VLE Project Case Study

Coronary Heart Disease (CHD) Prevention Online

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Overview

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<tr>
<th>Title</th>
<th>Coronary Heart Disease Prevention Online (Summer Term 2007)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pedagogic theme</td>
<td>Problem based learning: case study learning; facilitating group discussion (distance learning)</td>
</tr>
<tr>
<td>Keywords</td>
<td>Interactive content (virtual patients); reflective learning logs</td>
</tr>
<tr>
<td>Subject area</td>
<td>Coronary Heart Disease prevention</td>
</tr>
<tr>
<td>Student level &amp; profile</td>
<td>A stand-alone distance learning course for health professionals, worth 20 credits at Level 6, if contributing towards a degree</td>
</tr>
<tr>
<td>No. of students</td>
<td>18 Students</td>
</tr>
</tbody>
</table>
| Key conclusions | 1. The tutor’s role is crucial in reviewing discussion activities in online tutorial groups. The use of summary posts, which highlight the contributions of group participants, is helpful in reinforcing good points and identifying those students who have made a useful contribution, and in the same way exposing free-riders who have not engaged. Discussion boards which are not moderated often become places for ‘one-shot’ comments, rather than locations where students construct understanding by critiquing the contributions of their peers and relating their thoughts to previous posts. The tutor can help students to think more deeply about their comments, as well as to work in a collaborative way by posing questions and drawing out themes for group discussion, which have been touched on in previous posts.  
2. It is essential to clarify what students may expect in terms of the scope and frequency of feedback from tutors. Guidelines should be established and a consistent level of feedback delivered to students across tutorial groups. Regular feedback is essential for distance learners, who seek reassurance on their progress to ensure that they are on the right lines with their research and evaluative assignments.  
3. Blogs can be used as reflective learning logs, serving as a location for students to reflect on their progress in tackling course activities. They represent a safe and private place where students can draft questions on course content and activities, and receive personal feedback from their tutor. This helps to engage students in critical thinking and to test out ideas, helping them to gain confidence in their work before contributing to a tutorial or plenary discussion forum. |
Background

Coronary Heart Disease (CHD) Prevention Online is a fully online distance-learning module for practice nurses and community nurses and all those working in cardiac rehabilitation, which is delivered over 14 weeks. The course is taught completely online, with no attendance required at study days. Access to all the evidence and clinical guidelines is provided by the course on the VLE. The aim of the module is to develop core skills for clinical practice in coronary heart disease prevention. The course content is linked directly with patient cases and covers primary and secondary prevention, dealing with topics such as risk factor management, evidence-based lifestyle management and behaviour change and health promotional techniques. By working with simulated patients online, participants undertake a range of activities which are designed to develop assessment and management of CHD.

The Department of Health Sciences has delivered classroom based courses for local students in cardiac rehabilitation and CHD prevention in partnership with the local NHS Trust, but has received an increasing number of inquiries from students for this type of training, which prompted consideration of a new distance learning course for practitioners across the country and overseas. Ros Brownlow, the course leader, viewed the development of a distance learning course as an opportunity to explore the possibilities of online delivery, whilst reviewing the content of the course:
With the distance learning approach we had to look at the teaching and learning strategy and technology side-by-side. What are the challenges? How can technology help?

“We planned CHD Prevention Online to be a unique educational experience to help nurses develop skills in providing essential preventative care to patients at risk of heart disease. We had taught a similar course face-to-face before, but it needed an overhaul and as our student market was widening geographically, we needed to consider how we could provide a course to meet their needs. With the distance learning approach we had to look at the teaching and learning strategy and technology side-by-side. What are the challenges? How can technology help?.....We also wanted to get students really feeling that this is not just a new course, but it is about the new agenda, so they get a sense of dynamism.”

The aim was to come up with an online course that would provide students with a learning experience that not just simulated nursing practice, but which also gave them the opportunity to look at practice with a patient over and above the normal classroom experience. This resulted in the development of a new type of course, supporting a problem-based learning approach, in which students engaged with patient case histories over the duration of the course. The details of each patient were revealed in the form of an episodic drama, to provide a sense of realism for each individual case history.

