Enhancing reflective professional practice through the use of an ePortfolio: A UK case study

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The professional bodies, in subjects allied to medicine, have always required evidence of continuous professional development in order for members to maintain registration. Although the manner in which these submissions are required by different bodies varies in most instances these have been paper based. This paper provides a brief background to the development and use of eportfolios in Universities in the UK and then examines the reasons behind the decision to adopt an electronic portfolio during undergraduate degree programmes in Pharmacy and Biomedical Sciences. The paper goes on to discuss the way the electronic portfolio is being used to support the development of reflective and professional practice on these programmes. It reports feedback from staff and students during the pilot phase before discussing the current developments that are taking place with the Royal Pharmaceutical Society and the Institute of Biomedical Science to use electronic submission in order for members to demonstrate professional competence through evidenced continuous professional practice.

Keywords: reflective practice, professional development, eportfolios, e-portfolio

Background

EPortfolios are increasingly being used across universities to support student learning and the development of employability skills, (JISC, 2008). In the UK this application grew out of a recommendation from the Dearing report in 1997 that progress files should be introduced, and as a minimum that they should consist of a record of the qualifications and preferably an element of reflective and personal development. This was reinforced by the ePortfolio government white paper (DFES, 2003) and Burgess (2004) went a stage further and suggested that progress files could play a role as an alternative to degree certificates. The Higher Education Funding Council for England (HEFCE) and the Quality Assurance Agency (QAA) have both been promoting progress files. The QAA in particular has stated that the purpose of these files are to help students "reflect upon their own learning and achievements and to plan for their own personal, educational and career development". A significant aspect of the progress file is Personal Development Planning (PDP) and many institutions are experimenting with different ways of encouraging students to reflect on their learning and action plan as well as a method of delivering PDP. The QAA issued Guidelines for HE Progress files (2001), which expected students graduating in 2005/06 to have progress files or Personal Development Plans (PDPs), documenting their achievements. The primary objective of PDP is to improve the capacity of individuals to understand what and how they are learning, and to review, plan and take responsibility for their own learning. The concepts of e-portfolios are being widely discussed across the whole of the UK educational sector particularly for personal and professional development, (Halstead et al, 2006). This paper presents the use of PebblePad as the electronic portfolio to support the development of reflective practice and the recording of professional development in subjects allied to medicine at Aston University in the UK.

Portfolio use in the professional bodies allied to Medicine in the UK

The UK Pharmacy profession's new governing body has made the maintenance of Continuing Professional Development (CPD) records mandatory. Submission for review is still accepted on paper but the institution is strongly encouraging a structured on-line portfolio. The Royal Pharmaceutical Society,

(2006) advises that the culture of CPD should be embedded in all pharmacy education and as a result most undergraduate programmes have well developed paper based portfolios. This approach is mirrored in Biomedical Sciences where in order to register as a qualified professional members are required to complete a Certificate of Competence Registration Portfolio to demonstrate that they meet the standards required by the regulatory bodies, the Institute if Biomedical Science (IBMS) and the Health Professions Council (HPC). The work for this portfolio may be partly carried out in the University and partly during a work placement (a 12 month placement in a clinical laboratory under the supervision of a qualified BMS training officer). The current paper version of the IBMS Registration portfolio is 149 pages long, before any evidence has been submitted. This presents a cumbersome document for students and staff.

The benefits of eportfolios over the paper based version include the portability, ease of modification and updating as reported by Bharma and Rattenbury, 2006. They also acknowledged that these skills, acquired in higher education may form a natural foundation for Continuing Professional Development. Calvert at al. (2007) recognised that eportfolios used in this way supported reflective practice and in doing so promoted independent and deep learning. A recent study by Messer et al. (2009) reported the advantages of using an electronic portfolio for radiography students on clinical practice, in terms of portability and updating, although the system used required a considerable amount of training for both students and staff. Against this background the next section looks at a UK University that has significant numbers of students studying subjects allied to medicine all of which require registration to the professional body in order to be able to practice.

