Abstract

This paper presents findings from a institutional survey investigating the use of WebCT by academic staff and students in their learning and teaching at a large Australian University. The survey was designed to ascertain how WebCT was being used, what support services were being utilized, and to determine what areas, if any, needed improvement. It was expected that most student comments would relate to technical and infrastructure issues, but instead, the survey elicited responses primarily on how WebCT was used in teaching and learning, indicating that quality control is a major issue for the University. Students are generally positive about the use of WebCT and appear to have little trouble in using the technology. Student opinions appear to reflect more the use of the technology made by teaching staff – students who have experienced a well-designed unit rich with resources, timely feedback and good interaction with staff reporting a positive experience with the technology. However, many students reported poorly designed sites, little or no feedback from staff, outdated information and broken links. Staff responses are more focused on the technical and administrative aspects of using WebCT rather than teaching issues, such as the level of local IT support and the lack of ease of use of many of the features within WebCT. Many staff are also concerned about increased workload, but this is generally associated with the technical and administrative aspects of learning about WebCT, developing and maintaining their site rather than time spent in online teaching. The findings in this paper have implications for teaching and learning with technology and the way in which tertiary institutions support academic staff and students using such technology.

Keywords: WebCT, technology, learning, online teaching

Introduction

Over the years, there has been considerable debate on the quality of teaching in higher education sector but in more recent times the higher education industry has undergone a transformation whereby there is a greater emphasis on meeting the expectations and needs of their customers - students (Cheng & Tam 1997). In addition, with the growing emphasis on quality, it has become common for universities to be subjected to quality reviews in which universities are required to demonstrate that they have adequate procedures to ensure quality for their students in teaching and their learning environments. Literature has consistently confirmed a strong correlation between classroom environments, learning and satisfaction (Fraser, 1994, 1998; Griffiths, 2001; Nair & Fisher, 2001: Suarez, Pias, Membiela, & Dapfa, 1998; Templeton & Jensen, 1993; Whiffen & Kalivada, 2001). Although educational environment is a somewhat subtle concept, much progress has been made in conceptualising, assessing and researching its determinants and effects. Research over the last four decades has recognised that students’ and teachers’ perceptions are important parameters of the social and psychological aspects of the learning environments of school classrooms (Fraser, 1994, 1998; Ramsden, 1991, 2005; Templeton & Jensen, 1993). Student learning is a complex multivariate phenomenon with numerous controllable and uncontrollable parameters. For example, Walberg’s theory on educational productivity indicates that student ability, maturity, motivation, the quality of and quantity of instruction, the psychological environment at home, the classroom social group, the peer group outside the classroom and the time involved with the video/television media contribute to the variance in students’ cognitive and affective outcomes (Walberg, 1981, 1984). The model was successfully tested as part of a national study showing that student achievement and attitudes were influenced jointly by these factors (Walberg, Fraser, & Welch, 1986). An interesting outcome from these studies was the finding that classroom and school environments were important influences on student outcomes. Similar findings in higher education have been reported recently in a paper by Ramsden (2005).

In recent years, more of the classroom interaction occurs in the virtual world, via online learning and teaching. The increasing use of Learning Management Systems (LMS) across higher education institutions has, in theory
at least, provided the potential for rich learning environments built on social constructivist theories and available to all students, both on-campus and those studying at a distance (Stacey, 1999). Much has been published about what constitutes good online teaching (Chickering & Ehrmann, 1996), and there this literature has expanded with institutional interests in quality online learning environments (see for example Evans & Nation 2000, Oliver 2003) but often we don’t know to what extent these principles are being applied across an institution.

This paper discusses an investigation into quality of online education at Monash University in Australia. Monash is a very large institution, with over 55,000 students and campuses located in metropolitan Melbourne, in regional Victoria and two international campuses (in Malaysia and South Africa). Most students are enrolled at the metropolitan campuses, where there is a traditional and strong on-campus pedagogical culture for its 40,000 students. Monash makes admirable claims about its interests in developing quality teaching and learning environments and using educational technologies to develop student-centred flexible learning (see the Monash Learning and Teaching Plan 2003-2005). Monash is also a research-intensive University -indeed, Monash is part of a consortium of eight institutions known in the Australian higher education sector (there are 37 universities in Australia) as the ‘Group of 8’ (Go8) Universities. Collectively, the Go8 universities receive over 70% of national competitive research grants and conduct over 60% of all Australian university research (http://www.go8.edu.au). This means essentially that its academic staff, like others across the sector, face competing demands on their time and intellectual energies in that they are expected to excel at both teaching and research.

