

Recognising Learning: Educational and pedagogic issues in e-Portfolios

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Abstract

The paper is based on developing and implementing e-portfolios in three different European projects. It is argued that insufficient attention has been paid to the pedagogy of e-portfolio development and that existing applications and implementations tend to be overly dominated by the requirements of assessment. The paper looks at the different pedagogic processes involved in the development of an e-portfolio. It considers the competences required for developing and maintaining an e-portfolio. The final section considers the challenges in developing e-portfolio applications.

Keywords

e-portfolio, informal learning, pedagogy, non-formal learning

e-Portfolios – context and purpose

This paper is based on a series of projects aiming to introduce portfolios to support learners in different countries in Europe. Much of the paper is based on a series of blog entries written during the spring and summer of 2005.

The projects have different target groups and are based in different educational sectors but all share the idea that portfolios could be a valuable tool to record and reflect on learning

They are also based on the idea that “the real potential for e-Portfolios is in the widening contexts in which learning is taking place - or is recognised to be taking place - and in the ability to bring together personal learning gained in multiple contexts” (Attwell 2005a).

The following describes three of the projects.

The first is the Workplace Learning Partnerships project. The objective is to use e-portfolios to support apprentices in bringing together formal learning from the school based component of the apprenticeship with learning from the workplace (for more details see <http://www.workplace-learning-partners.org/partners/knownet>).

The second is the ICOVET project which is working with socially disadvantaged young people in five different European countries. Portfolios are intended to help them recognise and record their learning and reflect and validate their learning experiences (for more details http://www.pw-projekt.de/pw-projekt/11a.php?url_projektid=3).

The third project is the European ASSIPA project which is implementing an e-portfolio for adult education teachers following an on-line professional development programme in self-evaluation.

Initial research undertaken for these projects discovered few experiences in using e-portfolios outside the context of formal school and higher education contexts. This poses a problem in terms of pedagogic approaches. The use of portfolios in universities has been largely as a means of assessment (although in the UK portfolios have been seen in higher education as a means of Personal Development Planning (PDP)). Such a focus is arguably at the expense of other potential uses, such as recognising and recording and reflecting on learning and focusing on learning.

Secondly the focus on formal learning, and basing portfolio development on formally prescribed curricula and outcomes, has been at the expense of recognising different forms of learning – informal and non formal learning –and learning from different contexts including the workplace and the home.

Thirdly, because of the context of school and university education, portfolios have been assumed to be owned by the institution and not by the learner. Ownership may be a critical issue in education and there is already some evidence that students are rebelling against portfolios, seeing them as another externally imposed layer of assessment.

Formal higher education may be the least productive context to introduce ePortfolios. Universities already have well developed and culturally embedded systems for recognising, recording, validating assessing and certifying learning. ePortfolios may have far greater potential for those excluded from existing means of recognition of learning, be they socially excluded young people or workers undertaking continuing professional development.

The intention of this paper is to explore these issues through looking at the different possible pedagogic and learning functions which an ePortfolio could be expected to support and then considering how an ePortfolio

system could be designed to support such pedagogic design. One of the motivations for writing this paper is an email from a trainer working with socially excluded young people in Germany. He was happy to experiment with an ePortfolio but found it difficult to understand how such a system could be implemented in practice:

"I had some problems with working with the portfolio. Simply not knowing how to start. Would need some inspiration. Ulrike from DJI had similar problems, also asking for didactic concept," he wrote. It is hoped this paper will begin to answer some of those questions.

Processes and stages in e-portfolio development

There are different definitions of what an ePortfolio is. Scott Wilson (2005) says: "An e-portfolio is a repository of information about a particular learner provided by the learner and by other people and organisations, including products in a range of media that the learner has created or helped to create alongside formal documents from authoritative sources, such as transcripts of assessed achievement, which the learner has chosen to retain." Wilson goes on to say an ePortfolio is "principally owned by the learner although some of the things it contains may be co-owned," This latter part of the definition is both important and contentious and will be returned to later in this section of the paper. Wilson continues to say an e-portfolio is "capable of providing the information about a learner from which different profiles of the learner may be developed through other services and retained within the portfolio."

There are seven different functions for an ePortfolio, all of which can be mapped against different pedagogic processes (Attwell, 2005b).

The first is **recognising learning**. This is not as simple a task as might be at first assumed. Within the formal education system learning has been conflated with achievement. Although it could be said that all learning is an achievement it does not follow that the formal education system has recognised it as such. Learners frequently lack the skills to recognise their own learning, especially on-going learning which does not necessarily lead to formal outcomes.