Porfolio use at Aston University in Pharmacy and Biomedical Sciences

Aston University is a small (9000 students), research led institution. In the 2010 Complete University Guide it is ranked 13th in the UK and has one of the highest graduate employment records in the UK – 83% within six months of graduation. Aston has four Schools of study, Life and Health Sciences, Engineering and Applied Sciences, Business and Languages with a strong industrial and commercial focus. Currently over 80% of the undergraduate programmes have a placement or work based element and the University strategy is to ensure that this becomes 100% by 2012. This focus on employability is considered to account for the high graduate employment record for Aston graduates. In the School of Life and Health Sciences both the Pharmacy and Biomedical programmes require that students undergo a twelve month placement. Undergraduate students on these programmes are encouraged to develop a reflective approach. This is achieved through the design of the assessment in which students submit various reflective tasks throughout the four year programme. This is a major way in which the student receives feedback during the placements on clinical practice. The work is currently submitted as a word file through the University's Virtual Learning Environment (VLE) – Blackboard 8 but for the professional body the current preferred method is then for the student to collate the work into a paper-based portfolio for recognition. In 2007-8 Aston University ran a number of eportfolio pilots then led to the adoption of PebblePad (Pebble Learning, 2009) as a staff and student personal learning system and eportfolio in August 2008. The next section presents the results from a pilot study that was carried out in 2008-9 to look at the advantages and disadvantages of third year pharmacy students writing and submitting reflective work following hospital visits to tutors and receiving feedback via the electronic portfolio.

Eportfolio pilot study in Pharmacy

A pilot study was carried out, Hirsch (2009), to compare and assess the ease of use and functionality of the eportfolio PebblePad compared with the Virtual Learning Environment, Blackboard 8. The evaluation focussed on students submitting and tutors assessing reflective work following hospital visits. The pilot was conducted with 148 third year students. Half submitted reflective work via PebblePad and the other half through Blackboard. The staff involved received work from students via the eportfolio and the VLE. A short questionnaire and focus group with staff and students elicited the following from students and staff.

The students found the ePortfolio was easy to navigate and that it provided a useful structure for the learning tasks and reflections. Submitting the work to the tutor was straightforward and feedback was timely. They felt that they needed more face-face support and guidance from staff to get the most out of the new system. The students submitting via the VLE provided no additional comments, as this was a standard university method of submitting information. The following feedback was obtained from the staff who received work by both PebblePad and Blackboard 8.

The staff found the Pebble interface attractive and easy to use. They had similar experiences to the students in that they found it straightforward to share information. They liked the structure provided for encouraging students to comment in a reflective manner and found the commenting on work quick and easy. Some commented that they felt the student reflection was richer via the eportfolio in contrast to the uploaded work document in the VLE. All found the portfolio less bulky than the current paper based versions and could appreciate how the structure could be tailored to an individual's development which would enable them to make the process more relevant. They also commented that they would have liked more initial training.

Developments in Pharmacy and Biomedical Sciences 2009-10

As a result of the initial pilot and the direction of national developments with the professional bodies in the UK Pharmacy has developed the learning materials, assessment tasks and portfolio proformas to enable them to be delivered to the students through PebblePad. All students have been introduced to PebblePad as the beginning of the year during introductory lectures. The tutors have received a half day training but have yet to decide if the final submission will be through the creation of a webfolio or downloaded hard copy. Staff are supportive of these developments and see the positive benefit of aligning the programmes practice to the professional body requirements however they want to ensure that the learning and assessment practice engages the students fully in the process. Evaluation will take place by questionnaire and focus groups with tutors and students in all years of the programme.

Developments in Biomedical Sciences are specifically focussed on the students who are currently on placement in clinical practice working with BMS Training Officers. Selected exercises and assessments within the existing BMS paper-based BMS Registration portfolio have been transferred and formatted within PebblePad for use by the students and the Training Officers. Following a joint training session a short questionnaire was used to gauge their opinions of the benefit of this pilot. Early feedback suggests that the Training Officers, who have extensive feedback of the paper versions, are very positive and supportive of this move to an electronic version. The Training Officers will be assessing work and giving feedback to the placement students until June 2010. On completion of this placement, students and supervisors will be invited to attend independent debriefing days where exit questionnaires and focus groups will be held. If the students and supervisors are positive and in favour of the electronic development a formal proposal will be made to the regulatory bodies i.e. IBMS and HPC that this eportfolio approach be extended and adopted nationally.

