Authors

Shane Sutherland

Pebble Learning, eInnovation Centre, University of Wolverhampton, Telford Campus TF2 9FT

shane@pebblelearning.co.uk

Alan Paull

58 Norton Wood, Forest Green, Nailsworth, Stroud GL6 0HG

alan@alanpaull.co.uk

Abstract

The PortisHEad project developed tools to support applications to UK higher education through learner-owned e-portfolios; including the ability to target unique e-portfolios to different institutions. The original demonstration tool helped address the recommendations of the Schwartz report for fairer admissions to higher education. However, despite good learner feedback and a strong sectoral imperative, the tool was not implemented by UCAS, the application service. Despite the withdrawal of UCAS from the project the remaining partners developed a generic application toolkit which allows any e-portfolio user to auto-complete educational or employment-related 'application-type' forms using learner-owned data from their e-portfolio. The toolkit is consistent with the 'thin e-portfolio model' propounded by the JISC-funded e-Portfolio Reference Model project. It uses an 'open standard' web-service which is easily implementable by 'form-owners'; access to data is managed by the learners and remains secure. The toolkit is easy to deploy and has already generated significant interest not only from admissions tutors but also for its utility to teachers and staff developers. This paper points to how learner-controlled technologies, and learner-owned data, can be meaningfully utilized to engage with intra- and extra-institutional systems using open standards and web services. It also illustrates that technological difficulties are less critical than organisational ones.

0081 PortisHEad: portfolios in successful Higher Education admissions

Project overview

Applicants to higher education (HE) in the UK apply through an application service called the University and Colleges Admission System (UCAS). Typically applicants will apply to multiple institutions but can only submit a single application 'form' within which they are allowed to present a generic 500-word 'personal statement'. The process does not allow applicants the opportunity to provide extended or differentiated 'profiles' or to augment their applications using external resources.

This paper reports on the PortisHEad project (JISC, 2008) which built on the work of the UK's Joint Information Systems Committee (JISC) funded e-Portfolio for Lifelong Learning Reference Model project (eP4LL, 2006), itself part of the wider eFramework initiative supported by DEST et al (eFramework, 2008). The project sought to address the Schwartz (2004) report recommendations:

'to produce a more integrated service for applicants and specifically to facilitate … Transfer of information from applicants … Structuring the personal statement and reference, in particular through the insertion of course-specific prompts … Providing feedback to applicants'

In the context of the ePortfolio For Lifelong Learning (eP4LL) work the next logical step was to implement a practical application of the model using an open-source tool (developed by the project), and an existing e-Portfolio system; with a view to learning lessons from a state-of-the-art implementation. The PortisHEad project carried out this work using the PebblePad system to implement a 'real life' pilot version of the web services developed for the Reference Model project, including the use of structured Entry Profiles and structured Personal Statements for admissions to UK HE.

PortisHEad aims and objectives

PortisHEad's aims included implementing the integration of the PebblePad e-portfolio system throughout the admissions process reviewing and amending existing admissions processes, so that the learner's e-portfolio can be placed at the centre. It was vital to the project that the learner remained in control of the construction and submission of the application, and that Higher Education Institution (HEI) staff could choose how much of the extra information from the e-portfolio to use in selection processes.

In particular the project sought to:

- revise current Information Advice and Guidance (IAG) and application management practices in feeder establishments and the University of Wolverhampton for the selected student groups;
- enable electronic data transfer from the students' e-Portfolio to the University via UCAS, linking into current UCAS centralised procedures;
- provide feedback to applicants, to include assistance to those who are not successful;
- improve induction mechanisms via further data transfer to populate the university e-portfolios of successful students.

Project methodology

Using a case study approach the PortisHEad project sought to implement an extension of the e-Portfolio Reference Model to enable groups of students from feeder establishments and from the University of Wolverhampton to use their e-portfolios to research, prepare and submit applications via UCAS, to receive IAG about their applications from their school or college, to receive feedback from HE admissions staff and to form the starting point for enrolment and induction into an HEI. Using the 'thin e-portfolio model', based on Web Services and a service oriented approach (SOA), the project aimed to put the learner, via the e-portfolio, at the centre of the HE admissions process.

The project supplied support to the students involved at the application stage, in order to ease their involvement with the technology and the new parts of the application process.

The anticipated impact of the project was to enable a close coupling between the IAG and admissions processes on the one hand, and on the other, the applicants' experience of learning through the IAG events and personal reflections that occur during the preparation, submission and assessment of their applications and onward through enrolment and induction into university life. The project sought to demonstrate the efficacy of fully electronic admissions, including faster processing and better integration of admissions processes than current systems.

Iterative feedback and project evaluation was gathered through interviews with the students and careers / application advisors. Additional data was gained through close alignment and joint project meetings with colleagues on the ADoM and Delia projects (University of Nottingham) working in the same domain. External evaluation was conducted by the University of Nottingham.

Outcomes and outputs

The Application Interface
In pursuance of the project aims the University of Wolverhampton; Pebble Learning and APS developed a demonstrator tool allowing e-portfolio users to:

- access the UCAS application services and register themselves;
- conduct course searches from within their e-portfolio environment;
- utilize course information to write Personal Statements against learner Entry Profiles;
- submit their Personal Statement using a web-service to their application on the UCAS system;
- finally, and perhaps most significantly, the tool allows users to publish specific 'presentational' or 'application' e-portfolios to any of their 5 named institutions.