The second is **recording learning**. What should be recorded in a portfolio?

An ePortfolio will contain records of formal achievements but possibly more important on going learning from home and work as well as formal education and training. Peer group interaction may be the most powerful means of recording non-formal learning. ePortfolios should allow individuals to build and present a profile or picture of themselves and should allow people to record their learning and achievement from the home, from school or college and from work.

The third is **reflecting on learning**. Reflecting may be the most important part of the learning process. In terms of e-portfolios it is probably the least developed. Reflection has generally been seen as a process of commentary by the subject on any aspect of themselves (Wilson, 2005). The commentary may be private, shared, or public. Examples include journals and more recently web logs.

The fourth is **validating learning**. Validating is the processes of proving – to oneself and to others – learning has taken place– including the abilities and competences identified and recorded. Validation takes place through evidencing and verification.

Evidence is provided by the learner to attest to their own achievement and may be in different forms and media - for instance a picture of a chair they have made or the url of a web site they have designed. Verification is externally sourced evidence of claimed achievement - for example a letter from a team leader verifying as to performance during a work placement.

Validation is not the same as assessing and accrediting. Validation is referenced against the abilities and competences identified by the learner – not those of an external occupational profile or qualification.

The fifth is **presenting learning**. Presenting offers an opportunity to select artifacts from the portfolio to tell a story or make a point. Presentation involves the processes of structuring, visualising, narrating and re-purposing (Wilson, 2005). Presenting is the bridge between validation and assessment but it is only one of the possible purposes of presentation. Other purposes include for a job application or application for a European funded project! ePortfolios should allow individuals to present their learning for different purposes and should be owned by the learner and independent of institutions

The sixth is **planning learning**. Planning is a form of reflection - looking back and looking forwards. What have I achieved and what do I want to achieve?

The seventh is **assessing learning**. Assessing is an external process, not under the control of the learner. Assessing is external judgment of the value of a set of artifacts presented by the learner.

Assessment and ownership

The next section looks more closely at two issues – the problems of the focus on assessment in many portfolio applications and implementations and the issue of ownership. These two issues may be interlocked. “As always happens with any innovation, ePortfolio development has taken place in the context of existing paradigms of education and training. This means development has been dominated by universities and worse dominated by the assessment goals of higher education institutions. Put quite simply portfolios have been seen as yet another form of recording and assessing student achievement. What’s wrong with this approach?” (Attwell, 2005c).

Firstly the assessment process is owned by the system and by the institutions. This means learners do not own their portfolio. Secondly institutional provision of portfolios has tended to militate against portability. When learners leave an institution the portfolio stays with that organisation - they do not own it - neither can they take it with them

More problematically the range of achievement and learning reflected in the portfolio is constrained by curricula and course objectives. One participant in a debate at Alt C 2005 said that an eportfolio is neutral regarding what a disadvantaged learner can actually do and another that it can be made neutral regarding how the learners’ achievements are recorded (Davies, 2005) However if the only valid portfolio entries are those that support the attainment of externally imposed objectives, the eportfolio is not pedagogically neutral, neither do learners own their learning. e-portfolios can be an important tool for recognising, recording and validating non formal learning especially if the portfolio application provides means for peer group interaction, exchange and sharing. However, the recognition of non formal learning requires moving beyond formal learning objectives. Many existing portfolio applications place considerable restraints on what is seen as valid learning

Helen Barret and Joanne Carney (2005) have found that “When portfolios are used for accountability purposes, to document pre-service teachers’ achievement of standards-based competencies, teacher candidates viewed their portfolios as a hoop they needed to jump through to graduate, and not the lifelong reflective tool that had been envisioned.”

They go on to ask “In the name of assessment (i.e., accountability) are we losing a powerful tool to support deep learning? Are we losing the "stories" in e-portfolios in favor of a skills checklist?”

Most existing applications tend to conflate the different processes involved in developing a portfolio or focus on only one or two of those processes - usually recording, presenting and assessing.” Helen Barret has said “Those tools that purport to be more “assessment management systems” tend to provide an institution-focused structure that makes it much easier to “score” but more difficult for the learner to tell their own story of their learning.”

In practice ownership is not a straightforward issue. The following diagramme (Figure 1) attempts to locate the different pedagogic processes involved in e-portfolio development within the wider education and learning environment.

