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Initial Findings from a Large-Scale, Longitudinal Study of First-Year Learners' Experience of ePortfolios

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Abstract: ePortfolios are one of the latest web 2.0 tools available to educators in tertiary education. Their application and popularity are growing rapidly in Europe and North America in all subject areas (Stefani, Mason and Pegler 2007; Strivens 2007). Early studies indicate that the learner response to this tool in the first year of study has been mixed, with a notable lack of student engagement and ownership (Oradini and Saunders 2007; Pond 2007; Cosh 2007; Peacock & Gordon 2007; Tosh et al. 2005). This response may reflect confusion regarding the different roles of an ePortfolio within the learning and teaching environment. However, there has been little in-depth, longitudinal research into the learner experience of such systems to date that might substantiate this. This presentation outlines a new study, which sets out to explore first-year learners' experience of using ePortfolios with the aim of providing practical, grounded guidelines to support institutional implementation and assist effective student engagement.

Introduction

The ePortfolio (electronic portfolio) facilitates the collection of digital resources or artefacts, such as text-based documents, graphics and multimedia (Oradini and Saunders 2007), which have been drawn from a range of learner experiences over a period of time and will include those from formal and non-formal learning opportunities (Beetham 2005; Siemens 2004; Funk 2004). These artefacts will be personally significant to the user and can be linked, augmented or evidenced by other data sources, including personal data held on other institutional systems such as student record systems. The purpose of an ePortfolio is to encourage students to “develop the skills to continue building their own personal portfolio as a life-long learning tool” (Siemens 2004) and ePortfolios are often linked with personal development planning, employability (JISCinfoNet 2007) and widening participation (Peacock & Gordon 2007). Consequently, Government initiatives such as those in the United Kingdom including Dearing (NCIHE 1997), the Higher Education Funding Council for England (2005) and the Department for Education and Skills (2005) e-learning strategies, and more recently the Burgess Report (2007), have set out the agenda for implementing ePortfolios as a life-long learning tool. However, early studies indicate that the learner response to this tool in the first year of study in higher education, especially when linked to Personal Development Planning, has

been very mixed, often indifferent, with a notable lack of student engagement and ownership (Oradini and Saunders 2007; Pond 2007; Cosh 2007; Peacock & Gordon 2007; Tosh et al. 2005). This contrasts with learner responses to other e-learning tools, such as Virtual Learning Environments, which are tutor-led and predominantly focus on the e-administration of learning.

The ePortfolio may support three specific roles in the learning environment (Barrett 2000; Barrett & Carney 2005; Beetham & Strivens 2005; Dyson 2005; Ward & Grant 2007). The learning, or working ePortfolio provides a means by which the learner can record their ongoing reflections and thoughts, for instance, through blogs, thereby supporting the 'processes' of learning. The assessment role of the ePortfolio is linked to the 'product' of the student's learning which is shared with others, usually tutors, and often measured against externally supplied standards such as assessment criteria. It will probably include materials that have been selected from the 'learning portfolio' and may include materials which have feedback linked to them provided by peers and tutors (Baume 2003). From the Strivens (2007) report, it appears that there is limited use of an ePortfolio system for the management of assessment, at present. The third role is the marketing, or showcasing presentation ePortfolio. In this instance, the learner uses the ePortfolio to present their best work for employment and other promotional activity, such as applications for further study. Often the showcase portfolio consists of a selection of work from the assessment portfolio which is published to the Internet; such portfolios will usually consist of an introduction, links to other selected pages and materials (Ward & Grant 2007). The Strivens (2007) report shows that there is some usage by institutions of ePortfolios for presentational and showcasing of progression.

The 'Net Generation' have high expectations of technology in their learning: they are extremely discriminating and will not tolerate poor implementation of any web 2.0 tool (Bakker, Sloep & Jochems 2007; Ipsos MORI 2007; ECAR 2007). In this study we are exploring learners' experiences of using ePortfolios through which we seek to develop a deeper understanding of how the ePortfolio is used, how usable and accessible the ePortfolio is, and what learners' expectations and perceptions of ePortfolio are. This understanding will enable the advancement of a more effective implementation of ePortfolios within the higher education environment and will assist with supporting student experience and use of ePortfolios.