“We wanted a course that would provide a supportive learning environment, which was dynamic and interactive. It is a 14-week case-study focused course. It is problem-based learning, but we have organised it like an episodic drama...like Holby City or ER. The students love those and we wanted to be able to get that kind of drama and entertainment into our course as well as it being theoretically sound with good learning ideas.”
The new structure of the course placed the emphasis on student-centred activity, getting participants to assess the needs of patients through case studies, with structured activities on creating risk profiles, evaluating the psychological needs of patients, as well as addressing pharmacological management and behavioural change and lifestyle. The VLE was used to host the case studies and assessment activities, as well as to support interactive and reflective activities, in which participants discussed their approaches to patient care.

Description of approach

The module required students to interact on two levels within the VLE:

- **Interactivity with the simulated patients** – based on the profile of the patient as outlined in each case history. Students learned to apply the risk assessment tool to each patient and to draw conclusions on the level of patient care required.

- **Interactivity with peers and tutor** – students discussed the implications of the risk assessment for patient care with peers and the tutor.

The learning approach involved three key stages, namely the mastery of theory, the application of theory to practice and then a wider critique of practice. The VLE helped to structure the course materials around these stages, with discussion and reflective tools also employed to help students to share their experiences and engage in the critical evaluation of practice.

Ros felt that the introduction of the VLE might help to improve on the learning outcomes for the course, which had previously been delivered face-to-face within the classroom.
“Critical evaluation is hard to get going face-to-face, but the VLE supports discussion and encourages students to share their experiences. The revised design of the course is based on theory, application of theory to practice and then a wider critique of the practice. This is better than discussions in class, which are very rapid. The VLE slows things down and the discussion is more insightful and stays there – students can revisit it.”

Learning activities & tools

The online component of the module included:

- **Case study resources.** CHD Prevention Online is a case study based course, focusing on the case histories of four virtual patients. Participants spend 3 weeks working on each patient. They are guided through a range of activities related to each patient on a week-by-week basis, which might include an analysis of the patient’s lifestyle and health profile. Audio and video resources are used to reveal details about the patient, bringing the case history to life. Participants are also introduced to key reading resources as they work their way through the case history, with web links and files on the theory of cardiovascular risk, hypertension etc. In each case study there are a range of activities which must be completed, including the use of simulation tools such as a risk assessment application to calculate the patient’s level of cardiovascular risk. Students then decide how to interpret the results and present them to the patient in the form of a consultation. They are also presented with self-test resources, which are intended to reinforce understanding of the technical aspects of the course related to pharmacology and physiology.
Personal journal. Each student was given an individual blog space, with viewing access restricted to their tutor only. The blog was intended to be used as a personal journal to record observations on each of the patient case histories. In fulfilment of the tasks set out in the case study area, students were required to make entries in their journal about the patient’s health problems, and were encouraged to highlight key findings and pointers for a care plan. Tutors then review the entries and provide one-to-one feedback on each student’s work in this space.

Tutorial area. Course participants were divided up into 3 tutorial groups in this course, and each assigned a discussion board to reflect on the issues arising from the patient histories. For instance, in Case Study 1 students got to grips with a range of risk assessment tools and within their tutorial groups they discussed how these should be applied in patient consultations.

General discussion board. A general discussion area for all students to exchange ideas on the key themes of the course. This was used at the beginning of the course to cover induction information and throughout the course to share ideas across tutorial groups. A further discussion board was set up during the consolidation week to reflect on the outcomes from the course.

Assessment area. Students were required to complete three reflective writing assignments, focusing on: (i) the strengths and weaknesses of the CHD risk assessment tools; (ii) the psychological assessment tools/techniques used in CHD prevention; (iii) the integration of the course content into a student’s own practice. In this area students were presented with guidelines and resources to help them with their writing, as well as instructions on how to electronically submit their work.

Deadline for submission of assessment

The submission date for your work is

Monday 11th February 2008

Your work must be submitted by 2.30pm on that day.

If you anticipate that you will have any difficulty in meeting this submission deadline please contact your Personal Tutor for advice.

You will find your Personal Tutor’s contact details in the Year Tutor’s folder on the left hand menu.

How to submit your work electronically

The assessment for CHD Prevention Online must be submitted electronically. You may need to submit one copy. Read the instructions carefully, find out where you need to do for the assessment and how to format your work.

