Using WebCT: Case studies

Physics 1AH: Simon Bates, School of Physics, Clara O'Shea & Lucy Clark, Section of Clinical & Health Psychology

See Simon Bates’ Presentation here

See Clara and Lucy’s Presentation here

Notes and discussion

Simon outlined the way in which WebCT is used in the Physics 1AH course, with a first-year group of over 200 students. WebCT has been used on this course since 1998, so the development to its current sophisticated use has been a gradual process, assisted in recent years by an award from the Principal’s e-learning fund.

About the course
About 40% of the students on the course are taking it as an outside course, rather than part of their degree studies, so there are issues about their motivation. The course deals with the classic physics of space and time and as such, has to address a number of very common misconceptions, and so the students are challenged to reconsider long-held ideas, and require support in the process of re-framing their understanding.

The course is a true blended course - the online component in WebCT is complementary to, and fully integrated with, the traditional face-to-face sessions, but does not attempt to be a substitute.

WebCT content
The structure of the WebCT component makes it clear where students can go for further information about IT skills and the software itself, separately from information about the course and course content.

Technically, the staff placed great emphasis on having a single-input - multiple output set up, where academic staff create the content once but use this single set of files to generate paper-based materials (handouts, course notes), lecture slides, and WebCT pages. See the presentation for a diagrammatic representation of this.

Student use of WebCT
The department was supported from the Principals E-Learning Fund to create ways of gathering and analysing very detailed information about student activity on the course. WebCT provides some tools for doing this, but the analysis now available to Physics is more detailed. Some of the research findings have been submitted as a paper to the forthcoming ALT-C conference. The findings are already being used to consider where adaptations should be made to the course for next year. There is some indication that high usage of the course correlates with good results in assessment, but further study is necessary on this.
Self-test questions
This examination indicates that the self-test questions in particular are an extremely popular component of the course, they are used throughout the course but use peaks just before the exams, suggesting that they are valued as revision tools. There is now a considerable bank of these self-test questions across all the topics of the course, built up over the years, and other institutions have expressed an interest in acquiring them. The hope is that these questions can be reviewed and revised to add appropriate metadata and ensure they conform to current standards for QTI (Question and Test Interoperability) format. As there are now so many questions this will be a significant project and the department plans to apply for funding assistance to carry it out.

Technical requirements
Setting up a course in this way has required very significant technical input, amounting to a full-time staff member over two years, in addition to significant academic input spread over a number of years. Special sets of transformation scripts have been required, and this means that almost all of the conversions are specially tailored to the particular needs of this course. The advantage is that the materials are highly platform-independent and that it is now possible for academic staff to create and input new content with very little technical expertise.

A resource base
The resource base for the course, now over 1,000 “granules” of content (e.g. documents, HTML pages, illustrations, questions) has been developed over 6-7 years. To some extent the department may have suffered from leading the field - there are now a number of tools being developed which will make it much easier to put in place a “single input - multiple output” system which creates content conforming to agreed interoperability standards. So it is likely that over the next 12-18 months some aspects of this type of development will become much easier and more readily available.

The next version of WebCT is likely to have improved capacity for offering course organisers data analysis and also better integration with other aspects of course management and administration, so that we can all move to a better understanding of what our students are actually doing on our courses.

Clinical Psychology: Older adults
Clara O’Shea and Lucy Clark described a very different course which is actively using a range of WebCT tools to support clinical psychology students while they are out on placements. Because of this, the kind of support and range of activities offered on the course aim to help students develop a sense of the community of practice they are joining, and also to develop their own understanding, as practitioners and not students.

The course content
The course is on the topic of older adults, and one aim of providing an online component was to make this topic more interesting and appealing to a predominantly youthful group of students. The course has a sort of conceptual split between student materials and curriculum work, and a more practitioner-based collection of resources and discussion area. The online nature of the resource meant that it was possible to call on expertise from outside Scotland, offering exciting
possibilities for students to interact with well-known specialists in their field, so for example they had a guest lecturer from California on the highly specialist topic of psychotherapy for older adults. This also helped to provide a more global perspective on the subject of ageing.

**Resources**
The clinical practice side of the course provided a large number of links to web-based resources. Clara and Lucy both spent a great deal of time searching for suitable resources to link to. On both “sides” of the course links to video clips helped to bring issues to life by associating them with real people. This included a section where current practitioners provided their own tips for professional practice.

**Activities**
In addition to some self-test questionnaires, there are a number of activities which encourage and invite participation. The “quandary” section has been set up to provide a game-like setting for exploring particular issues when dealing with “real-life” settings. Students provide each other with suggestions and support via the discussion board.

On both courses the use of the discussion board has varied, but in general this facility has been appreciated by students. Simon Bates described students as “spontaneously talking about physics” on the board. Clara was surprised that the discussion board had mainly been used for topics close to the course, and had not been used to form a social community, in spite of the isolation of the students. Simon noted that in some years the discussion board has been little used.