Presentation

This presentation provides an introduction into a new study about the first-year student experience of ePortfolios. The study seeks to explore the changing perceptions and experiences of first year students over three academic years, focussing on the accessibility and usability of the ePortfolio. Key themes identified through a literature review will be presented together with initial findings from early cooperative user evaluations and interviews.

The Literature Review

A search of electronic databases and ejournals is currently in progress. Websites for the Centre for Recording Achievements, W3C Web Accessibility Initiative (WAI), JISC TechDis, the Higher Education Academy, and Conference proceedings are also being searched for relevant literature. Early work indicates that although ePortfolios are being implemented throughout education, from primary schooling onwards, especially in the USA and Europe, there is considerable confusion regarding the term 'ePortfolio', which reflects, primarily, the technical options that could be available to a user of an ePortfolio system. Usually an ePortfolio system is a "composite of facilities and functions that already exist in other types of software." (Stefani et al. 2007, p.16) and typically will have:

- a 'reflective' tool, such as a blog or an online journal;
- a tool for the creation, development and maintenance of a web-based, digital online portfolio;
- provision for providing feedback between students and tutors;
- an area for the storage of digital artefacts;
- functionality for sharing and publishing to the Internet;
- diagnostic and competency testing tools

The Methodology

This research project will use elements of 'naturalistic inquiry' (Denzin & Lincoln 2005) through adopting case study methodology to focus on groups of individuals with a shared identity: in this instance, each group of students will be using an ePortfolio within their learning environment. A series of case studies will be conducted enabling an holistic, in-depth study of ePortfolio use. A mixed method approach to data collection is being employed. Cooperative user evaluation and interview techniques will enable development of a rich and detailed picture of the main issues. Other studies will be consulted, for example, ePortfolio case studies from the Universities of Westminster, Leeds and Nottingham in the UK will be examined as part of the preliminary, investigative stage of this study, to facilitate empirical generalisation.

Cooperative user evaluation is a technique used in human-computer interaction and systems design to obtain detailed user feedback and assists in identifying potential usability problems (Monk, Wright, Haber and Davenport, 1993). It involves the system designer sitting alongside the user at the computer, observing the user's interactions with the system and questioning as required. For this study, cooperative user evaluation will enable the recording of learners' interaction and engagement with the ePortfolio in the natural setting of use (the learning environment), facilitating a better understanding of learners' ability in using an ePortfolio, methods of engagement with the tool and difficulties in using the tool. The first of these evaluations will take place in December 2007. A second series of evaluations will take place in April and May 2008, to see whether there is any notable change in the learners' use and perception of the ePortfolio.

Data gathered through these evaluations will be essentially qualitative and in the form of field notes. Participants will be encouraged to 'think aloud' during these evaluations and audio recordings will enable the researcher to contextualise the field notes. The researcher (a member of the research team with experience in undertaking this type of evaluation study) observes the processes that learners employ to perform specific tasks using a variety of tools within the ePortfolio, for reasons such as learning, assessment or presentation.

Semi-structured individual learner interviews will be used to gather qualitative data regarding learner experiences. Interviews will be conducted at two stages of the study. Initial interviews will be conducted in conjunction with the cooperative user evaluation in December 2007 and this will be to gather data regarding learners' expectations and perceptions of the ePortfolio. A second phase of interviews will be conducted in conjunction with the later series of cooperative user evaluations in April and May 2008. These interviews will be aimed at gathering data relating to the learners' experiences of using the ePortfolio. Interviews will be audio recorded with the participant's permission. Analysis of the transcripts will be conducted through NUD.IST (Non-numerical Unstructured Data Indexing Searching and Theorizing). Online learner questionnaires will be used to assess learners' attitudes towards the use of ePortfolio, to explore their perception of the impact of the ePortfolio on their learning experience, and to rate user satisfaction.

Aims of the Session

The aims of this session are to:

- outline this newly initiated research into first-year learners' experience of ePortfolio use;
- present some initial findings with regards to usability and accessibility issues;
- discuss some of the potential implications for educators when implementing an ePortfolio with first-year students.

By the end of the presentation, participants should be able to provide colleagues with an outline of the research and discuss some key issues which may impact on first-year use of ePortfolios.

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Topic: 5 Institution specific-case
Brief paper

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