Once your work is completed, please read the instructions carefully, and submit your work electronically.

1. Go to the link that says ‘Submit your answers’.

2. Click on the link which says ‘Submit or view assignment’.

3. Read the instructions carefully.

Image from the CHD Assessment area (from Oct 2007 module)
- **Coffee room.** A blog was set up for general course discussion. The commenting function was used for one of the blog posts to set up a tutor-free space, where participants could discuss aspects of the course and support each other. Tutors periodically checked the forum to ensure that it was being used appropriately, but did not intervene in the discussions.

- **Announcements.** The announcement tool was the launch page for the site and was used extensively to convey information to participants. The announcement function was used to let students know when each new case study went live. It was also used to provide ‘top tips’ on how to use the course tools such as blogs, discussion boards and Library resources. Although the dates for the announcements were set at the beginning of the course, the students would see a new announcement or tip at least every week. This gave students a sense that the course was dynamic and that the tutors were engaging with the course frequently.

### Student profile

An all-female cohort of qualified nurses from a range of healthcare settings and countries followed the course. Most participants were from the UK, but some were based in Brunei and Saudi Arabia. Their educational experiences were quite varied. Some had studied up to diploma or degree level, whereas for others this was their experience of studying at this level. For the majority of students, this was the first time they had followed a case-based learning approach.

Students were asked to complete an entry survey at the beginning of the course, which focused on their experience in using computers to support their learning. 8 out of the 18 students following the course completed the survey.

### Experience with computers

All students had access to their own personal computer. They had been required to complete an online application form to register for the course and had received course information via email, which demonstrated that they had basic Internet and IT skills. However their IT skills were not formally assessed for admission on to the course. The entry survey results revealed that students were established users of computers for information search activities, with all respondents accessing information from the web on a frequent basis. There was a division though within the class regarding the use of communication tools. 37.5% of respondents had never posted a message to a discussion forum or blog nor chatted over the web prior to starting the course, with a similar figure declaring that they had only occasionally done so. At the
beginning of the course half of the respondents rated themselves as not yet confident in uploading files to a website.

**Experience with computers for learning**

The VLE was new to all participants and the majority lacked experience of studying online. 75% of respondents had no previous experience of following a course in which course materials and resources were delivered online, and which involved the use of a discussion board. Only 37.5% of respondents had followed a course in which they had used online self-assessment tools to test their own learning.

**Expectations towards the VLE**

Expectations towards the use of the VLE in this course were positive, with 87% of respondents agreeing that the platform would support ideas and experience sharing amongst students.

A similar level of agreement was recorded for the view that the VLE would provide flexibility to learners in terms of their study needs. 75% of respondents agreed that it would enable an instructor to respond to individual learning needs.

**Outcomes of the pilot**

The course was delivered over a 14-week period from April to July 2007. Feedback was collected from the course leader and students on the learning outcomes at the end of the course, before students had completed the assessment tasks and received their final marks. A subsequent follow-up discussion was then held with the course leader to comment on the lessons learned from the course.

**Activity statistics**

Student log-in patterns were frequent across the course, with 16 students recording more than 50 visits to the site over the duration of the course, with 11 students visiting over 100 times and 6
students visiting more than 200 times. The discussion boards received the greatest number of hits (83%) on the course site. In the evaluation of the course, all students reported that they had accessed the course activities, case notes, clinical data, videos, electronic articles and book chapters, quizzes and case study resources. The majority of participants (92%) accessed the audio recordings and 53% accessed the electronic library resources.

**Participation in tutorial groups**

Students were divided up into three tutorial groups (A, B & C) and were asked to complete a series of tasks for each of the four case studies, starting off with individual reading, self-assessment quizzes and personal reflection on the case study, which was recorded through note-taking within their personal journal. The next step involved discussion of the case within their tutorial group, where they posted their solutions and reflections on the patient history in response to a series of pre-set questions.