Method

In 2001, WebCT was introduced at Monash University as the institution-wide centrally-supported Learning Management System (LMS). Since then, there has been an exponential rise in the number of academic users of WebCT and the number of active WebCT units across the University (Weaver, 2003). Adoption of the LMS has been mostly voluntary, and although some Faculties and Schools have mandated the use of WebCT in some of their degree programs, many of these are restricted to the delivery of lecture notes online. Similarly, participation in staff development prior to commencing online teaching has been voluntary, although one Faculty mandated staff development.

There has not been any cross-Faculty investigation of the use of WebCT at Monash University since the initial project implementation, and only limited evaluation of online teaching within one or two Faculties.

The objectives of this project were to:

1. to conduct institution-wide surveys of staff and students actively using WebCT to determine what use was being made of it;
2. to investigate which areas of online teaching with WebCT needed improvement or further investigation;
3. to inform developments in the pedagogical applications of WebCT, including quality improvement strategies in online learning environments and;
4. to inform staff development and training initiatives related to WebCT specifically and online learning more broadly.

Student and staff perceptions of WebCT were measured to establish what features of WebCT were being used in teaching and learning, and the experiences of the staff and students using these features. Two surveys were administered, one for students and the other for staff. The student survey comprised 56 quantitative items organised into three parts. The first part sought biographical information. Part two of the survey measured student usage of WebCT, and the final part investigated the kind of support respondents sought to use WebCT. The student survey also sought qualitative feedback in regard to support, and respondents’ perceptions of additional features that could extend WebCT as a learning tool.

The staff survey comprised 27 quantitative items in four sections. The first section sought biographical information. The second section aimed to investigate training and support issues for WebCT, and section three investigated respondents’ perceptions of using WebCT in their teaching. Section four measured respondents’ experiences with WebCT on a 5-point Likert scale. The staff survey also sought comments about their experiences using WebCT in their teaching.

A total of 1314 students and 69 academic staff participated in this online study
**Staff Perceptions**

Staff responses to questions related to their general satisfaction with using WebCT indicated that while nearly 70% of respondents experienced problems using WebCT, most appear to have worked through these issues and were generally positive about their experience. The negative aspects of teaching with WebCT were identified as primarily software related (for example, ‘slow and clunky’, ‘awkward to upload files’). Furthermore academic staff respondents identified the need for more local IT support, and indicated concerns about delayed access to WebCT sites.

Staff were also concerned about the increased workload, but this was generally associated with the technical and administrative aspects of developing and maintaining their site (and in learning how to do this), rather than time spent in actual online teaching. The increase in workload appears balanced by an increase in flexibility and decreased workload for students.

Staff also identified content-related and communications-related tools as those most used in their online teaching, with 60% of staff using at least one of each of these tools. More than 40% of academic staff also reported using at least one of the assessment-related tools.

Interestingly, most staff reported using various avenues for support when they first started using WebCT, with help from colleagues being the most common response (55.3%). Moreover, more than 40% of staff also reported using training and workshop manuals from the University’s central unit for teaching support, the Centre for Learning and Teaching Support (CeLTS), training staff from that unit, WebCT’s own online help, and local (faculty) WebCT staff. A total of 47% of respondents reported they had attended the CeLTS WebCT workshops to help get started, but the majority of respondents (65.6%) reported they had mostly worked out what to do themselves.

The survey also determined that staff require ongoing help in specific areas on an as-needs basis, as well as rapid online technical assistance. The survey identified that academic users of WebCT are also concerned about support for new versions of WebCT (at the time of the surveys, the University was preparing to move to WebCT Vista). Importantly, staff also identified their interest in seeking advice on good online teaching practices.

**Student Perceptions**

Students were generally positive about the use of WebCT at Monash and report little trouble in using the technology (Table 1). Despite known issues with very specific versions of browsers and plug-ins being required to access the LMS, these technical problems appear to have affected a minority of students and most students coped with these problems early on.