Summary

This paper has focussed on current undergraduate programme developments in the School of Life and Health Sciences at Aston University in the UK. A pilot study in Pharmacy has demonstrated the capability of using an electronic portfolio to encourage students to reflect on their personal and professional development during their undergraduate studies. In subjects allied to medicine, where graduates are required to gain professional body recognition for practice, it is hoped that such an approach will enable undergraduate students to become robust, independent learners with a clear focus on the personal and employability skills. This latter aspect is currently being assessed during a programme wide evaluation of PebblePad as a technology to support the student-tutor sharing and feedback of reflective accounts. In addition Biomedical Sciences are running a contained pilot with students currently undergoing a 12 month placement.

Several challenges have emerged from the pilot and development work. The first is the importance of working closely with the relevant professional bodies to ensure that initiatives are aligned. Technological is changing so rapidly that a variety of different systems are being piloted and it is important that common systems, content and methodology are agreed at the outset. Secondly it is important to involve tutors and students from the beginning and ensure that the assessment plans and tasks are designed for delivery through the selected technological platform. To be successful in the implementation phase a considerable amount of time needs to be scheduled for the programme director to articulate and demonstrate the benefits of the new technological approach to staff and students. It is also helpful to provide a considerable amount of additional support for staff and students to ensure that all participants are able to fully exploit the opportunity.

Initial feedback from staff and students has been during the pilot stage and feedback from the professional body training officers has been very positive and there is some early evidence that the ability to share reflective pieces with a tutor during the development of the portfolio is felt by some to enrich the experience. This will be explored further during the current pilot. There are major benefits to both the

students and the professions if the requirements can be fully embedded in the undergraduate programme. Interestingly the comments from staff and students during these developments completely resonated with those the 2008 JISC report on 'Effective eportfolio practice' from which the following comment is taken: 'Initiatives and national policies can drive forward an agenda for change, but the real test comes at the point of use. Emerging, often powerful evidence from practitioners and learners of the value of developing e-portfolios provides another strong rationale for reconsidering the role of e-portfolios in learning and teaching. Cutting-edge research and development projects funded by JISC and other agencies also indicate further potential that is not yet fully exploited – for example, in facilitating the transition between institutions and stages of education, and in supporting staff appraisal and applications for professional accreditation. But perhaps the most pressing reason for taking a closer look at e-portfolios is the indication that use of these tools can promote more profound forms of learning'.

Technology is simply an enabler of learning for both staff and students and it is the planning, design and deployment that provides the greatest challenge. These aspects are being more comprehensively addressed in the current pilots and will be the topic of a future paper.

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References

Bhamra, A. & Rattenbury, S. (2006). Construct a personal professional portfolio. *Biomedical Scientist*, 50(3), 223-228

Blackboard (2005). http://www.blackboard.com/

Burgess, R. (2004). Measuring and recording student achievement. Universities UK/SCOP. http://www.universitiesuk.ac.uk/Publications/Documents/measuringachievement.pdf

Clavert, J., Jowett, T., and Cotterill, S. (2007). Centre for Bioscience Bulletin Spring, p3. http://www.bioscience.heacademy.ac.uk/ftp/newsletters/bulletin20.pdf

Dearing, R. (1997). *Higher Education in the Learning Society*. Report of the National Committee of Inquiry into Higher Education, Norwich. http://www.leeds.ac.uk/educol/ncihe/

DFES (2003). *The future of Higher Education*. White Paper. http://www.dcsf.gov.uk/hegateway/strategy/hestrategy/foreword.shtml

Halstead, A., & Sutherland, S. (2006). Eportfolio: A means of enhancing employability and the professional development of engineers. International Conference on Innovation, Good Practice and Research in Engineering Education (EE2006) Liverpool 24-26 July 2006. http://www.ee2006.info/docs/10.pdf

JISC (2008). Effective Practice with e-Portfolios http://www.jisc.ac.uk/media/documents/publications/effectivepracticeeportfolios.pdf

Messer, S. R., Griffiths, M., Gomez, S. & Lush, D. (2009). International Conference in Multimedia and ICT in Education, April 2009.

Pebble Learning (2009). http://www.pebblelearning.co.uk/

Royal Pharmaceutical Society of Great Britain (2006). *Principles of Pharmacy Education and Training 2.5*. http://rpsgb.org.uk/pdfs/educprinciplesrept.pdf

QAA (2001). Guidelines to HE progress files. http://www.qaa.ac.uk/academicinfrastructure/progressfiles/guidelines/progfile2001.asp

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