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A Blended Approach to Evidence Learning in Professional Practice

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Abstract: Research and e-learning both need to have real-life usability in order to be of benefit. This paper analyses the journey followed as an electronic portfolio was introduced into the midwifery programme at a University in the United Kingdom. Underpinning this innovation were key findings from the literature and an ongoing study exploring "Assessment of Practice". Due to a number of curricular changes required by the authors' institution and the professional body, the decision was made to incorporate these – together with current evidence – into a blended portfolio for use by undergraduate midwifery students. The part-electronic, part-paper portfolio enables students to demonstrate the individual range of their practice learning activities and professional development, resulting in them being able to provide evidence of their competence prior to professional registration. The flexibility offered by the e-portfolio system empowers the learner and promotes autonomy in the gathering of their evidence, which they demonstrate through a system of hyperlinks. Clarity and consistency of multimedia guidance and facilities for regular feedback on progress are key features of the new electronic portfolio. The results of a set of longitudinal case-studies which are currently nearing an end at the Centre for Excellence in Professional Placement Learning had a major influence on the development of the blended portfolio. Student perceptions of the validity and reliability of the various practice assessment methods used in Midwifery, Social Work and Post-registration Health Studies in the University as well as the impact of the practice assessment process on their learning have been explored. Significant findings have emerged from this research with regard to the strengths and weaknesses of portfolios. The importance of students understanding the purpose of practice assessment as well as recognising its contribution to their learning and development has also been highlighted. In line with the authors' focus on producing an evidence-based innovation, a pilot was undertaken of the blended portfolio, in which students with a range of IT (information technology) and learning styles were invited to experiment with the new format. Following the successful outcome of the pilot, the portfolio has recently been rolled out to midwifery students and the mentors who support them in their practice placements. The e-portfolio has been show-cased in the wider University, and a number of health and social work colleagues are keen to incorporate a similar assessment method into their programmes. It is considered that the principles of the blended portfolio and other findings from the research will be of interest to a range of other professions which have a practice component, and would be transferable across international boundaries.

Keywords: Portfolio, blended learning, professional, practice, assessment

1. Background

Midwifery is a profession which relies on a sound evidence-base in order to inform practice. It is also essentially a practical profession in which activities undertaken need to have a demonstrably clear purpose. Critical analysis and a reflective approach inform rationalisation of decisions and actions. It was on this basis that the midwifery team reviewed the practice portfolio and assessment process in use at the time, and these were therefore the origins of an innovative blended portfolio which is currently being used by first year students.

Eighteen months ago, the Midwifery degree programme at a University in the United Kingdom was undergoing revalidation – a five-yearly process which is the norm for this institution. At the same time, the professional body governing Midwifery in the United Kingdom set out a range of new requirements in an attempt to strengthen the validity and reliability of practice assessment. Many of these were already in use in the existing programme, but it was necessary to incorporate some of the changes into the new curriculum. One of the midwifery team was leading an ongoing extensive research project in a Centre for Excellence in Teaching and Learning at the institution, which was exploring the perceptions of learners on a number of health and social work programmes with regard to the methods and processes used in their curricula to assess practice – all of these programmes preparing the learners for registration with professional bodies. The findings from this research had been

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informing the assessment process not only in the relevant programmes but also in others in the faculty. It was therefore considered important to transfer these key findings to the Midwifery programme, at this time of review and revalidation.

The midwifery team took the approach of setting up a work-party to review the current practice portfolio and assessment process in the light of evidence both from the literature and from the "Assessment of Practice" study. The work-party comprised academics, clinicians and students and so represented the various views and needs of key stakeholders. Following discussion, it was decided that the format of the portfolio should be changed to make it more up-to-date, flexible and user-friendly. Initially, the intention had been to transfer in its entirety what was historically a large and cumbersome paper portfolio to an electronic platform. However, there were two major barriers to this: firstly the lack of ready access to computers in the clinical areas – particularly in community settings – and secondly the need for entries of profession-specific requirements and summative assessment to be signed by registered midwives and mentors – a process which was, at the time, not feasible due to available technology and non-communicative web-based systems in the various hospital and community Trusts. Enquiries were made with regard to palm-top computers, but the cost was prohibitive. A decision was therefore made to initially develop a blended portfolio in which the profession-specific and summative elements were retained in paper format, but the greater proportion of the portfolio – the evidence of learning and development – was to be moved to an electronic version. Crucial to both components of the portfolio was the embedding of the key principles which had been identified in the research and literature – enhancing the portfolio's functionality as a means of presenting valid and reliable evidence of learning and achievement.

