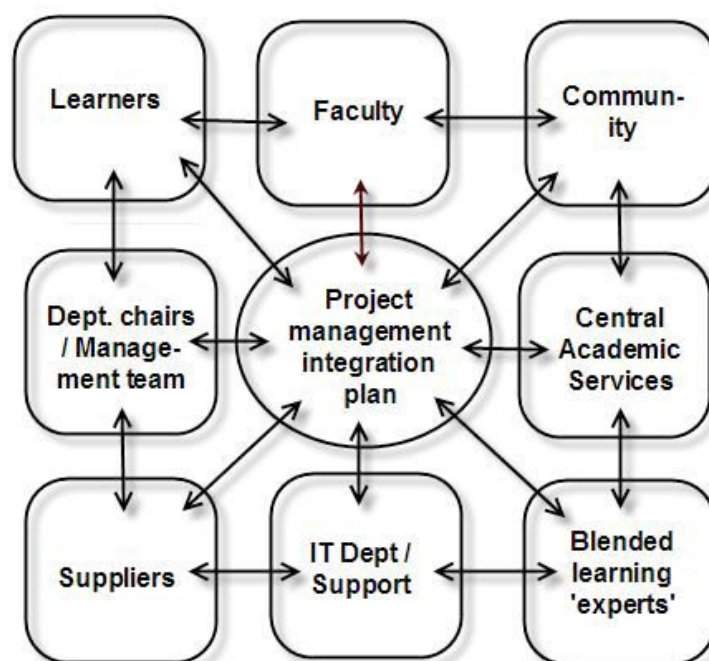


Figure 1: Stakeholders involved in planning the process of implementation of e-portfolio initiatives

A range of alternative strategies to those used at DMC was introduced at Unitec NZ to cultivate academic practitioner 'buy in', and to foster a sense of ownership of initiatives. Ownership is partly achieved in collaborative and supportive teams where initiatives are driven internally, and academic practitioners are actively involved from the inception of a project. There should be opportunities for initial research and sharing of concerns, anxieties, educational philosophies, identification of their own and of student needs, design, and the choice of resources and tools. Facilitation of this process by a credible 'expert', is more likely to result in a shared guiding policy with mutual vocabulary, and clear goals and purposes. This is also a good time to identify project champions in the team (including in management) (Aalderink & Veugelers, 2005).

To be effective e-portfolio initiatives must "address pedagogical as well as technological, economical, societal, and political objectives" (Hoppe & Breiter, 2006, p. 45). The embedding of e-portfolios into the curriculum and classroom practice is reliant on pedagogic design where there is a shift in focus from content to the holistic development of student skills (Cosh, 2008). Feedback from academic practitioners suggested that the time-commitment and effort involved in this process was extensive; however, effective integration will help avoid excessive time and work demands for practitioners and students (Strivens, 2006), as well as meeting course requirements.

Parity of input and output within teams is important for effective teamwork, and this may be adversely affected when there are members with different levels of expertise and experience. As trialled at Unitec NZ, a variety of PD and support can be offered on an ongoing basis, preferably tailored to specific disciplines, along with a bank of readily accessible online resources. The formation of CoPs may be encouraged, where, for instance, forums (face-to-face or online) are used to discuss anxieties (King, 1993), strategies and successes. Mentoring can also be valuable whereby academic practitioners buddy up, work together on tasks within an established relationship of mutual trust. Teaching and learning advisors play an important role in guiding teams through the whole process, as well as in the development of relevant pedagogically sound examples and models of e-portfolio usage.

Conclusion

This paper has provided an overview of relevant current literature, and discussed academic practitioners' attitudes toward e-portfolios in three scenarios. The barriers identified by academic practitioners toward e-portfolio use were also collated and discussed.

Education institutions wishing to adopt e-portfolios need to draft a policy that states the ethos informing the institution's decisions, as well as formalising the guidelines around their use. However, not all academic practitioners will be motivated to develop or use e-portfolios. With this factor in mind, it is clear that, if an e-portfolio initiative is to be successful, a bottom up approach that empowers academic practitioners is essential. Sufficient resources need to be made available, in particular time release that will allow the development of their own professional e-portfolios, as well as for integration of e-portfolios into curricula. Timely PD opportunities underpinned by a sound pedagogical foundation, provision of plenty of support and scaffolding, formation of CoPs, and just in time training, are vital. Successes should be shared, celebrated and rewarded, because without buy-in, e-portfolio initiatives run the risk of becoming time consuming activities with little associated learning.

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