
ONLINE APPROACHES TO REFLECTIVE PORTFOLIO LEARNING - INITIAL STUDIES

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Abstract: We are required to deliver portfolios, that contain evidence of skills competencies and reflective learning, within the UK's largest medical school, with 2000 students at university, and hospital sites dispersed across North West England. We are starting to use "Horus", an established education technology to introduce workplace learning management and portfolio services to the medical school's virtual learning environment, in the HeLM (Horus e-Learning Management) project. A major challenge is to use online facilities to support reflective learning for such large student numbers. We present initial investigations of online reflective discussions and the role of student facilitators. We have introduced an online discussion forum, using a WebCT platform. The students are divided into groups, each with designated student facilitators from the same year as the other students. They provide feedback to their peers on portfolios and facilitate online discussions on portfolio matters and specific issues we raise to stimulate debate on personal and professional development. The widespread use of this facility, preliminary results using the community of enquiry model and initial discussions with student facilitators indicate that reflective learning by this means is possible. Our long term aim is full integration of these online discussions with the HeLM project.

Keywords: online reflective discussion, peer assisted learning, virtual learning environment

Introduction

Portfolio Learning in the University of Manchester Medical School

Personal and professional development portfolios (referred to here as portfolios) have been used for many years in professions such as nursing and teaching, however, their introduction into the medical profession is relatively recent. For medical practitioners the portfolio must provide evidence that the individual is competent, abides by high ethical standards, maintains the standards the public and the medical profession expect and is thus fit to practice medicine. By this means individual practitioners can substantiate that they recognise the limits of their competencies and skills, deficiencies in their knowledge and understanding, and think critically about their experiences. The significance of this for clinicians throughout their careers both for patient safety, and for their own development is recognised, in the UK, by the General Medical Council's document "Tomorrow's Doctors (1). Portfolios for medical practitioners are therefore routinely based both on evidence drawn from practice and a reflective element or commentary on experiences(2). Such portfolios are now well accepted in post graduate medical education (3-5). Their introduction, together with personal and professional development, early on in the undergraduate curriculum, is a more recent innovation. Nevertheless, the GMC expects all medical schools to include portfolios and portfolio learning in their undergraduate curriculum (6)

Our vision is of a portfolio that will describe an individual student's maturation from year 1 to year 5, and integrate with their portfolio learning post graduation in the clinical workplace. We have recently introduced portfolios into the medical curriculum in the Manchester School of Medicine, beginning with Years 1 and 2. The medical school in Manchester is extremely large with around 380 students in each of years 1 and 2. This precluded the use of individual mentors to support the delivery of portfolio activities. We therefore used a system of tutor facilitators for groups of students. These tutor facilitators retained some of the functions associated with individual mentoring, but also utilised skills of group facilitation to emphasise aspects of professional behaviour, reflective writing and practice and to explain the significance of personal and professional development. This approach emphasised discussion between and learning from peers, with the aim of sharing best practice and empowering students as independent reflective learners. The portfolio itself is a simple folder, divided into sections based on the GMC's 'Good Medical Practice' guidelines namely; maintaining good medical

practice, good clinical care, relationships with patients, working relationships with colleagues, teaching and training, probity and health

Challenges to portfolio development in the workplace learning environment

We are now extending the portfolio into years 3 -5 of the curriculum, where the focus is on workplace learning. Here we face a number of challenges:

- We have even higher numbers of students, with over 530 per year. Recruitment of tutor facilitators from clinical/academic staff was not an option.
- As this phase of the course emphasises workplace learning, the students are distributed over 4 geographically separate and distinct hospital sites, dispersed across the North West of England. Although each of these clinical centres has its own distinctive learning environment, the curriculum is that of the University of Manchester Medical School and is common to all students.
- The nature of clinical work place learning is such that timetabling is highly complex and there is little opportunity for face to face group meetings to discuss portfolio activities and personal and professional development as in years 1 and 2.

Technologies and Learning Approaches Available

We have a variety of elearning and pedagogic approaches which we are using to meet these challenges.

- 'HORUS': a suite of sophisticated learning management technologies developed and applied to several workplace learning opportunities including early postgraduate education of doctors, specialist medical postgraduate education and basic nurse education (7,8). To date HORUS has focused primarily on supporting learners' attainment of intended learning outcomes of objective-based curricula.
- Virtual Learning Environment a bespoke virtual learning environment, which supports problem based learning, "Medlea" already in use in the Manchester Medical School.
- Online web based discussions: The use of WebCT as a platform to support online discussions, already employed for interdisciplinary and interprofessional learning between students with disparate timetabling constraints.
(<http://www.campus.manchester.ac.uk/ceeb1/projects/casestudies/9.pdf>)
- Learner led and student facilitated learning approaches The medical curriculum of the University of Manchester Medical School is problem based and the combination of this learning approach with traditional medical workplace learning is now being sited as best practice (9).