For instance, in Case Study 2 students focused on cultural issues for South Asian patients suffering from cardiovascular disease. They read up on the patient history and reviewed articles on diabetes and CHD and metabolic syndrome, before making notes on the case in their personal journal. On the discussion board, they posted responses to four key questions, focusing on the background to cardiovascular disease and cultural and lifestyle factors, before reflecting on a series of consultations with the virtual patient.
Table 1 below presents the number of posts per tutorial group for each of the four topics under discussion for Case Study 2.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Tutorial Group A (7 participants)</th>
<th>Tutorial Group B (6 participants)</th>
<th>Tutorial Group C (4 participants)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topic 1</td>
<td>13</td>
<td>12</td>
<td>5</td>
</tr>
<tr>
<td>Topic 2</td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Topic 3</td>
<td>5</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>Topic 4</td>
<td>10</td>
<td>9</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total posts</td>
<td>5</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>Tutor input – total # of posts</td>
<td><strong>41</strong></td>
<td><strong>41</strong></td>
<td><strong>20</strong></td>
</tr>
</tbody>
</table>

In Group A, most participants made one post each in response to each of the pre-set topics for discussion. The majority of contributions were ‘one-shot’ posts, which introduced new ideas rather than replying to earlier contributions. Only one student made a second post in response to a fellow group member’s comments.

Group B contributions followed a similar pattern, with students making new posts rather than replying to other threads. However, two participants were particularly active on their discussion board, making three posts each on two of the topics.

Group C contributions were restricted to the first 3 topics, in which all students posted at least once. Interestingly in this group, instead of creating new posts, they replied to a thread when making their own points.

Table 2 below summarises the content of posts per tutorial group for Case Study 2, focusing on the degree to which student related their post to previous contributions, as well as the connections that they made with their own practice.
The first discussion topic focused on a discussion on the background to cardiovascular disease for South Asian patients and the socio-cultural issues related to it, and this elicited detailed responses based on observations drawn from the theoretical articles as well as each participant’s own clinical experience. The other topics invited participants to transfer their learning from the theoretical texts to the patient history, an approach illustrated in the following post:

“I think that the nurse is trying to use a more patient centred approach in an attempt to influence Mohammed’s change process. The use of double sided reflection with displays of empathy is noticeable. This approach certainly gets more out of Mohammed as he appears to begin to engage in the conversation/consultation.”

The pattern of student contributions to the discussion tasks was mirrored in Case Study 3, which focused on myocardial ischaemia and chest pains. Table 3 below presents the number of posts per tutorial group for each of the six topics under discussion for Case Study 3.

<table>
<thead>
<tr>
<th>Tutorial Group A</th>
<th>Tutorial Group B</th>
<th>Tutorial Group C</th>
</tr>
</thead>
<tbody>
<tr>
<td># of posts with evidence of building on previous contributions</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td># of posts making connections with practice</td>
<td>7</td>
<td>10</td>
</tr>
</tbody>
</table>
Table 3: Number of posts per tutorial group for Case Study 3.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Tutorial Group A (7 participants)</th>
<th>Tutorial Group B (6 participants)</th>
<th>Tutorial Group C (4 participants)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topic 1</td>
<td>7</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Topic 2</td>
<td>7</td>
<td>13</td>
<td>7</td>
</tr>
<tr>
<td>Topic 3</td>
<td>8</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>Topic 4</td>
<td>8</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Topic 5</td>
<td>4</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>Topic 6</td>
<td>3</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>Tutor input – total # of posts</td>
<td>5</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Total posts</td>
<td><strong>39</strong></td>
<td><strong>52</strong></td>
<td><strong>20</strong></td>
</tr>
</tbody>
</table>

Again, students posted at least once in relation to each topic in the early part of the case discussion, with participation declining in the final two tasks. Where more than one post was made by a student, it was usually prompted by a question posted by the tutor, which was directly addressed to that particular student. However, there is evidence to suggest that students were learning to draft their posts, building on the contributions of others as well as relating to their own clinical experiences in their responses. This is illustrated in the following post from a participant in Tutorial Group B, commenting on the outcomes from a consultation with the virtual patient Malcolm in Case Study 3:

"Like X I agree that Malcolm should start with better breathing. I think unless he is breathing correctly other techniques probably would not work so well. I am also a great believer in positive thinking and this is a great strategy for coping with stress which can crop up at any time. Learning to turn negative thoughts into positive ones. I like the idea of deep relaxation but my thoughts are this is not always practical. Malcolm is going to come up against stressful situations that need to be dealt with straight away, if he uses the correct breathing and gradually learns to think positively he will cope better."
Role of the tutors in the discussion activities

A tutor was assigned to each of the three discussion groups. Tutors posted between 0 and 4 times on each discussion topic. They responded to the group with summaries of the points made and questions for further consideration, as well as attaching further reading on a topic of interest. They also responded to individuals with questions, to help get students to think more deeply about their comments. This summarising approach is illustrated in the tutor’s post for Group C on Case Study 2 topic 3, which invited students to reflect on the outcomes from a patient consultation.