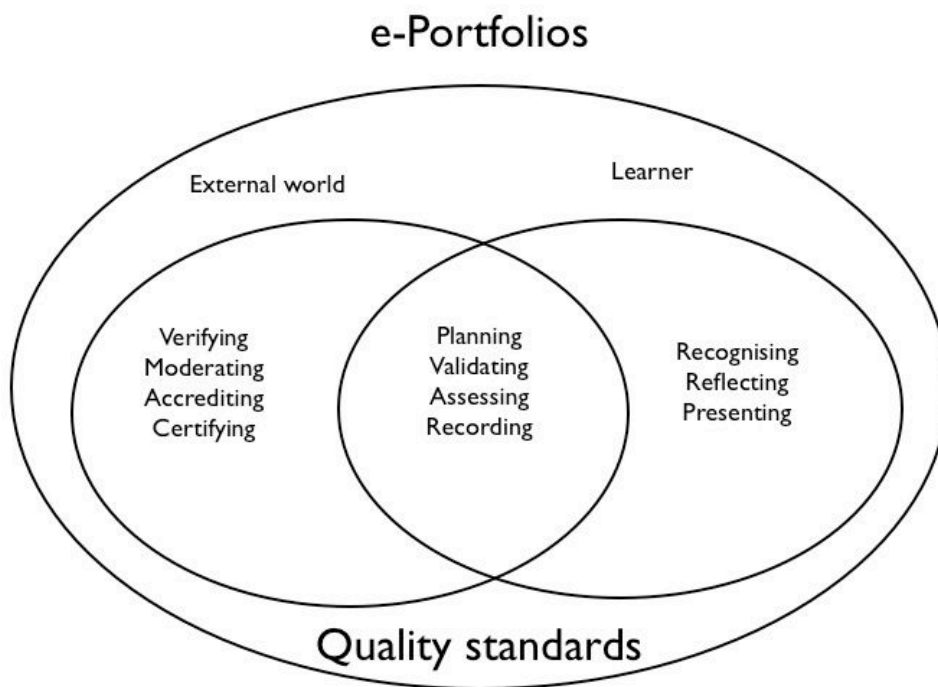


Figure 1: Processes and ownership in developing e-portfolios

Within this construct recognising, reflecting and presenting learning are under the control and ownership of the learner. Responsibility and ownership of verification, moderation, accreditation and certification lies in the external education and training system.

However the processes of planning, validating, assessing and recording learning are a shared and negotiated process between the learner, teachers and educational institutions. Even so it could be argued that the learner should ultimately control with whom (and if) they wish to share.

The last issue to be picked up in this section is the issue of text and language. Perhaps because of the higher education context, there seems to be an assumption that ePortfolios will be predominantly text based. This is a little ironic in that, at least in the UK (non 'e') portfolios were traditionally most commonly used by art and design students and professionals. Especially as access to bandwidth increases, computers can be used to record competences in many different media including photographs, video and audio. This is particularly so if the pedagogic idea of using a portfolio to tell a story is accepted. This may be very important for learners who are not confident, comfortable or accustomed to expressing themselves in a text format.

e-Competence and e-Portfolios

A considerable constraint on the discussion regarding e-portfolios is to consider issues of pedagogy, where they are considered at all, in isolation from the wider processes of teaching and learning. The development of an ePortfolio involves considerable competences and abilities in terms of literacy. This is not meant to refer to narrower definitions of literacy in the ability to read and write but to include processes of reflection and judgment making – which have tended to be known as digital literacy (although in reality there is no real reason for such a separation).

The International ICT Literacy Panel, comprised of experts from education, government, non governmental organisations, labour and the private sector, including representatives from five countries (Australia, Brazil, Canada, France and the United States) defined ICT literacy as

“using digital technology, communications tools, and /or networks to access, manage, integrate,

evaluate and create information in order to function in a knowledge society” (International ICT Literacy Panel, 2002).

The “continuum of skills and knowledge” required, they said, included:

- Access – knowing about and knowing how to collect and/ or retrieve data;
- Manage – applying an existing organisational or classification scheme;
- Integrate – interpreting and representing information. It involves summarising, comparing and contrasting;
- Evaluate – making judgements about the quality, relevance, usefulness, or efficiency of information;
- Create – generating information by adapting, applying, designing, inventing, or authoring information.