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>Percentage (%)</th>
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<tr>
<td>Major Difficulties</td>
<td>59</td>
<td>4.5</td>
</tr>
<tr>
<td>Minor Difficulties</td>
<td>334</td>
<td>25.5</td>
</tr>
<tr>
<td>Generally easy to learn</td>
<td>675</td>
<td>51.6</td>
</tr>
<tr>
<td>Always easy to learn</td>
<td>240</td>
<td>18.4</td>
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The student responses raised major issues about the quality of the online sites - both issues of teaching quality (appropriate teaching activities, level of interaction and feedback) and use of technology (broken links, outdated information) were highlighted by students. It is our contention that addressing these concerns and improving the quality of online teaching is a major challenge for Monash University; this is an area of interest across the sector in Australia and internationally (see for example Oliver 2003, Laurillard, Armatas, Holt & Rice 2004).

Student opinions of WebCT appear to reflect more the use of the technology made by their teaching staff – students who have experienced a well-designed unit rich with resources, timely feedback and good interaction with teaching staff report a positive experience with the technology. However, many students reported negatively about poorly designed sites, little or no interaction with or feedback from staff, outdated information and broken links to resources within these sites. These negative aspects far outweighed other issues regarding access or technical problems that students may have identified. Many of these issues were detailed...
comprehensively by students who experienced both extremes of online teaching and were able therefore to make legitimate comparisons between the two.

Therefore the survey findings serve to provide for this cohort at least, information that tells us about student expectations of good online teaching. For example, students believed that ‘it [online teaching] works well when the lecturer wants to make it work well’; however if ‘content was not always up to date or complete’ online teaching was perceived as poor. Further, students are clearly capable of recognising the potential of the existing learning tools in WebCT; they believed that ‘most of the tools mentioned would be useful, but have not been used by our course designers’ and for example, the ‘calendar is only useful if it is current. If the calendar is from the previous year, then it is extremely unhelpful!’

Students’ comments generally indicated they wanted access to their lecture notes (both for printing and saving files), and timely feedback on their progress. Students also identified poor use or lack of use of these tools by staff as a major issue for them, rather than any problems they may have had with using the tools themselves.

With respect to resources used by students to learn WebCT, half of all students reported learning how to use WebCT by themselves (Table 2), and a further 23% received an introduction from their lecturer or tutor. Only 31% of students were aware of the existence of the CeLTS helpdesk, with even fewer being aware of the online student manuals. While most students were aware of the existence of ITS and Faculty helpdesks, a large proportion of students were unaware of the available support services.

| Table 2: Resources utilised by students to learn WebCT |
|-----------------|-----------------|-----------------|
| Number          | Percentage (%)  |
| Worked it out myself as I went | 969 | 50.9 |
| My lecturer or tutor provided an introduction to the unit | 439 | 23.1 |
| Other students helped me to get started | 162 | 8.5 |
| Consulted online resources | 91 | 4.8 |
| Lecturer or tutor helped me to get started | 89 | 4.7 |
| Completed a preliminary online exercise | 70 | 3.7 |
| Other | 49 | 2.6 |
| Consulted helpdesk staff | 33 | 1.7 |

Issues of student training were also highlighted from the open-ended responses; where students were largely unaware of the built-in features in WebCT or how to use the existing tools effectively. Students who did receive an introduction to their unit’s WebCT site (usually from their lecturer) appeared to find the technology easier to use, and appeared clearer on what was expected from them.

In analysing responses to the open-ended questions from both staff and students, it was apparent that many staff had difficulty in maintaining their WebCT sites with current and relevant information. Student feedback indicated the primary areas of concern were with the many broken links and outdated materials, including extreme cases of calendar entries referring to dates from 2002. Staff comments in this area were either on the lack of local IT support to help them maintain these sites, or lack of time to spend in online teaching.

Discussion of Findings

It is interesting to contrast the different priorities of staff and students—staff seemed more concerned with technical aspects and with issues of increased workload, whereas students were more concerned with the quality of the online teaching and a perceived lack of engagement with the teaching by the academic staff.

As increased workload associated with online teaching is a major issue for some staff, support for these staff may require assistance with the technical and administrative tasks associated with using WebCT, freeing up the teaching staff to spend more time on the actual teaching. For staff who are less comfortable with using the technology, this level of support may be the only way to encourage more engagement with their online students.
Where technical support is not available for such staff, it may be appropriate to question the decision of including an online site at all. Students appear to report more negatively on a poorly developed or maintained site than on the lack of a site – we may need to decide that if we can’t do it well, we won’t do it at all. While Monash University has not mandated the inclusion of an online component for every unit at an institutional level, some Faculties and Schools have. Student responses identified that in these circumstances, the online experience was frequently less satisfactory than when online teaching was a choice of the lecturer. In these areas, serious consideration should be given to providing increased support to the staff involved, to ensure the highest quality can be attained.

