Demonstration and Panel Discussion Synopsis

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The aim of this session was to familiarise workshop participants with some of the web-based options available for flexible teaching and learning, by showing just a few of the more commonly used tools. After that there was a question and answer session with a panel of experienced academics. The tools chosen were: *TopClass*, currently used at the University of Technology, Sydney; *WebCT*, currently used at the University of Western Sydney Hawkesbury; and *WebTeach*, developed at and currently used by The University of New South Wales. Our panel of experienced academics was comprised of: Simon Housego (Simon.Housego@uts.edu.au), UTS; Stephen Sheely (SD.Sheely@uws.edu.au), UWSH; Peter Love (Peter.Love@mq.edu.au), Macquarie University; and Lindsay Hewson (l.hewson@unsw.edu.au) and Chris Hughes (c.hughes@unsw.edu.au), UNSW.

Introduction

The important issue is the learning environment, not the technology, so the tools were to be viewed, not in terms of which buttons are prettier, but really which is going to best support the sorts of learning strategies that you are interested in using. Hence this synopsis outlines the educational uses made of the tools, rather than documenting features of each tool in turn.

Educational uses

When considering using web-based learning environments, some of the available activities are: private mail between students and the lecturers; private mail between students and students; discussion groups; multiple choice quizzes; delivery of course work; bulletin boards; chat rooms; asynchronous communication; synchronous communication; calendar; ongoing record of what's happening; student presentation facilities; and collaborative learning spaces.

On-line quizzes can be valuable revision aids for students. However, if the lecturer wants the quiz to contribute to the student's assessment, authentication and security are still issues. Whilst UTS have found quiz authoring in *TopClass* to be very awkward, particularly if diagrams and graphics are required, it does not seem to be any worse than other authoring environments such as *WebCT* or *Question Mark Perception*. Even so, students at UTS are making extensive use of the quizzes that have been developed. *WebCT*'s quiz facility caters for both formative and summative assessment and is used by UWSH for assessment in some subjects.

With large classes, often in excess of 500, with multiple lectures per week and on several campuses, communicating relevant administrative information to students is a real issue. UTS uses *TopClass* to overcome this problem. While not directly related to student learning outcomes this is viewed by students and lecturers as a step forward.

Training staff and students in the use of the tool is important, but is often a logistical nightmare. UTS have found that in workshops with a ratio of two staff to twelve students, projection facilities and good quality web access, students pick up *TopClass* in about half an hour. However it is not possible for the central support team to train approximately 12,000 students in the first two to three weeks of semester. So the issue of how students will learn *TopClass* is left to the lecturer. Some lecturers provide laboratory/tutorial time for students to learn *TopClass*; others encourage students to help each other. Staff training generally focuses on the pedagogical issues rather than the technical

ones as staff tend to learn how to use the tools fairly quickly. Student training need only be enough to get them started. What is being provided by these systems is a set of utilities for which different students will choose different pathways, in order to achieve comparable, but not necessarily the same ends. Some will also follow paths the designer did not envisage. UWSH are working on a "virtual icebreaker" which will be available to all *WebCT* based courses to introduce students to the environment in which they will be working.

TopClass has been designed with transmission in mind, i.e. training, rather than communication and discussion. This is reflected in some of the features e.g. the search facility allows you to search course work but not discussion folders. *WebCT* is interaction-based and the developer, University of British Columbia, is quite responsive to requests for improvements from institutions which are currently using the product. The look and feel of these products is not always intuitive for academics. For example, the task bar within *WebCT* is path oriented rather than task oriented i.e. if you want to put up a bulletin board you can't find a button that says bulletin board, instead you find buttons like 'course management', 'organisation' etc. *WebTeach*, however, has been designed with the teacher-student relationship in mind. It focuses on the educational pedagogy rather than the technology and attempts to facilitate the sorts of activities which foster deep learning. Hence terms such as "quiz", "discussion", etc. are what the teachers and students see. The individual lecturers should determine those aspects of the tool which facilitate learning in their particular subject or educational environment.

