Developing a distance learning programme for the Public Health Masters - University of Bedfordshire

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Abstract

The last decade has seen an acceptance that technology is here to stay and if Higher Education Institutions (HEI's) ignore this they do so 'at their peril' (Sloman, 2001). Aware of this the University of Bedfordshire have recognised that in order to expand and transform the traditional learning experience, for both students and teachers, they must embrace e-technologies and rise to the challenges these present. This need was further highlighted following an audit to establish why a large number of students who had shown an interest in the Public Health Masters did not enrol for this course. This audit, of a group of potential students, clearly indicated that the demographics of postgraduate students is changing. Amongst the group a large number were mature students, with slightly more females, who would need to juggle family responsibilities with a return to study. Additionally, it identified that interest was not just local but global; with the majority of enquiries coming from individuals from developing countries. The clear message from this audit was that the 80% attendance requirement was the primary reason for them not enrolling on this taught course. The main request was for a course to be delivered using a distance learning approach. Kevern and Webb (2004) identify that some mature students lack coping strategies and support systems for effectively managing both the workload of a taught course and their domestic role, which adds further support for the need to develop and offer a flexible and family friendly system of studying. One way of doing this is by using blending learning within a Virtual Learning Environment (VLE), which introduces diversity into delivery. The VLE facilitates access at a time suited to the student. Additionally, as one of the key aims of higher education is to produce self-directed learners this approach should facilitate this (Boud, 2000; Yorke, 2003). Armed with a clear rationale for developing a distance-learning programme for the Public Health Masters we set about this task. However, it soon became apparent that this was much easier said than done. The VLE used within the University of Bedfordshire is Blackboard and although the team were familiar with the use of this resource for taught courses we were less certain with how it could be effectively used for teaching and learning remotely. It soon became clear that lack of confidence with *'all things technological'* was the first hurdle to be crossed if we were to be successful. The challenges have been many and the learning curve huge. The whole course was broken down starting with the

induction day and concluding with how to manage an on line examination. It was important to draw on the expertise of others and we worked closely with our external examiner and the e-technologies support team within the University. A range of resources were used, including Wimba Create (formerly Course Genie), Turnitin and Assignment Drop boxes. To enhance student learning and to try and encourage a *'community of learning'* (Bielaczyc and Collins, 1999) a Wiki plus discussion boards were incorporated into the course. The first two semesters were not without problems as we underestimated both the time and expertise that would be required. However, this learning experience has enabled us to move our approach to blended learning forward and we go into the third semester with enhanced confidence. The next task is to further develop our e-skills, evaluate our progress so that we can disseminate to others and demonstrate the value of incorporating e-technologies into our teaching and learning strategy.

Keywords:

Virtual Learning Environment (VLE), Higher Education, Distance-learning

Main Body

After the euphoria of a successful validation the reality came all too quickly, we were mid July with a course due to commence at the end of September. The first thing was to remind ourselves why we had embarked on this mode of delivery. The final student numbers for the year 2006-2007 were not as high as expected therefore it was apparent that there were many more enquires than applications received, but why? The only way to find out the possibly reasons would be to conduct an audit. Of the 120 students who made enquires we knew 22 had accepted other Universities but that still left 88 of whom we knew they had made over 5 email requests for information and requested a copy of the handbook. A short questionnaire was complied and sent out to see if there were any specific reason why enquires had not become application was the course at fault? The questionnaire was short with the hope it would be returned (see appendix 1). We sent out to the whole 88 enquirers and over the next six weeks they were all returned. The respondents represented many countries, 13 were from the UK, 10 from the EU and 65 from all over the world however the majority were from developing countries. There were slightly more women then men but this was of no significant. Neither was their qualification, type of work or the course fee a main reason for not pursuing the application. The problem lay with the 80% attendance. So it was easy to see the main difficulty whether UK or overseas was attendance. The main request when asked how it could be redesigned was into distance learning with a human side (see appendix 2 for results) since they all consider the course was what they might pursue.

