2012

Producing multimedia resources for teaching medical students about the social context of medicine: a partnership approach

Collett, Tracey Jane

PedRIO Research Fund Report
Guidance on writing the final report

Key contact: Priska Schoenborn**,** Educational Development
Tel: 01752 587611, **E-mail:** pschoenborn@plymouth.ac.uk
Other staff involved: Verity Campbell-Barr, Tracey Collett, Fiona Dalton, Valerie Huggins, Oxana Poverjuc, Lynne Wynesse

Title: Students as producers of multimedia curriculum content: an investigation of pedagogical merit.
Type of project: Summative Evaluation and Action Research

Aims: To investigate the ways and extent to which the process of involving students as producers of multimedia curriculum content enhances their understanding of subject knowledge and broader life skills.

Background: Social constructivism, and more recently communal constructivism, is recognised as having a positive effect on students' learning experience (Vygotsky, 1978; Holmes et al, 2001). Use of a participatory approach in the online environment has been termed Pedagogy 2.0 (McLoughlin and Lee, 2008). Many educators argue that Pedagogy 2.0 which entails the use of Web 2.0 tools provide richer and more engaging pathways to learn with great potential for facilitating student multimedia content creation, interactive information sharing, student-centred design and collaboration (Cochrane, 2010; McLoughlin and Lee, 2007; 2008). Studies suggest that students gain a better understanding of subject knowledge and develop transferable skills while using Web 2.0 tools (Lee et al., 2006). However, there are authors who believe that not all students may be familiar with technology (Crook et al., 2008; Kennedy et al., 2007) and with some questioning the ideology of Web 2.0 which they claim has not been seriously evaluated and has affected Pedagogy 2.0, resulting in its failure (Williamson, 2009).

Previous research in Computing, Accounting, and Early Childhood Studies (ECS) at Plymouth University, involved students producing wikis, videos and audio content to be shared as module material with their peers and subsequent student cohorts. It is these studies and Pedagogy 2.0 (McLoughlin and Lee, 2008) that form the basis for our project. After an initial evaluation of the previous studies, three further concurrent action research studies using Pedagogy 2.0 will be undertaken in the disciplines of Accounting, ECS, and Medicine. The research project aims to explore the pedagogical merit of Pedagogy 2.0; more specifically, to establish the ways and extent to which the process of involving students as producers of multimedia curriculum content enhances their understanding of subject knowledge and broader life skills.

Methods: The overall project adopted a mixed method approach (Creswell, 1999). It comprised of two phases. During the initial stages a comprehensive literature review was undertaken to elicit recommendations on implementing Pedagogy 2.0 and 'students as producers' (McLoughlin and Lee, 2008; Lambert, 2009) and in the context of using multimedia to produce such content. The three existing studies of the use of Web 2.0 technology to create shared module material (Schoenborn, 2008; Dalton, 2009; Campbell-Barr et al, 2011) formed part of this literature review. In order to ascertain students' views and experiences of producing Web 2.0 curriculum content, a summative evaluation of these was carried out which included using existing student feedback and undertaking follow-up semi-structured interviews with students.

The second phase consisted of three concurrent action research projects (Carr and Kemmis, 1986). The action research framework contained a combination of both

quantitative and qualitative methods. The data was collected from the contemporary student cohorts. Students were consulted in the selection and timing of research methods for phase II. To this effect, self-completion questionnaires (Accounting Studies) and focus groups (Medicine and Childhood Studies) were carried out to determine which data collection method(s) students believed to be most appropriate to assess this pedagogy of participation. As a result, semi-structured interviews and questionnaires were devised to evaluate the extent to which students' participation in producing multimedia curriculum content enhanced their understanding of subject knowledge and broader life skills. The emerging quantitative data was analysed by employing SPSS; while the qualitative data was analysed using NVivo.

Results

Phase I: Findings suggested that participants displayed mixed perceptions of producing multimedia content to be shared and to be used in student learning. The perceived benefits related to increased understanding of subject knowledge; help with revision and exam preparation; gaining a sense of accomplishment; working collaboratively with peers; enhanced critical thinking skills; improved communication skills;
experiencing enjoyment and fun while learning.