On-line discussion forums have been found to be very valuable by UTS and student feedback has confirmed this. However, there is a trap here – the notion that on-line discussion saves time, when in fact, the lecturer often gets drawn into responding to the discussion at all times of the day and night. The on-line discussion is often in addition to, rather than instead of, existing components of a course. The structure of a course discussion should be determined by the lecturer. UWSH's primary aim for the use of *WebCT* is to promote discussion. Hence the main uses are email, chat rooms, and bulletin boards.

Bulletin boards are classic threaded discussions in a virtual environment. *WebCT* has an interesting feature, the Compile function, which allows you to go through the bulletin boards and pick out the contributions you want to retain. This facilitates including in the assessment a component based on the student's contribution to things like threaded discussions, chat rooms etc. Using the Compile function, the students can extract comments they've made to bulletin boards, comments other people have made in reply to their comments on bulletin boards, compile them and then edit around them to produce an assignment which they can submit or present for marks. *WebCT* also offers "My Record" and "My Progress", which allow students to track their visits to the web site and their assessment. So if you've made, for example, part of their involvement in the subject that they have to visit the web site five times and they have to contribute to four different discussion forums, then they can track how far they've come down that path. *WebTeach* is basically a sophisticated bulletin board. It offers, for example: a notice board, which only teachers can post to; a seminar room, where the teacher initiates activities such as discussions, case studies, and formal debates; and a coffee shop where teachers or students may start or contribute to an activity. When a posting occurs on any of the activities within *WebTeach*, email is sent to all interested parties e.g. when a teacher posts a notice on the notice board all students in the group are notified. Teachers and students using *WebTeach* may choose to be anonymous. This was introduced to allow a teacher to break a long silence in a discussion session but has proved to be useful in promoting interaction. *WebTeach* also allows for the highlighting of messages, and the inclusion in the discussion of meta comments, which are coloured blue and indented, comments about the process rather than within the process. For example, the teacher might add a meta comment such as 'I think we've heard enough on that let's move on'.

The idea of having a collaborative learning space – being able to brainstorm on-line – is very exciting. *WebCT* offers this facility in the form of a 'Whiteboard'. However, there is one small flaw, any one of the participants can wipe the board clean! *WebTeach* also includes a brainstorm facility. Another useful facility is that questions can have imposed time delays on responses. For example, the *WebTeach* feature in which the teacher poses a question, students submit their answers which are held until the teacher decides there are enough to generate useful discussion, then they are released and the class enters discussion mode.

Putting course material up on the web for delivery requires a sound educational reason. For example, The University of Newcastle uses *TopClass* for content in some areas, particularly where it is dynamic or hotlinked. If material works better in paper based form it should remain as such. UTS and UWSH have both left much of their course material in paper based form and are using *TopClass* and *WebCT* to supplement or support these with web-based interactive processes. If a student has an old computer and a slow modem, expecting them to download course material involving pictures and large amounts of text is unrealistic. In addition, at UTS, the printing of coursework from the web by students at locations outside the particular school is effectively outsourcing the printing costs and this is causing administrative friction.

Student access and equity are still issues. Many students do not have access to the web from home and have never used email. Each institution needs to be very aware of their student mix. However, access and equity are improving over time. UTS has gone from less than 30% of students having access to the web from home to more than 80% in the last few years. The designers of *WebTeach* were always conscious of this issue and so the target interface has always been a standard browser that is independent of platform, location and company.

TopClass is centrally supported by 3 people at UTS; *WebCT* is centrally supported by 2 people at UWSH; and *WebTeach* is supported by 2 people at UNSW. When deciding which environment to choose, the institution must consider technical support requirements and training of support staff, academics and students. UWSH has about 12 subjects live on *WebCT* and about 50 in the development stage. A very important message that came through was that uptake is very rapid once you have central support in place and a known point of contact.