This is a useful starting list but the following competences could be added (Attwell, forthcoming):

- Define – framing a problem or issue and developing a structure for approaching the issues
- Apply – the ability to move between abstraction and practice – and, conversely, between abstraction and practice
- Contextualise – the ability to apply knowledge from one context to another
- Scaffold – the ability not only to integrate learning in a personal knowledge base but to develop and build ongoing learning
- Search – the ability to use different search techniques to find knowledge and information
- Make sense – the ability to make sense out of disaggregated sources of information and knowledge (this goes beyond evaluating or integrating)
- Share – the ability to judge when it is appropriate and useful to share learning.

The acquisition and application of such competences cannot be undertaken as a stand alone ‘lesson’ in developing and maintaining an eportfolio, but requires a broader approach to teaching and learning, embedded in the wider curriculum. For both professional development and for socially disadvantaged learning, it suggests the use of e-portfolios cannot be regarded as a separate measure in itself, but has to be introduced as part of an overall approach to the recognition and development of competences. George Siemens (2005) has used the term ‘connection preparation.’ He asks: “How can I prepare my students? I think I have to ensure that they are comfortable with expressive writing. I think I also need to make sure that they are comfortable using tools that can help them navigate the networks around them and organize their personal knowledge. I also believe that they need to be able to interact with these networks and to contribute to them. Finally, they need the freedom to explore and connect, to co-construct, to learn through discovery. They need to know that the journey takes precedence over the final result.” A number of European projects have begun to explore such approaches under the heading of self evaluation (see, for example, www.self-evaluation.org).

Challenges in ePortfolio design

As the movement towards e-portfolios matures, it may be that instead of seeing an eportfolio as a ‘standalone (or integrated) software application, it will be regarded more as a pedagogic process, supported by a range of different, interoperable, software applications. What are the challenges in designing such applications?

Developing learner centred applications

e-Portfolios should support learning processes, rather than forcing learners to follow software design driven work and learning processes. Whilst this may be relatively easy for formal education, supporting informal learning is more complex. Research suggests most e-learning is SMEs is both informal and is problem driven (Attwell, forthcoming). e-Portfolio applications should be designed to record and support problem centred learning.

Supporting the recognition of learning and reflection on learning

Present eportfolio applications are weak in their support for both the recognition of learning and reflection on learning. Recognition and reflection may require support or new pedagogic processes and involve peer

group interaction as well as the intervention of facilitators. e-Portfolio applications should allow learners to reflect on real life experiences.

Recognising the multiple contexts of learning

e-Portfolio applications must support learning from multiple sources – including the workplace and home as well as formal education and training. This means applications should facilitate movements between abstraction (in the process of recording learning) and application (in using and evaluating learning).

Scaffolding learning and knowledge

Informal learning is often interest or problem driven. It does not happen sequentially nor does it necessarily build on previous knowledge bases. e-Portfolio applications must allow for the revision of previous learning and the reorganisation of personal knowledge bases to take account of new learning which may challenge previously held knowledge and previous knowledge schema.

Supporting multiple media

e-Portfolio applications should allow learners to present learning in different media and in different combinations of media.

Developing communities

e-Portfolio applications should recognise the social aspect of learning allowing the natural and flexible development and interaction of communities as part of the e-portfolio process.

Negotiating and sharing learning and content

e-portfolios should recognise the importance of ownership and sharing, not just through flexible and powerful permission environments, but through providing support and tools for negotiating and mediating the sharing process.

Presenting learning

e-Portfolios applications should recognise the multiple contexts and purposes that learners have for presentation and provide tools to guide, develop and build presentations.

Porting data

It is likely that at some point or another learners will wish to move data held in one e-portfolio system to another – or to a different digital application. E-Portfolios applications should be designed in such a way that it is simple for learners to retrieve a copy of their personal learning record and to port it to another applications.

Educational technology and pedagogy

There are problems in establishing the pedagogic processes and meanings behind new educational technology. Technology is not pedagogically neutral All technologies, be it intentionally or otherwise, facilitate or constrain particular pedagogic approaches and methods. The contexts in which educational technology is used may greatly influence pedagogic approaches.

Generic terms for educational technology – take, for example, Virtual Learning Environments or Learning Management Systems – can embody different pedagogic approaches dependent on the functionality and design of the application. This complicates any effort to develop shared understandings and meanings about the application of educational technology in practice.

Such difficulties increasingly pervade the discussion around e-portfolios. There is not one generic e-portfolio approach but multiple approaches based on different pedagogic understandings of the purposes and processes of using e-portfolios for teaching and learning. To clarify the debate it is necessary to start not from a description of technological functionality but to first understand the pedagogic approaches involved and then to consider how technologies can be shaped to support pedagogy.

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