Evaluation and further development of an e-portfolio system (EPS) for initial teacher education

Executive Summary

This report outlines the work and findings from a research project funded by the Training and Development Agency for Schools (TDA). The purpose of the research was to enable the development of 'The Electronic Portfolio System' (EPS) and to evaluate the effectiveness of the system, identifying affordances and challenges.

EPS started life before the term "e-portfolio" was common parlance. The School of Education, University of Southampton invested in the early development and evaluation of an e-portfolio system in 2001. A TTA Grant was used to design and implement an online system for IT trainees to save evidence of their activities.

The principle underpinning the design of the current Electronic Portfolio System is:

"The Electronic Portfolio System, based upon technology used widely on the internet, provides our teacher trainees and students with easily accessible space to save work they wish to submit for examination. EPS enables tutors and mentors to access trainees' and students' work for review and assessment from any computer that is attached to the internet" (March 2001).

Over the years its use and value has changed. With a growing interest in the development and application of various e-portfolios the researchers felt that is was important to evaluate the current system within the School of Education. EPS makes explicit the basic functions of an e-portfolio system, however, it did not reflect the visual sophistication of current e-portfolio systems and therefore it was believed that it did not stimulate and motivate trainees to contribute in a fully engaged way. Furthermore, until the all-encompassing, all-embracing, nationally implemented e-portfolio system is established, our trainees will meet an unpredictable and diverse range of e-portfolio systems in their placement schools and their first employment. We have to ensure that they have sufficient experience to equip them for dealing with *any* e-portfolio system in their first and subsequent years of teaching.

The aims of the research were to:

- Identify attitudes towards a current electronic portfolio system
- Specify the features of the new interface

- Design a new graphic interface
- Implement the new design
- Implement the new EPS system with at least 100 trainee teachers
- Evaluate the trainees' use, engagement and attitudes to the new common gateway interface
- Identify the affordances of EPS and communicate them.

The study included the:

- development of evaluation forms for trainees and tutors
- identification of attitudes, activity, affordances, and improvements by surveying current trainees and tutors
- evaluation of the in-house electronic portfolio system which identified current practice, the motivations, and rationale of tutors and reasons why other systems might be used
- identification of areas in which EPS could be developed and enhanced by consulting tutors and technical developers
- recommendations made regarding the evaluation of affordances of EPS for initial teacher training. (Affordances are the activities that the technology enables to occur. They are the benefits for learners and for tutors arising from the functionality of the system)
- capturing of over 4000 words of comments
- implementation of the changes.

The research methodology was successful and 42 trainees in the cohort of 240 responded on which we could make some clear conclusions from this case study investigation of e-portfolios. 30 out of 44 questionnaires were from compulsory users and 14 from optional and expected users. There was a correlation with subject specialism and the level in depth of response from the trainees to the questionnaire. In particular Science, Geography and History, where the trainees were compulsory users, gave the most in depth responses.

The findings from this research highlighted that there were several areas needed for development to ensure a flexible and efficient building and sharing of electronic resources. However the research also found that in general, views on the e portfolio system were very positive and accepting of the overall process. The full findings and recommendations can be found in the report.

The main areas identified by trainees and tutors for development were:

- To have a uniform user interface.
- To improve layout of pages and labelling of links to make EPS more engaging and motivating to use.
- A clear link on the PGCE Secondary Notice board to make it easier to find.

- To recognise more unusual file extension names.
- To include more icons for file type recognition.
- To increase file size and disk usage limits to enable the upload of Moviemaker files, MS PowerPoint files, visual image and sound files.
- To be able to move files between folders easily.
- To rename shared folders and always show at the top of entry lists.
- To enable zip files of whole directory structures to be uploaded.
- To enable easier deleting for tutors.
- To enable clearer labelling of actions.
- To enable log emails to be collected and sent one per tutor per day.

From these key findings the following were then implemented:

- a uniform user interface; CSS and layout improvements;
- deletion and amendment of files with non-alpha numeric characters;
- labelling of links in entry scripts and in FManage;
- clearer labelling of actions;
- enhanced memory, storage, backup and server provision;
- more icons for file types, both generic and SOE specialist;
- file upload and disk usage limits to increase to 50MB in both cases;
- shared folders renamed and shown at the top of entry lists;
- log emails collected and sent one per tutor per day notifying tutors when trainees upload files;
- zip files of whole directory structures can be uploaded;
- easier folder deletion.

The researchers felt that the implementation of these recommendations for tutors and for trainees would be an effective way forward to learn about and experience a secure, monitored, flexible and efficient building and sharing of electronic resources.

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