2. Applying the evidence from the literature on e-learning and portfolios

Portfolios are commonly used in health and social work professions as a method of recording practice learning, as well as being a tool for assessment (Snadden and Thomas 1998, Baume 2002, Calman 2002, McMullan 2003, Melville 2003, Carraccio, 2004). Scholes et al (2003) identify difficulties for both students and assessors of matching evidence in portfolios to specific learning outcomes. It was this aspect which the work-party sought to address by developing a system whereby mapping of learning would be more readily achieved – and the use of an electronic system seemed to facilitate this.

The expansion of e-learning is one of the priorities within Higher Education. This term covers many different approaches, with the common theme of information and communication technologies. Clarke (2004) highlights that this wide range of approaches may incorporate different elements - for example interaction, learning resources, formal and informal learning. Scott (2003) identifies effective e-learning strategies as including online debates, problem-solving or interactive learning from real life situations. Several authors emphasise the need to be clear regarding the purpose of e-learning (Forman et al 2002, Washer 2001), and Washer cautions against the presumption that transplanting learning materials onto the web necessarily makes them as effective as the resources they are replacing. However, Forman et al explains how the diversity encouraged by e-learning is very good in terms of addressing specific needs. Williams (2002) suggests that more attention should be paid to the students' needs and attitudes, and Scott (2003) further expands on this aspect stating that success is linked to matching their needs and effective e-learning strategies. An understanding of the audience and their perception of the resources will help increase acceptability and effectiveness. It was for this reason that a stakeholder group was invited to form the work-party, and that a pilot of the new blended portfolio was proposed in order to evaluate whether the users' needs had been met. The value of portfolios in promoting learning has been recognised by a number of authors. Mountford and Rogers (1996) suggest that if reflections on practice form part of portfolio assessment, this process may also contribute to the student's learning. However, Scholes et al (2004) argue that unless outcomes are clear, the result may be that the student focuses too heavily on completing the portfolio rather than learning from the experience itself. The midwifery team were very keen to ensure that the students understood the purpose of completion of the portfolio – charting their growth and development throughout the course as well as demonstrating their achievement of programme and professional outcomes.

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Sit et al (2005), in their self-administered questionnaire of post-registration degree students, explored six aspects of on-line learning. They found high levels of respondents agreeing that they could take responsibility for their own learning and work at their own pace. Other aspects which facilitated learning were ease of navigation within the resource, supplementary face to face sessions and electronic communication with the lecturer. The greatest hindrance was the lack of opportunity for face to face discussion with peers and lecturers and confidence in their own ability. Key to the new midwifery portfolio was a system of providing regular feedback to students – either electronically or face-to-face – to ensure that they clearly understood the process and purpose of this method of learning and formative assessment. Several face-to-face group tutorials were also timetabled into the programme to explain the new resource to the students and clarify any queries.

3. Applying the evidence from the research: Study on “assessment of practice”

The Centre for Excellence in Professional Placement Learning (Cepl) at a University in the United Kingdom is engaged in a number of activities to explore and support learning in professional placement settings. One of the research strands is investigating issues around “Assessment of Practice” - evaluating methods used in Midwifery, Social Work and Post-registration Health Studies. A multi-disciplinary team is undertaking a three-year longitudinal study which commenced in June 2006, following on from an exploratory study in which the foundations and focus of the main research project were established (Fisher et al 2009 – manuscript in preparation). Multi-centre Research Ethical Approval was granted for the study.

3.1 Methods

Semi-structured interviews have been undertaken with 14 students after submission of their practice documents at the end of each year of their programme, and these are now nearly complete. Single and cross-case analysis and synthesis of the qualitative findings from the finished case-studies is in the process of being undertaken using the ‘Framework Technique’ (Ritchie and Spencer 1994).

3.2 Aims

The overall aim of the project is to establish an evidence-based set of key principles and resources to guide assessment of practice, relevant across professional boundaries. The research questions explore student perceptions of the validity and reliability of practice assessment methods as well as the impact of the process on their learning experience.

3.3 Key findings

The longitudinal approach has enabled comparisons to be made both at different stages of development of the individual as well as between individuals and professional programmes. Overarching themes identified in the study have centred around:

- Purpose - The actual reason for assessment and relevance to learning. Students appreciated being able to demonstrate “achievement of learning” and “focus” rather than feeling they were merely “jumping through hoops/ ticking boxes”.
- Process - Methods used needed to be clear and consistent. Students were keen to avoid bulk of documentation and its associated workload, and wanted to be able to be individual and flexible in demonstrating their learning and achievement of outcomes.
- Preparation (or guidance) - Key to the students’ experience, contributing to their understanding of both the ‘purpose’ and ‘process’ of practice assessment. There was a need for consistency of information and appropriate timing of its delivery.