Research question

How can these technologies and learning approaches integrate to support workplace portfolio learning, in the context of a complex educational timetable, of large numbers of medical students, who are geographically dispersed? We present here interim Action Research into the development of such an undergraduate portfolio. We investigate

- The type online interactions, their development over time and their content
- The role of the student facilitators

Planning and Implementation

- 1) The HeLM project In the Horus e-Learning Management.(HeLM) project, we are integrating HORUS on a pedagogic model of experience based learning with 'Medlea'. HeLM is supported by an integrated team of experts, each with responsibility for a discrete work package aimed at extending the technology to support life long learning. These include reflective learning, teacher development, integration of assessment, learning management in workplaces, transfer to education of other healthcare professions, project management and capacity building. This forms the basis of an electronic portfolio, which can be accessed by all students. Through this

methodology the complexities of workplace learning within a problem based learning curriculum can be made explicit and amenable to e-Technology support.

- 2) Online reflective discussions. Our approach for enabling students to continue their reflective discussions, which supported their professional development in years 1 and 2, was to construct a web page, using WebCT as a platform, specifically for this purpose for students in year 3 which will be continued as they progress through the curriculum. The page has a designated area for general discussion, to which all students in the year can contribute. Students are divided into groups for reflective discussions. Each group was designated discussion board, which was private to its members but could be seen by the three members of the portfolio implementation team. It was made clear to the students that they were the only ones who could contribute to the discussion, implementation team members were non participatory.
- 3) Role of student facilitators - As the students were already familiar with facilitated discussion in groups which emphasised sharing of good practice, empowerment of individual students as reflective learners and learning from peers, we planned that these online discussion groups would be facilitated by students from Year 3 i.e. the same year as their peers. The facilitators have several roles namely to provide feedback and advice on portfolio matters and to facilitate discussions on specific issues raised, by the portfolio support team, to focus debate. There was no specific credit given to them for this activity, although its importance in providing material for their first job applications was not lost on the students. This was an innovative proposal for reflective learning with large numbers of medical students. Although online discussions have been supported by peers elsewhere in Higher Education, notably in teaching practice, it is generally used with small numbers of learners (10). In undergraduate medical education, peer assisted learning is generally applied to the teaching of specific skills to learners at a junior level by more senior students (11,12). This approach was not suited to our situation; year 3 students were the first to have experienced portfolio and reflective learning for the initial two years of their curriculum. Students in years 4 and 5 would have found it difficult to provide feedback on issues concerned with portfolio. We recognised that student facilitators required support, guidance and feedback on their activities. Our proposal was that a small group of clinicians termed “clinical mentors” would fulfil this role

Results

- 1) **Usage of online discussions.** From November until mid July, online discussions were used vigorously; 98% of groups participated with 3,349 postings The discussions are being analysed for both thematic content and type of interaction. Initial investigations indicate that the online discussions were mostly concerned with issues arising from the professionalism activity. There was some evidence that the content of portfolios was discussed within the groups online, but the implication was that these issues were dealt with mostly by face –face interactions.

The types of interactions are being analysed by the Garrison et al’s community of inquiry model (13), from which 12% were at the integration and resolution levels of cognitive presence and 35%, 26% and 39% were group cohesive, emotional and open levels, respectively, of social presence, indicating increasing sophistication of interchanges.

- 2) **Role of student facilitators and online discussions.** In addition to analysis of the online discussions, we have used questionnaires, focus groups conducted with nominal group techniques,, individual semi-structured interviews and analysis of portfolios with both student facilitators and the other year 3 students. Initial analyses showed that students were positive; ‘viewing’ others’ perspectives was beneficial, text based discussions were ‘thought provoking’ and empowered reflective learning, although the role of facilitators had to be clearly defined and making time for face to face interactions was desirable. Student facilitators raised the following points:

- Organisation of specific time tabled slots for face-face meetings; many thought that this would be helpful as an adjunct to their online discussions,

- Non participating students; some facilitators felt tentative over referring students who were not participating in discussions on to clinical mentors,
- More activities as a focus for online discussion: most facilitators wanted more issues raised by the portfolio implementation group as a focus for their discussion, to follow on from the “professionalism” activity. They concluded that without this stimulus, the web may not continue to be used widely.

Amendments

The first amendment to the original plan is the incorporation of further activities to initiate further online discussion. The first of these, which challenges the students to consider issues surrounding safe prescription of medicines, has now been introduced. Further amendments will be made following the results of our evaluations.

Future Goals

Our initial observations indicate that the online discussion facility provided by the WebCT platform was used by almost all Year 3 students, who were located on different hospital sites and that it is possible to support this with student facilitators, drawn from the same year. We were therefore able to provide reflective learning by this means, despite a complex educational timetable and large numbers of medical students, who are geographically dispersed. WebCT, however, is a separate platform to Medlea, the virtual managed learning environment, which supports HeLM. Currently there are links between the two, but this is not ideal and our overall aim is to integrate the two systems.

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