"Hi Everyone. You raise some good points here about consultation 1. X you notice that the practitioner kept telling the patient what to do and Y you identify that the practitioner wasn't listening to the patient. Z you describe the practitioner’s style as being directive and note how this leads to the patient becoming defensive and aggressive. I’d agree that the practitioner has a very didactic style and actually at some points I think it’s confrontational so I agree it’s had an influence on the patient’s level of aggression. I also think the practitioner tries to move the patient towards change before the patient is ready and that it's the fact that he is not listening to what the patient is really saying that contributes to this. I wonder how you think this compare to consultation 2? Is it any different? What do you think the practitioner does differently, if anything, to influence the outcomes? Best wishes."

This approach was also adopted in the other cases, in which the tutors summarised the findings of their group and promoted participants to expand on particular points. They reassured students that they were posting relevant responses to the discussion topics, and reminded them how to use the 'reply' feature to reply to one another’s threads, and in some cases provided additional information. The frequency of feedback per tutor was not consistent across the groups however, which frustrated some students.

Coffee Room

A blog was set up as a tutor-free space, which participants could use to discuss aspects of the course and to provide support for each other. A total of 8 posts were made to the blog. However there was plenty of discussion, with the commenting function used on the first post to generate a lengthy exchange of views, with 292 comments made over the duration of the course. 13 students used the Coffee Room over six times or more, with only two students not posting at all.
To get a clearer idea of how the Coffee Room was used by participants, the messages have been classified in Table 4 below, according to five categories:

(i) Information sharing: Relaying information from personal communications with tutors; sharing information about feedback received.

(ii) Peer support: Reassurance – sharing feelings about the course and the workload, comparing progress, sharing family pressures.

(iii) Task related: Asking for or giving clarification about task instructions and comparing approaches to assessed tasks.

(iv) Technical queries: Questions and answers about how to use the VLE and course materials, ATHENS logins.

(v) Social: Social messaging between participants (introductions, about jobs and locations) not related to the group task.
Table 4: Content analysis of Coffee Room postings

<table>
<thead>
<tr>
<th>Information sharing</th>
<th>Peer Support</th>
<th>Task Related</th>
<th>Technical Queries</th>
<th>Social</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>27</td>
<td>104</td>
<td>52</td>
<td>14</td>
<td>69</td>
<td>266</td>
</tr>
</tbody>
</table>

The results from Table 4 show that the Coffee Room played an important role in the course, providing a location for students to support each other. This peer support dimension is reflected in the following posting:

"Hi X – welcome to the "stress room" - I think this room is great – we all discuss exactly the same concerns and worries – nice to know we are hitting the same problems together. I've only just remembered how to get into the second wks work – so thought everyone had lost the plot!!! Found out it was me!!!! Am sure we are all gonna get there."

The Coffee Room also served as a location for participants to request help from their peers, calling on not just their tutorial group peers but all participants:

"Can anybody out there help? I am having problems with the 2nd essay. Do I need to compare PHQ9 with the consultation use of the questions? Can't get my head round this one..."

The social dimension to the discussion also appears to have been important in fostering a sense of community amongst distance learners. One student confirmed this impression in her feedback to the exit survey questionnaire:

"The coffee room was a good idea and helped to build a rapport with the other students."