So this is why we are here. Our aspirations were supported by many speakers in the Organisations of Societies for Electrophysiologial Technology Congress in Italy (2007) where Marsh-Nation outlined e-leaning during the saying *"the world of electronics, computers, and the Internet have made to the world a smaller place. Students no longer have travel to the source of their education. On line education comes to the student. An internet*

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connection can put you into a classroom anywhere in the world. Learning management systems have been developed to facilitate discussion, download study material, upload assignments, deliver content by means of text, video, audio and interactive features developed from gaming technologies. Exams are self governing and content can be accesses on line a flexible timetable. The days of driving long distances after work to taken night school classes at a university are being replaced by sitting in front of your computer for a while in the evenings and on the weekends".

So although we were aware of the current research: in that a decade ago Taylor *et. al.* (1997) stated that this VLE is an underestimated resource, as it can provide opportunities for the student to revisit and revise. Leung (2002) declared it embraces the competency approach that it is used at all stages of postgraduate learning. While Grandis (2003) wrote VLE learning is active, it can be individual or group based, offering repeated practiced until acquisition the knowledge or skills, is obtained. Inssenberg *et. al.* (2005) confirmed it enables the student to become self-confident, whereas Kirkley and Kirkley (2005) conclude that the blended learning goal is not to intimidate but to offer challenges and possible solution to this situation of supporting students in the family where a taught course is not applicable. Finally Beckwith (2006) states it facilitates the students to seek the information that they need, when they need it. All of this was fine words but how did we now establish the course.

What would our distance learning programme look like? Donnelly and Rourke (2007:31) reminded us that *"the Internet has made it impossible for higher education institutions to ignore technology in fulfilling their strategic mission and responding to the expectations of a diverse student body".* We knew the student group would definitely come from diverse backgrounds working within and outside the UK. We had stated we would use the virtual leaning environment within the University of Bedfordshire which is known as Bedfordshire Resources for Education Online (BREO) it is platform on which e-Learning can take place. BREO is a web-based system for delivering support and enrichment for learning at the University of Bedfordshire. BREO provides access to specific learning materials which will be introduced by the module leaders such as related web sites and online journals. The course was to be complemented by *guided reading* from the 'Reader in Promoting Public Health', edited by J. Douglas *et al.* (2007). Also additionally *essential reading* from the 'Oxford Handbook of Public Health', edited by D. Pencheon *et al.* (2007). There would be texts for each module for example the 'Ethical and Legal Issues in Public Health' module would be using 'Health Care Law' by Mc Hale and Fox (2007) and 'Medical Ethics' by Rhodes *et al.* (2007) . This guided reading was to be directly related to the set books for each module. Having been reminded of where it all began a shopping list of our needs was required, this in itself was easy as we had specified it very carefully for validation document what we proposed to use:

- Advertising

- Podcasting

- A synchronistic discussion

- Compressed Video Imagery (CVI)

- Online examination

- Interactive CD-Rom technology

- Blogging and Wikki's

Advertising would have to be our first priority so a Flyer was developed (appendix 3). However soon it was deemed to not have sufficient detailed information from the questions we were receiving. So a booklet was completed which reiterated the content of the flyer but in a different format (appendix 4) specifying the basic requirements. The target student numbers was only minimal between 6 and 12, as this would allow us to problem solve as the course progressed. Our target numbers were soon reached. So our attention was diverted into how we would present the material on line in a format that was simple and user friendly. We were aware that we probably fitted in to the category describe by Donnelly and Rourke (2007:32) *"many academics staff lack the online experience of the Internet generation, and so do not feel as confident in an online environment as they do in a traditional classroom setting" how* right, but we were committed and the team had to expand to gain the skills that were needed employ for this purpose. Moreover we needed to win over some team members since they possibly saw this venture *"as a course in ITC's rather than an effort to change or improve their teaching abilities"* (Donnelly and Rourke, 2007:32)

Incorporating e-technologies:

- **Step 1 -B**edfordshire **R**esources for **E**ducation **O**nline (BREO / Blackboard)

Setting up the VLE was the first challenge we encountered. In previous years each module was loaded onto BREO as an individual entity. However, this meant that each time the students wanted to access course material they had to return to their gateway, find the module they wanted and then access it. As we were incorporating a course Wiki, discussion boards and a reflective diary we were concerned students may not engage with these if they were not immediately visible and they had to navigate through a number of different windows to find them. Additionally, a lot of the information provided for individual modules is relevant to them all, for example the handbooks, timetable, staff information, learning resources, announcements, and so to reduce the amount of repetition, and to encourage the students to see this course '*as a whole,*' we developed a single Masters BREO site (see Diagram 1). Initially we had concerns that this may cause problems as BREO is linked to student

registration but with the assistance of the BREO support team it turned out to be a straight forward process. Another advantage of taking this approach is that we are able to access the course statistics and see which sections of the site are regularly accessed and which are not. If there were some modules that are not being viewed as often as others we would need to ascertain why this is. This could be achieved by gaining feedback from the students to determine whether the material is stimulating or comprehensive enough. By acting on student feedback we are able to meet their needs in order for them to remain engaged and achieve their learning outcomes.