Students also noted a range of critical issues around producing and using student-produced content including quality, motivation, pedagogical integration into the course design, provision of tutor feedback, students' technological literacy, and students' perceptions of learning and teaching approaches. Explicit introduction to the learning objectives and outcomes, on-going tutor feedback and various evaluative mechanisms could potentially heighten student engagement with producing and using student-produced multimedia content.

Phase II: Although the findings from phase I suggested that students who participated in the research had mostly enjoyed the production of multi-media curriculum content, reporting a number of affective, social, and cognitive benefits, there were a number of issues arising which were addressed in the subsequent phase. Thus, the tutors adapted and redesigned aspects of their practice with a view to increasing the extent of student involvement, fostering collaborative culture, supporting students' technological skills, and strengthening the re-use of student-produced materials. Nevertheless, the findings from phase II are similar to those identified during phase I. The mixed perceptions remain and so did the majority of benefits and critical issues. Overall, there was stronger evidence of positive collaborative behaviours in the second phase. The medical students in particular reported a positive and rewarding experience and a sense of empowerment. ECS students reported positively on their experience of group work in a Web 2.0 context but there were mixed perceptions of the efficacy of working in friendship groups such as evidence of frustration from Accounting students. Some additional benefits students reported were that they developed a sharper ability to recognise their own learning needs and they gained knowledge about creating a learning resource for others. In addition, some were confident in the quality of own work produced; in ECS for example, the production of a Wiki proved more trustworthy when it was reviewed and assessed during in class-time.
They also identified a wider range of skills developed, e.g. technological, research, presentation, and time management.
As a result of the above findings, a number of recommendations have been identified to assist tutors interested in embedding similar methods to the ones evaluated in this study, mainly Pedagogy 2.0 and more generally collaborative learning in Web 2.0 context.

Associated publications:

Two **journal papers** in preparation:

'Limitations of 'Students as Producers' in Web 2.0: a reflective account' Target Journal: Journal of Computer Assisted Learning

'Towards more collaborative learning and co-production of curriculum: the role of Web 2.0 technologies**'** Target Journal: Innovations in Education and Teaching International

Conferences:

Schoenborn, P. and Poverjuc, O. (2012) *Student voice: engagement with Pedagogy 2.0*. European Conference on Educational Research, University of Cadiz, Spain.

Collett, T. et al (2012) '*Getting the pitch right': A study of how medical students can help each other learn the social aspects of medical care.* AMEE (An international Association for Medical Education) 2012 Conference, Lyon, France.

Collett, T. et al (2012) *Producing multimedia resources for teaching medical students about the social context of medicine: a partnership approach.* Vice Chancellor's Teaching and Learning Conference, Plymouth University, Plymouth, UK.

Collett, T., Schoenborn, P. (2012) *Teaching medical sociology in a PBL curriculum: Trying to think of it from an educator's perspective.* Behavioural and Social Sciences Teaching in Medicine (BeSST) Conference, Cardiff University, Wales

Schoenborn, P., Campbell-Barr, V., Collett, T., Dalton, F., Huggins, V. & Poverjuc, O. (2012) *Students as producers of multimedia curriculum content: challenges and opportunities of Pedagogy 2.0.* International Consortium for Educational Development, Bangkok, Thailand.

Schoenborn, P., Campbell-Barr, V., Collett, T., Dalton, F., Huggins, V. & Poverjuc, O. (2012) *Students as producers of multimedia curriculum content: an investigation of pedagogical merit.* Pedagogic Research Institute and Observatory Conference. Plymouth, UK.

Schoenborn, P., Campbell-Barr, V., Collett, T.; Dalton, F., Huggins, F. & Tidy, R. (2011) *Pedagogy 2.0: friend or foe?* SRHE Annual Conference, Newport, South Wales.

Keywords: Pedagogy 2.0; co-production of knowledge; students as producers; collaborative learning; Web 2.0

Breakdown of project budget expenditure (£17,105)

To be submitted (still waiting for a comprehensive breakdown from Finance)