Consolidation week feedback

As part of a consolidation week near the end of the course and before submission of the three pieces of assessed work, students were asked to reflect on their learning outcomes and to provide feedback on the course via a plenary discussion board. In particular, they were asked to identify strengths and weaknesses of the course, which are presented in Table 5 below.
Table 5: Consolidation week feedback on strengths & weaknesses of the course

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Virtual patients - authentic &amp; gave a practice experience. Accompanied by case notes &amp; relevant problems</td>
<td>1. Case study 4 – the last case study had too much reading</td>
</tr>
<tr>
<td>2. Course materials - all relevant to practice</td>
<td>2. Scheduling of coursework – difficult to tackle case studies and essays at the same time</td>
</tr>
<tr>
<td>3. Tutor support – particularly feedback via personal journals</td>
<td>3. Delay in receiving feedback – some participants had to wait for feedback from their tutor.</td>
</tr>
<tr>
<td>4. Peer support – via discussion boards &amp; Coffee Room</td>
<td>4. Course downtime – the VLE was off-line for two weekends</td>
</tr>
<tr>
<td>5. Scope of course – breadth of topics covered (e.g. motivational techniques, depression, goal setting)</td>
<td></td>
</tr>
<tr>
<td>6. Course literature – web links and resources provided for the course</td>
<td></td>
</tr>
<tr>
<td>7. Flexible study – enabled through online delivery</td>
<td></td>
</tr>
</tbody>
</table>

The feedback suggests that students received different levels of support from their tutors, particularly in terms of the speed with which feedback was delivered to them via their personal journals.

“I think you need your tutor to look at your case journal on a weekly basis just to make sure that you have understood that area and that you are on the right lines.”

“The ability to write in our personal journal and then receive ‘personal feedback’ was excellent. I felt very supported by X and felt I was able to email her if things became complicated or if I wanted someone to take a quick look at my assignment ideas.”

The course was well received though and viewed as highly relevant to participants’ day-to-day practice. Indeed, students requested a CD-Rom of the course case studies to take away with them for future reference, and they suggested the establishment of a website for updates which could support their future learning.
Exit survey feedback

13 students completed the exit survey, which invited them to reflect on their expectations to the VLE based on their experiences following the course.

Table 6: Selection of results from the entry and exit surveys

<table>
<thead>
<tr>
<th></th>
<th>SA</th>
<th>A</th>
<th>N</th>
<th>D</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online learning enables tutors to provide a wider variety of resource than traditional courses</td>
<td>38%</td>
<td>38%</td>
<td>17%</td>
<td>7%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>25%</td>
<td>25%</td>
<td>50%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Online learning increases the workload of students compared to classroom learning</td>
<td>23%</td>
<td>46%</td>
<td>24%</td>
<td>7%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>12%</td>
<td>12%</td>
<td>26%</td>
<td>50%</td>
<td>0%</td>
</tr>
<tr>
<td>Discussion boards support ideas and experience sharing between students</td>
<td>61%</td>
<td>31%</td>
<td>8%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>0%</td>
<td>75%</td>
<td>25%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Discussion boards provide opportunities for discussion between students and tutors</td>
<td>61%</td>
<td>31%</td>
<td>8%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>0%</td>
<td>62%</td>
<td>38%</td>
<td>0%</td>
<td>9%</td>
</tr>
</tbody>
</table>

SA: Strongly    A: Agree    N: Neutral    D: Disagree    SD: Strongly Disagree

Exit survey results shown first, entry survey results in italics.

The survey responses indicate that students noted the workload as being significant for this course, with general comments identifying the last case study (Case Study 4) as particularly challenging in terms of the reading required. The results reflect though a strong level of satisfaction for the range of resources made available to students online (76%), a point highlighted by some in their general comments at the end of the survey:

"I felt I had lots of resources that covered all areas of the activities."

"The big benefit to me was access to the most up to date information. I have been a cardiac rehab sister for 4 years and I try to keep up to date when I can. I liked the idea of being able to find the information all in one place."

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The virtual patients made the learning real and exampled how to apply it in the real world. I cried with Deidre and empathised with Mohammed and Malcolm. These people will live with me for a long time.

All respondents found the resources easy to use and agreed that the patient assessment tools would be useful in their practice. Indeed all respondents agreed that the content of the course was relevant to their learning needs.

92% of respondents valued the discussion boards as a means to interact with students and tutors, and 69% agreed that the Coffee Room provided opportunities for students to support each other.

All respondents agreed that the personal journals helped facilitate personal reflection on the course content as well as helping the tutor to respond to individual learning needs. In the open comments section however, there was a divergence in views regarding the frequency of support which students received from tutors:

“It was difficult sometimes not having feedback on a weekly basis from my tutor. I found that I contacted another tutor and she marked my work for me. I think it is important to have this feedback, just so we know that we are on the right lines.”