Figure 1: Application interface and personal e-portfolio data store used to auto-fill forms

As the current Personal Statement on the UCAS application is common to each of the institutions applied to, the ability to create and publish unique e-portfolios to each institution is seen as an important contributor to enhancing the relevant information about the learner that is available to selectors, thereby supporting holistic assessment of the individual learner (Schwartz, 2004).

Implementation issues

Unfortunately delays in the appointment of a new liaison member of staff at UCAS led to very limited involvement of UCAS in all project developments. This severely affected the project's ability to continue with its case study approach, which was abandoned for the final project stages. The interim report to JISC (Paull, 2007) stated:

The project has been forced to re-focus its work on demonstration activity, rather than a case study approach, which means that outcomes with respect to the learner and tutor-centred aspects of the project, rather than the technical, cannot be investigated in a realistic fashion.

The inability of UCAS to implement the link between the e-portfolio system and the UCAS system 'Apply' brought about an end to the project's work with students who had created application e-portfolios. Notwithstanding the foreshortened experience feedback from the mentor was encouraging:

The webfolio's that have been created are shaping up to be fantastic and the students themselves are very excited about the prospect of using them...

Although not quite finished, you can clearly see how valuable they have found this process and all have added the URL link into their personal statement... Two of the courses applied for, social care and law, are always popular [the students] are really pleased they have another way of showing themselves to the admissions tutor, which may help in the selection process. (Student Mentor)

The URL link referred to above represent what was perhaps the final 'nail in the coffin' for student involvement when UCAS decided to remove URLs from the Personal Statements of all applications. It is interesting that UCAS took this action as it unnecessarily prevents any student from including web links in their Personal Statement; precluding art and design students from referencing online folios, IT students from referencing websites or programs, and so on.

PortisHEad Interoperable Form Fill

With 5 months of the project left to run, APS and Pebble Learning agreed to develop an alternative means of supporting the generic aims of the project, choosing a method which firmly situates the control of learner-owned data with the e-portfolio user. PortisHEad Interoperable Form Fill (PIFF) allows students to import their personal data safely from a HR-XML web-service enabled e-portfolio system or data source allowing them to fill in web forms on the internet automatically (PIFF, 2008).

Webmasters of sites containing educational or employment related forms can very easily implement this tool kit on their web-based forms. It is simple to use and secure. None of the student's personal information is stored anywhere and the information can only be obtained by the student after they log on to their e-portfolio system using their user name and password.

The system has been designed to be compatible with all major browsers and has been tested with Internet Explorer 7, Firefox 3, Opera 9 and Safari 3.1.1. The system is not dependent on any libraries and makes use of Javascript and Ajax to perform its activities. The system is relatively light on resources.

In simple terms the web master includes a button on the web page which allows the student to log on to his or her e-portfolio account; single version data (for example a single surname) automatically populates the mapped field on the form. Where data has multiple values (for example address or email) the toolkit allows the user to choose the ones they wish to use for this current application. As part of the demonstration, toolkit examples have been created which allow users to use their e-portfolio data to populate forms for:

- A popular online job-search company;
- An undergraduate programme for overseas students;
- A post-graduate programme;
- An application for a health-service card;
- The core fields of the UCAS registration form.

Conclusions

The original aims of the project were predicated on the willingness and capability of a major educational stakeholder to extend their core systems to allow individual e-portfolio users to engage with them to manage complex application processes. Limited resources and development lead-in times extending over more than 2 years prevented its meaningful engagement. As a result the project failed to deliver the reusable web services it had hoped to develop which would have allowed remote systems to:

- Conduct course searches;
- submit application data;
- aggregate 'student entry profiles'; and
- present targeted e-portfolios as part of the wider application.

For the e-portfolio developer it was apparent that the complex application forms could not be easily replicated within the e-portfolio environment. For example, certain fields are pre-populated according to previous actions and the options for one field may be dependent upon the content of two or more other fields. The complexity of replicating the forms would also lead to significant maintenance overheads year-on-year.

So, from both the perspectives of application form provider and e-portfolio developer, it became apparent that a lighter weight, more generalisable solution would be more desirable. The method eventually developed is consistent with the view of the e-portfolio system as a 'personal learning system' where learner-owned data is able to be repurposed and reused multiple times for myriad purposes: and consistent with the 'thin e-portfolio model'. Using the open standard HR-XML means that the method could feasibly be deployed by HR systems and Management Information Systems as well as e-portfolios. From the perspective of the form owner, the toolkit is easily deployed and does not require any rewriting of the target form.

This new readily available functionality has the potential for significant impact on the transmission of data between systems, because it is relatively simple for developers to implement, easy to use for learners, and does not require complex security measures, because the learner controls access to the personal information. Within an institution where e-portfolios are widely used, it ought to be possible for all internal 'application-type' forms to include the ability for users to auto-fill common data fields directly from their personal e-portfolio information. From the perspective of PortisHEad as an admissions demonstrator project, we believe that the toolkit will be a suitable vehicle for universities, colleges and others to deploy in support of their student relationship management systems in the future, particularly for enquiry management, application, admissions and enrolment functions.

The project ended in October 2008 by which time PIFF was to have been

deployed for piloting in institutional contexts. Demonstrations of the toolkit to-date have been well-received and have generated significant interest from other projects thinking of utilizing the tool. Of particular interest is the application of the tool within the University of Cumbria who are using e-portfolios for continuing personal and professional development as part of the Flourish project.

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