One of the key methods of practice assessment explored in the study has been the use of portfolios, which are common to all the professional programmes represented. Significant findings have emerged with regard to the strengths and weaknesses of this tool.

Positive aspects of portfolios have included:

- they can be valuable learning tools, increasing self-awareness and guiding objective-setting

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- they make the student think
- they motivate identification of learning
- checklists and objectives provide a focus
- they provide evidence of capability and record progress and achievement

However, they have also been viewed negatively by students:

- they may be prescriptive and restrictive
- learning objectives may be repetitive
- completing portfolios may cause anxiety
- they contribute heavily to workload and are time-consuming
- size may be an issue
- insufficient preparation in their use may be given, and timing of their introduction is an issue to consider
- there may be issues around confidentiality
- elements requiring self-assessment may be misjudged
- weighting of marks may be unbalanced
- there is a perception of “ticking the boxes”
- reflections are valuable, but there is the potential to “cheat the system/ twist the truth”, raising concerns about validity and reliability (as well as professionalism!)

The midwifery work-party therefore took on board the relevant findings in the development of the new portfolio. Following up on the wish of some students to reduce bulk, an electronic component was proposed. Separation of the formative and summative elements was intended to promote understanding of the purpose of both components. Explicit in both the paper and electronic components was very clear guidance, in a variety of formats (both text and audio-visual) - so that this would appeal to different learning styles, provide consistency of information and enable students (and their practice mentors/ assessors) to re-visit the guidance as required. It was considered that the e-portfolio would provide greater flexibility for students to demonstrate their individual learning, whilst the more prescriptive elements ensured that they progressed towards the required professional and programme outcomes. Key to the functioning of the e-portfolio was a system of hyperlinks whereby students mapped selected aspects of their learning activities in order to demonstrate their personal and professional development and evidence how they had achieved these outcomes.

4. The pilot study

4.1 Methods

A six-week pilot study was undertaken prior to roll-out to students on the new curriculum, which took place between April and June 2008. This period was chosen as students had maximum time on clinical placement, and therefore would have most opportunity to try out the new blended portfolio in this setting. Volunteers were invited from the student groups across all three years of the degree Midwifery programme, based in three of the seven clinical sites. Thirteen students initially volunteered, but one subsequently withdrew due to other pressures. At the start of the pilot the students were asked to rate their IT (information technology) ability on a five-point Likert scale of poor – excellent and also to identify which learning style best described them – theorist, pragmatist, reflector or activist (Honey and Mumford 1992).

Students were provided with copies of the summative paper component and access was provided to the formative e-portfolio. Purposely, no face-to-face training of students on the use of either element was provided at the outset of the pilot, as one aspect which the midwifery team sought to evaluate was the clarity and adequacy of the written guidance. However, support was available on request once the pilot had commenced.

Mentors were informed of their student’s participation in the pilot via letter, and were also sent copies of the written guidance along with contact details should problems with the portfolio’s use develop.

Lecturers linked to the three hospital Trusts involved in the pilot were briefed and available as additional support, whilst all 10 midwifery lecturers were given the opportunity to view both components of the portfolio.

At the end of the six-week period students, mentors and lecturers were sent a questionnaire comprising closed and open questions regarding both components of the portfolio.

4.2 Findings

Background data collected prior to the pilot identified a range of self-assessed IT skills from satisfactory to very good. No student considered their level to be poor or excellent. The range of learning styles covered all categories. Responses were received from eight of the 12 students completing the pilot. Six lecturers completed a questionnaire, and one response was received from a mentor.

Guidelines were evaluated very positively by all respondents, although several stated that they would have valued face-to-face training in addition. Regardless of self-assessed IT skills, many found that initial access and navigation of the e-portfolio was awkward, however written guidance in combination with practical application resulted in overall positive responses identifying that there was with minimal need for extra help. Importantly, participants had been able to access the e-portfolio from all sites - home, practice placement and university. The reduction in size of the paper component was seen as an improvement, and a new method of assessing proficiencies was evaluated well.

There was some concern about perceived repetition of one of the sections in both paper and electronic components. Not all participants used or were able to access the e-portfolio for various reasons. This was largely due to the timing of the pilot which had, of necessity, occurred at a point when students were also being required to complete their programme practice portfolios as well as academic assessments. Some specific technical issues were identified such as general appearance, editing and navigation between sections, and these comments were used to inform improvements to the final version.

