Fostering online student interaction using the OB3 web application for online study

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The School of Midwifery at CPIT in Christchurch is undertaking an action research study on midwifery students and blended learning that commenced in 2010. This paper focusses on one aspect of this research which is the student's experience of social isolation whilst working through the online component of the blended delivery. In response the teaching team initiated an intervention as a result, and replaced the existing content authoring software tool with a system that enables students to engage and interact with each other more effectively. We subsequently adopted the OB3 web application which has ameliorated this problem to a large extent. This paper sets out to explain why the OB3 web application was chosen and what effect this has had in terms of the student's learning and the educators' teaching experiences.

Keywords: asynchronous discussions, blended learning, cooperative learning, online learning

Introduction

The School of Midwifery at CPIT, in collaboration with the School of Midwifery at Otago Polytechnic implemented a new style of Bachelor Midwifery (BM) programme in 2009 after extensive planning and design. A blended learning model was adopted for the programme in order to support the concept of a satellite delivery. Within this model, students are able to access the programme both centrally at CPIT and from the other satellite bases, Nelson/Marlborough, West Coast and South Canterbury. The previous BM programme was delivered in Christchurch with students attending lectures at CPIT and practical placements that were predominantly arranged in and around Canterbury. The new programme set out to actively improve access to midwifery practice opportunities for such students within their own geographical areas. Using a combination of practice based placements, online materials, virtual classroom sessions, face to face small group tutorials and block intensives, each component was chosen to best suit the purpose of the learning with consideration of how the learning in each could be integrated with the other components (Littlejohn & Pegler, 2007).

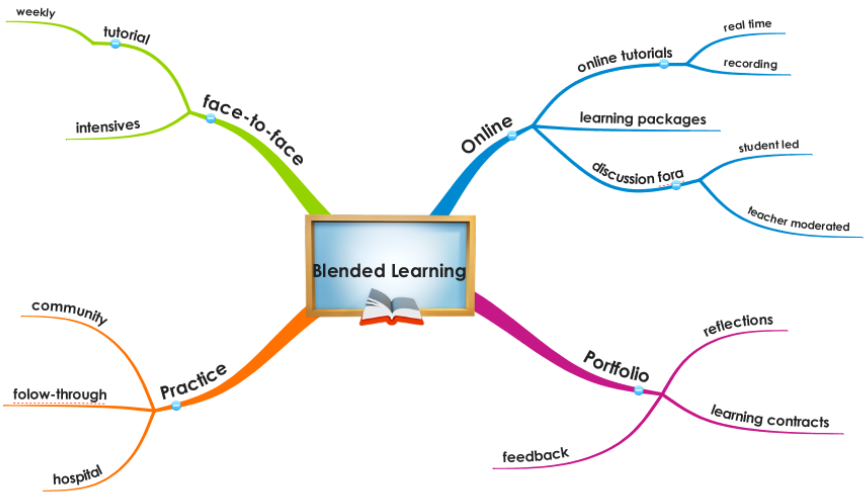

Figure 1: Blended learning model for the Bachelor of Midwifery

The e-learning component of the model was the most challenging aspect of the implementation, as many of the team had little experience with the modality. Additionally we had few role models at this time, as we were effectively breaking new ground within our respective institutions. We were introduced to the content authoring

software ‘eXe’ an open Source authoring system at a crucial stage in the programme development when we were searching for a way of presenting online materials in way that made them easy to produce and easy to use. The eXe application supported by CORE Education in Christchurch, was designed to assist teachers and academics in the publishing of web content without them having to learn the demands of using HTML language. This was important in relation to the time available and the level of skill within the staff. The resources authored in eXe were exported as IMS Content Packages onto the Moodle platform for students to access.

The system worked well for a number of years, but unfortunately, further developmental work on eXe was not forthcoming and the software became unstable as updates to servers such as Firefox took place. This meant that authoring became increasingly problematic and left the team with a challenge in terms of what we could use to replace eXe. There was an additional factor with eXe that took precedence over the technical issues that we had identified. This problem emerged from an action research study that we had initiated to evaluate the blended learning model.

Research activity on learning and teaching

In 2010 the midwifery teaching team at CPIT commenced a participatory action research (based on Kindon, Paine & Kesby, 2007; Reason & Bradbury 2006) project titled “Midwifery Education in a Blended Learning Environment”. All of the students within the cohorts who began the programme from 2009-2012 (inclusive), were invited to participate at the beginning of the second year and on completion of the programme. Each cohort numbered approximately 30 students. Students were invited to complete anonymised written questionnaires with open-ended questions or to attend focus group interviews. The response rates for the questionnaires ranged between 43-80%. There were three rounds of focus groups and about 1/3 of the students from each cohort participated. Ethics approval was gained from the CPIT Academic Research Ethics committee.

The data gathered from students was analysed each year. An iterative ‘interpretive description’ approach (based on Thorne, Reimer Kirkham, & O’Flynn-Maggee, 2004) was used by the midwifery teaching team and their interpretation of the data was discussed with students to gain their perspectives on the analysis. In keeping with the action research methodology, the teaching team developed strategies to address the aspects that students found challenging within the blended model. It also enabled the team to develop those aspects that students identified as enhancing their learning. Subsequent rounds of the action research cycle have enabled the research team to reflect critically on the effectiveness of these changes for students.