Students need to be taught what is acceptable practice in the use of this kind of medium. When setting up a subject, staff at UWSH are encouraged to put something in the content about netiquette, effective use, and respect – all things that are important in face-to-face teaching in tutorials but which tend to be conveyed more impersonally in this environment.

Most of these systems have facilities to import files created in other environments and to export files to other environments. *WebCT* can import files created by some other package provided it is HTML.

Does using these systems improve student learning? Good question. It is probably too early to tell but what is important at this stage is to evaluate student learning regularly. UWSH has in-built evaluation processes in most of their *WebCT* based courses to track student profiles, responses and progress. Indications at this stage are that students are finding *WebCT* easy to use. However, this does not mean they like using it and the response is quite varied. For distance students in particular it is a real plus as any interactivity is better than none.

Unless there is an educationally sound reason for doing so don't bother to tailor icons etc. Even if the tool being used has some short coming it is usually more cost effective to work around it than modify it. Focus on learning not tuning the technology. Carry out staff and student evaluations regularly and respond to these needs rather than what you perceive to be the needs.

Questions and Answers

1. **What should I consider when determining which tool to use?** Investment in terms of business time, business effort, business dollars, individual educator's invested time in knowledge and materials, institution's invested time and dollars in technical support. Some tools offer facilities the others don't so institutions are likely to find themselves supporting more than one. One way of trying to protect academic investment is to have the academics understand what they're trying to do educationally, irrespective of the technology. Aim for academics to have a grounding in good teaching, good assessment, alignment of objectives, method and assessment, and what teaching strategies work best in their discipline, then make use of whatever technology comes along. This also provides an independent yardstick by which to critically evaluate the tools. Teachers should not have to learn new teaching strategies to use these tools, the tools should support the use of existing classroom strategies.

2. **How do you use any of these without technical support?** Universities could cooperate – answer support questions or even host courses from other institutions if the product licensing allows it. Some suppliers, such as *WebCT*, allow institutions to run a limited number of courses from their server. The software supplier may offer the technical support, as in the case of *WebCT* and *WebMCQ* (see Workshop Presentation on page 20 of these proceedings).

3. **To what extent has *WebTeach* been taken up to replace on-campus activities?** Colleagues are tending to use it in addition to lectures and tutorials to conduct ongoing discussions which are not included in the student's assessment. One course is actually using it to try to improve participation in tutorials by posting the tutorial questions ahead of time and allowing on-line preliminary discussion. Lindsay and Chris, themselves, have used it as an integral part of their courses and have built participation into the course assessment.

4. **What sort of reactions have you had from academic staff when introducing them to *WebTeach* and which disciplines do you envisage it being used in?** *WebTeach,* with its strong underlying theoretical base, challenges the teaching style of many academics. We have found that we have to listen very carefully to the academics requirements rather than telling them what they need because each discipline is different e.g. management, law and medicine tend to use case studies whereas others don't. It's a slow process of them becoming aware of the functionality and what that implies educationally and us listening to the ideas they have. It's being used by Microbiology, postgraduate discussion groups, Medicine, Higher Education, Philosophy, librarians, and school sector mentoring.

5. **Is there evidence that pedagogy benefits from this technology?** Examples of where the pedagogy has been advanced and enhanced by the technology: brainstorms; questions with imposed wait times on responses; and flexibility in handling group dynamics. Teachers are finding that the quality of submissions in on-line discussions is a lot higher than in face-to-face classes, they are more thought out, better structured and better expressed.

6. **If I use *WebCT* for most of my course material but I prefer *WebTeach* bulletin board, can I link my course material to your bulletin board?** Technically yes, but copyright is an issue.

7. **How do you get staff involved?** Edict from the Dean. Word of mouth. Showcasing good examples. Pressure from students. However, approach should be qualitative adoption rather than quantitative adoption – requires considerable discussion before hand to establish the academic's requirement and whether or not it is an appropriate use of the medium.