Overall, participants from all user groups were positive about the introduction of an e-portfolio. The hyperlink system, although initially perceived as "tricky", became easier with use, and students commented on the benefit of being able to demonstrate external links (eg: to national guidelines): *"Hyperlinks are good as it shows evidence of learning"* (Student).

Students liked the fact that the personal tutor would have access and provide formative feedback. Participants were very positive about the updated format, and students thought that it would be more convenient to access in the clinical area rather than carrying around their existing bulky portfolio. *"I think it is excellent and innovative"* (Lecturer).

5. Discussion

It was reassuring to note that the feedback was generally positive from all participants in the pilot study, as this contrasted with the findings of Williams (2002). In his exploration of psychology lecturers' and students' views of a new electronic system, there had been a discrepancy between the two groups' perceptions and evaluation of the method - the lecturers having been enthusiastic, but the students viewing the development negatively.

The students in our pilot represented a range of ages, IT ability and learning styles. These differences did not however appear to affect whether or not they were able to cope with the new format. Although the pilot group was small, these findings concurred with those of Wishart and Ward (2002). They explored attitude and locus of control in relation to e-learning, and found that mature students were slightly less likely to have used different software, be less scared of computers and in favour of their use - a finding which was perhaps surprising. However, these differences were not significant. No differences were found between the two age groups with regard to locus of control, which refers to the

extent to which an individual feels they are in control of events and their environment. Someone with an internal locus is therefore more likely to be positive towards computers and enjoy being in control,

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whereas those with an external locus of control may find computer use a very unsettling, emotional experience. Whilst Wishart and Ward found no differences between age, gender and profession, they recommended incorporating some less open-ended tasks to support those with an external locus of control. The current move to widen the entry gate to university admissions has resulted in a student group with mixed abilities and attitudes towards computer-based learning. The midwifery team is therefore very aware of trying to accommodate the various needs and levels of IT ability in the range of students undertaking the programme. Some of the midwifery e-portfolio therefore comprises set templates which need to be completed by the student as they progress through their programme, whereas other elements allow free range to the student's individual expression. The inclusion of a paper-based element also makes allowances for variations in ability, learning style and locus of control.

Having undertaken the pilot study, the midwifery team was reassured that the move towards a blended portfolio was educationally sound and acceptable to stakeholders. Further refinement of the e-portfolio took place prior to rollout to 'real' students, and the challenges of electronic systems provided steep learning curves for the team! A significant hurdle to be negotiated was the siting of the portfolio on a long-term system, as the students needed a guarantee that their e-portfolio would be safe and functional throughout their three-year programme. Web-based learning being as it is, the technology has constantly been changing, and the recent purchase by the University of a commercially produced e-portfolio system for use throughout the institution added yet another dimension. It was, however, decided that the custom-made e-portfolio created with the invaluable support of a faculty technologist would be used in the first instance as this seemed to better meet the needs of the programme.

One of the main priorities of the midwifery team has been to ensure that students use their portfolio as a means of learning, rather than a "box to tick". Two indispensable components of lifelong learning are self-motivation and self-directed learning. Regan (2003) and Fisher et al (2001) both highlight the need to match students' readiness for self-directed learning and the teaching method for optimum learning. Fisher et al suggest that the former is individualised and consists of a continuum rather than 'ready or not'. Our blended portfolio will enable students to travel this journey along flexible routes, although the destination has to be time-constrained and outcome-directed. Regan's (2003) mixed method study found a wide range of motivational factors influenced self-directed learning- the importance of the tutor role, intrinsic factors (personal goals, interest in subject) and extrinsic factors (pressures and rewards). Support in helping students to understand the process and purpose is therefore crucial. A number of opportunities for formal and informal tutorial support and feedback for both students and mentors has been built into both the blended portfolio itself and the process of introducing it to the users. The end-result will hopefully be an individualised portfolio which demonstrates the student's progress and growth as well as achievement of outcomes, and promotes the concept of lifelong learning.

6. Conclusion

Although this blended portfolio has been designed for midwifery students and incorporates profession-specific components, it is believed that the concepts and principles are transferable across both professional and geographic boundaries. E-learning has opened opportunities for being more innovative in the application of traditional learning and assessment methods, and it is important to make use of this flexible platform. However, inherent in technology are a range of barriers and pitfalls – not least its rapidly developing and dynamic nature. All too soon, what was at the cutting edge of developments is outdated. On the other hand, these very developments may enable some of the existing hurdles to be negotiated – and a fully electronic portfolio readily accessible to students and mentors in all sites is anticipated in the future. Midwives are used to reflecting and critically analysing current situations, using the evidence base and technology at our disposal to promote best practice. So we'll move with the times, as we embed this portfolio into the curriculum, and continue on our own journey of lifelong learning.

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