Diagram 1 – Screenshot of the Public Health Masters BREO Site

- **Step 2 -** Wimba Create (formerly Course Genie)

Wimba Create is just one of a range of collaborative tools available within the Wimba Collaboration. Suite. This software, according to Wimba is *"Like Magic"* It allows Microsoft Word documents to be converted into interactive online courses and web pages, which can then be exported to Blackboard to "*create engaging learning content for students"*. Well that is the theory! This tool is new to all of the Masters team, and in fact was unfamiliar within the university as a whole. However, as we were aware that we needed to provide the distance-learning students with material that would be easy to read and that would engage them, we agreed that we needed to develop the necessary skills to do this and Wimba Create was the tool of choice. Armed with the software and a lot of enthusiasm we set about mastering the art of creating "*engaging learning content"* for our

students. However, this turned out to be easier said than done and has been a huge learning curve - for a number of reasons:

- Much of the teaching material had already been prepared for the previous group of taught students. However, this material was generally available as PowerPoint presentations. As these slides had initially been produced to support taught sessions they would not provide the information in enough depth for the distance-learning students. This meant that all notes had to be re-written in a Word format to enable them to be converted to web page format by Wimba Create. The lessons learnt here were that the style function should be used from the outset and that formatting should be kept to a minimum. It is much easier and quicker to Wimba Create material as it is being written than it is to produce material and then convert it afterwards (see diagram 2).

- We underestimated the time that converting the material would involve and it soon became very apparent that turning around the weekly notes for four modules was going to be a significant challenge. We discussed this as a team and decided that we would need some help in the early stages of the course and employed a computer science student for 10 hours per week to convert our material and load it onto BREO. This has allowed us to familiarize ourselves with the tool without the additional stress of time restraints. Having this type of support has been invaluable. This student has also able to take the time to explore the full range of functions that Wimba Create has and disseminate these to the teaching team. Wimba Create does so much more than we first envisaged and as our confidence and skills improve we anticipate that it will be an invaluable tool that will enhance both teaching and learning.

Diagram 2 – Screenshot of the Public Health Masters BREO Wimba Create

- Teaching material often contained graphs, tables and images – all of which Wimba Create is able to deal with – as long as you have an understating of its 'idiosyncrasies'. Tables and diagrams have proved to be a particular challenge. However we are getting there! (see diagram 3).

Diagram 3 – Displaying Tables

In order to stimulate and engage all students' activities and additional reading needed to be incorporated into the material loaded onto the VLE. (see diagram 4). Some activities guided the students to the course Wiki where they were instructed to expand on the information they had been provided. Others led them to the group discussion board where they were encouraged to post their views on the topic being discussed.

Diagram 4 – Incorporating Activities

It was hoped that both the Wiki and the discussion board would facilitate collaborative learning between the taught and distance learning students and it was also hoped that it would be a useful medium for facilitating peer support. It is too early yet to tell whether this has been achieved. Vygotsky (1978) proposed that a socially constructed environment is essential to effective learning and argued that 'conversation' with peers is vital for thinking and learning to occur. Stacey (1999) reports that reports that online environment collaboration not only motivates students to study effectively but also has a positive effect on student retention. Her study into collaboration in an online environment found that students who did not engage with the computer-mediated communication were more likely to drop out of the course. Interestingly we have observed that the students who dropped out of the course early on chose not to engage with the online activities. This is something that we will monitor to see if our findings concur with those of Stacey (1999). The importance of online networking and collaboration is also acknowledged by Stephenson (2001). However, he does state that in order to this to be effective the teachers must encourage interaction and "*operate effectively both technically and educationally*" (Stephenson, 2001; p222). We have made a start at encouraging interaction and although this has not always

been as successful as we had hoped we are sure that as our knowledge of the range of tools now available, and our confidence grows, we will become more effective facilitators of collaborative and student led learning.