The questionnaire was comprised of 14 open ended question that addressed all of the components of the blended approach including, tutorial groups, student forums and intensives. Although students were invited to evaluate all of the components of blended delivery, this paper only discusses the aspects related to the online learning packages which are used to teach the theory components of midwifery knowledge. There was a high degree of consistency in the students’ comments about the online content in relation to two key themes: flexibility and isolation. Each year in the surveys and interviews, many students noted their appreciation of the flexibility of online learning.

> So one of the good points for me is I can juggle my family better around my learning so I can still take them to school and bring the kids home and cook the tea and be there. (Interview, 2011)

> Advantages: can access modules at any time, can go over it at other times, can spend as much time as you like on difficult subjects. (Questionnaire, 2012)

An aspect of online learning that numerous students also commented on was the isolation they experienced in working through the learning packages online. For example:

> VERY isolating. Lack of discussion. Unsure if on the right track, or spending the right amount of time doing certain things. (Questionnaire, 2010)

> I think one of the down points for me … is there’s no one sat next to you to bounce ideas off or just to ask one of those silly little questions you want to just to clarify. I think you … there’s nobody in your room, you’re just in your room with you. (Interview, 2011)

In the reflections on the students’ responses, lecturing staff recognised that they were unsure whether students were engaged with and understood the online material that staff had developed. Although discussion forums on Moodle were set up in all courses, these were not well integrated with the content of the learning packages.

Communication in forums was often impeded by delays or a lack of clarity about what was being referred to in discussion comments or questions. This and the absence of feedback from students meant that the sense of 'isolation' and disconnection was a shared experience.

The research enabled us to gain more clarity about what was needed to make the online packages more conducive to learning for midwifery students. We considered different approaches to improving interactivity and feedback to students on how they were progressing through the online packages. Although aware of critiques of course designs that attempt to create online student communities (LaPointe & Reisetter, 2008; Muirhead, 2007), it still seemed worthwhile to seek out a learning environment that would support more peer interaction and collaborative approaches to learning. We had been inspired by Wenger's work on Communities of Practice (Wenger, McDermott & Syder, 2002) which we felt could best be achieved within this mode of learning. We had also studied the work of Downes (2007) and Siemens (2008) and felt that this 'joined-up approach' to learning related well to their connectivist learning theory. Furthermore, we believed that our use of blended as opposed to distance learning would set us apart from the studies that had found online discussion to be unfavourable. We were in fact confident that an online discussion facility, embedded in the course materials would reduce some of the limitations and anxieties related to the solitary nature of working through the online materials, while preserving the flexibility that students appreciated.

OB3

At a conference in 2012, we encountered the work of OceanBrowser, a Dunedin based educational software Development Company. We recognised that their system OB3 had advantages over eXe in terms of the authoring potential. Materials could be authored and altered online without any need to export the materials. The interface was crisp, clear and unfettered and it felt intuitive and user friendly. Primarily, however, OB3 had the capacity to allow the students to engage and interact with each other in a way that eXe had not and this we felt might be the answer to the issue of social isolation in learning online. We piloted OB3 using one course in 2012 and two in 2013, in order to gain a snapshot response of how the students and the staff could work with it. The e-Learning team at CPIT evaluated the OB3 pilots surveying staff and students. We were confident enough from the piloting to go ahead and introduce the system wholesale for the Bachelor Midwifery programme at CPIT in 2014.

Students and lecturers have commented on how much they enjoy the commentary and the discussion in OB3. They work interactively and contribute ideas and materials that they have encountered by sharing urls and uploading materials themselves. They speak of the value of having colleagues clarify things for them in a way that lecturers are not always able to do, at a peer level. As found in other research (e.g., Smirnova & Nuzha, 2013), the asynchronous discussion allows them time for reflection which encourages more engagement by students who feel put on the spot during synchronous sessions such as those held in Adobe Connect or in face-to-face sessions.

For us as educators, we are able to see the level students are engaging with the material and to respond to their comments in order to encourage deeper/critical thinking. We can see how the students are working with the materials online and this allows for an ability to clarify where necessary. Like the students the asynchronous discussion allows adequate time for consideration of what further needs the students may have. Being able to see where the gaps are, when the students are not engaging with an element of study in the way that we would expect them to, means that we can cover missing areas of understanding in tutorials and Adobe Connect sessions.

We have now resurveyed students in the first and second years of the BM programme to establish whether the themes related to online isolation still prevail. Preliminary analysis of the survey results suggests that there is a significant improvement in their perception of support both from staff but also from each other. The results from this survey will be presented as part of the presentation.

In conclusion, our research to date would suggest that the use of asynchronous e-learning resources enables students to manage the complex demands of the programme and their personal lives. OB3 provides the opportunity for students and lecturers to 'co-create' emergent understandings, discuss perspectives which are visually linked to the content that the discussion originates from and asynchronously follow discussion threads.

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