“(…) if I had any problems I had really quick feedback by email from X, so thank you again. Felt very much supported.”

“I liked reading the tutor’s comments on my journal entries. It felt like I was getting positive support throughout the course.”
Course leader’s feedback

Ros was pleased with the design of the course and the way that students responded to the online delivery approach. Whilst students were new to problem based learning and the use of case studies to elicit points of learning, this did not present an obstacle to their full engagement with the course.

“Students almost didn’t notice the problem based learning approach – it was a very fine thing. If the setting is good, the approach is not visible. I got a sense from the students’ comments that initially they were worried that they did not have all the answers. The Coffee Room was the place where they learned how to learn, establishing a range of ways through the learning process.”

“The PBL approach became invisible. Students talked about patient cases which they found very entertaining. They started with comments in their personal journal and then discussed patient problems. The discussion became more purposeful as the course developed.”

The role of the personal journals was important to the success of the course, in helping to stimulate informal discussion and reflection on the practical scenarios presented in the cases – helping to engage students with the key themes. Students posed questions themselves and then discussed the key issues via their group discussion board or via the Coffee Room.

“Initially their directions were to post in their personal journal and they would receive feedback from their tutor. After two weeks they began posting within the discussion board. The journal entries decreased and the discussion board postings increased. The discussion board became the formal learning area, whereas the Coffee Room was more the informal learning environment.”

Each tutor adopted their own way of communicating with students. However there was a lack of consistency across tutorial groups in terms of the frequency with which tutors reviewed the personal journals and delivered feedback to students. One tutor did not manage expectations, which led to disappointment with students. As a result the course leader stepped in to pick up the relationship with students.
**Student skills required & developed**

At the outset there was a concern that participants would struggle with online access to the course materials and that IT might prove a barrier to learning, but this was not the case, with students soon getting to grips with the case studies and exploring the electronic library resources through Athens. Ros notes that the online design of the course led to unintended learning benefits for students, in terms of the study skills that they acquired:

“At the outset I was worried about whether students would be able to cope with the technology and Internet / email. But it has been a liberating and enabling experience for them. They are more confident about IT now and have developed a range of skills which has helped them to become independent learners. IT has not been a barrier. Having a module that is engaging and entertaining has enabled the students to learn the IT skills as they have gone along, while their focus has actually been on other activities. We built some of this into the design of the module by setting up specific induction activities and presenting the IT in a non-threatening way from the outset. But some of these learning benefits have been an unforeseen part of the course. Students have got to grips not just with the case studies and practical resources as we planned but have also explored the wider library resources available through Athens. They have used the resources much more widely and more readily than we thought they would.”

**Staff skills required & developed**

The tutors met up regularly to discuss how the course was going and to support each other. Each tutor received feedback on their virtual communication style, which helped individuals to analyse how they came across to learners online. The tone in which feedback is delivered to distance learners is extremely important, with tutors aiming to be approachable and accessible to students. Indeed, tutors learned to engage in relationship building with their tutees by sending introductory emails outlining their role on the course, and by making early posts in the personal journals.
**Actions for further development**

One of the key learning points from this course is to confirm tutoring expectations up front to students.

> "It is important to manage expectations and stick to that commitment, particularly when students are at a distance. If you are going to communicate with students twice a week, tell them that you will do this once a week, so that they get double the service and are happy. If you can’t keep up with this, you need to proactively contact them to check if they are OK. You need to manage the dialogue closely. Maybe we were not as prepared as we could have been. Having said that, students got feedback and none went without it."

Ros also noted that the discussion board could be managed more effectively with tutors posting summary messages with positive feedback related to student contributions.

For future courses, a review of the case studies and resources will be needed, particularly with regard to the materials for Case Study 4, which students found quite challenging. Additional resources will be introduced such as the physiology videos, which weren’t ready for the initial delivery of this course.

On a positive end-note, the course ran again in October (07) and January (08), and it has been adopted by the British Heart Foundation as their definitive course on heart disease prevention, with the first BHF course set to be delivered in April (08). The April 2008 module is in progress at the time of writing.