- **Step 3 - Turnitin**

Another area that we need to give serious consideration, which had arisen over the first two years of the taught course, was the student needing to be aware of what must be referenced and the difficulty in trying to paraphrase somebody else's work. So in the last semester of 2006-7 we trailed 'Turnitin'. Turnitin is a means of handing in an assignment online, but also is an education tool, which helps the students see where they have failed to reference material that they have used to evidence their points. We explain to the students that it helps develop their skills in referencing and writing high quality assessments. So it is an 'aid de memoir' for the students to improve and this has been essential where students have not studied in UK (Stefan and Carroll, 2001; Hart and Friesner 2004). Universities now use such strict requirement in relation to referencing material. Equally it ensures that we are checking for any possible instances of plagiarism (Barrett and Malcolm, 2006). Turnitin works by checking assessments against other assessments from all over the world, the internet, academic papers and provides an "originality report". This gives each student an estimate regarding the amount of original writing in his or her work from Low –High – therefore very original to not very original. They are allowed to submit it before the submission day as many times as they feel they wish too. In relation to marking we can see a report showing the originality of student's work and this allows us to make a judgment. For example if the originality report is over 20% we can decide whether the percentage, although correct, can be permissible depending on what has been reported. Turnitin also has allows work to be marked on line and feedback can be easily accessed, also online, by the student. This has been piloted with one distance learning student and her feedback was very positive. In both semesters the students have found Turnitin a very useful tool. The teaching team has now adopted Turnitin as part of their standard operation

- **Step 4 – On Line Examination**

The on-line examination was a new innovation for us, and results from the fact that we were unable to cover all the learning outcomes in the Epidemiology unit. A paper was designed which had three separate part one which covered understanding of terms, one which required the student to show their ability to calculate, and the final one required the student to indicate they knew how to undertake a study using the approach. The students were given a 5-day window in which to complete it. We did not need to know they could do it in 20 minutes we needed to know they had understood the principles. In the even it was very successful and recognized so by our external examiner. However using Turnitin for the one line examination was not going to be an option, so for that assignment we used an assessment drop in box. This was also used for the students to submit a poster that was a part of the assessment for another module.

- **Step 5-** Skype

From the outset of the year communication with the students' was paramount. The suggestion was we use **Skype** [skaɪp]) which is a software program created by the Swedish and Danish entrepreneurs Niklas Zennström and Janus Friis and a team of software developers Ahti Heinla, Priit Kasesalu and Jaan Tallinn based in Tallinn, Estonia. Skype allows users to make telephone calls over the Internet to other Skype users free of charge and to landlines and cell phones for a fee. Additional features include instant messaging, file transfer, short message service, video conferencing and the ability to circumvent firewalls. So we used a mixture of via email or more directly via Skype. Some of the group liked this medium where others preferred the traditional email. We ensuring all their emails are answered within 48 hours or they know why there is a delay and this was a definitely positive action.

- **Step 6-** Student Comment

We asked the students to make useful comments throughout the module, which they have. The reason being that we had decided every module leader could create their own leaning material in a format they preferred. The students would then be provided with a mixed set of material/resources. The students made comments on the differences and where they highlighted gaps we amended them. These were mainly associated with assignment instructions that were then re-enforced. They asked for direction to on-line video material and greater explanation in certain areas. So another area of development will be more podcasts of for example researchers' evaluation of their methodological approach. Not all the students used the discussion boards successfully so next year we need to scaffold them more effectively. Moving over to audio boards, similar to audio email that we are trialling at the moment, may also help.

In summary where are we now and how do we see the future? As a team it has been a ***very very*** steep learning curve however by working together we are nearly through our first year. The student group has been very supportive when we had hitches or delays in completing material on time. We can clearly see our future challenges in that we need use the whole Wimba suite especially the audio systems and explore a greater us of live classroom not only for seminars but also for tutorials. One of the next steps will be to mark on-line and directly return to the student, at the same time it would be easily available to the external examiner, and avoid sending scripts with the possibility of them getting lost. We need to try and integrate our taught and distance learning group more effectively as they are parallel course so the can gain from one another. So to conclude e learning is definitely the only way some students can undertake this course, however they need to be self-disciplined.

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