In light of the strong student response regarding their perceptions of the poor quality of much of the online teaching at Monash University, further strategies to encourage improved teaching must be considered. Recent initiatives such as Unit Innovation Grants, institutional showcases of exemplar sites (eg. Designing Electronic Learning & Teaching Approaches (DELTA), Brack et al, 2005), and a new Monash Award for Online Teaching will encourage some staff to become more engaged with their online teaching, but may not reach the vast majority of staff. These initiatives are more likely to attract interest from the ‘early adopters’ of technology, whereas the major challenge is encouraging more interaction from the ‘mainstream majority’ of staff.

Ongoing seminars, presentations and staff development workshops can help demonstrate different strategies used by staff to engage students in online teaching, but these events need to be relevant to the targeted audience, and to be offered at times and venues convenient to the staff. Staff requests for ‘just-in-time’ support must be accommodated, either by such face-to-face sessions or by appropriate online resources, or a combination of both.

Issues of student training have also arisen – students are often unaware of features in WebCT or how to use the existing tools effectively, and are largely unaware of existing support services available to them. The CELTS WebCT Helpdesk staff offer to conduct brief introductions on using WebCT in lectures or other classes, but it appears that few staff are either aware of this service, or are utilizing it for their students.

Arising from these findings, a series of recommendations was submitted to senior staff and policy-making bodies within the University (including all Faculty Deans). These recommendations suggested further and ongoing evaluation of online teaching within Faculties, greater encouragement for staff to actively interact with their students online and more appropriate use of the online technology. The key message is that online teaching should be more than a static WebCT site.

Faculties and Schools are encouraged to provide additional support for staff, particularly where online teaching is mandated, and existing staff and student support services should be promoted more widely.

**Conclusion**

Our findings illustrate that online learning and teaching presents many challenges to Monash University and the higher education sector broadly. These issues are not new to those of us teaching and researching the field of online learning (see for example Evans & Nation 2000, Spratt 2002). Conole (2003) in a paper titled ‘E-Learning: the Hype and the Reality’, suggests that if we believe that ‘e-learning is transforming education’ as some would have it, then we are sadly deluded. She argues that ‘e-learning is still marginal in the lives of most academics with technology being used for little more than acting as a content repository’. While they may make some contribution to student learning, online learning environments that restrict themselves to delivering static resources do not characterise quality online learning environments (Oliver, 2003) nor do they take account of learner characteristics which may influence learning (Armatas, Holt & Rice 2003).

The current findings demonstrate that strategies must be found to encourage a more student-centered approach to quality online learning at Monash.

The Australian Universities Quality Agency (AUQA) (AUQA Audit Manual 2001) claims that tertiary institutions ought to articulate a ‘quality framework’, which demonstrates that:

- planned arrangements are adequate to meet its [the institution’s] goals;
- actual practice conforms to the planned goals;
- arrangements achieve the desired goals; and
- self-evaluation of its approach, practice & results contribute to improvement
Based on the findings from this very specific survey, one could argue that Monash’s quality discourses articulated in the Learning and Teaching Plan discussed earlier need a more determined operational support.

We believe that tertiary education aims to engage learners as active participants in their learning. Achieving this means offering learners opportunities for interaction in ways that can promote change and growth in the learner’s conception of knowledge. Such pedagogies aim to encourage learners to become autonomous lifelong learners, capable of problem solving and critical thinking and which moves them from being passive recipients of information and knowledge to being active, enthusiastic learners and knowledge creators. Moreover, tertiary pedagogy is concerned with building meaningful learning relationships between learners and teachers and learners and their peers. It involves encouraging collaboration in learning as well as cooperation in learning; the appropriation of technology for teaching suggests great opportunities for the promotion of innovative and interactive quality e-learning environments.

It behoves Universities then to develop strategic institutional quality learning and teaching frameworks that can be operationalised in Schools and Departments to ensure that day-to-day pedagogical practices reflect ‘quality’. In our view such ‘quality’ settings in pedagogical practices especially newly developing and as yet under researched online learning environments, ought to:

- exploit the student’s existing knowledge and experience;
- be experiential and embedded in real worlds of work where appropriate and feasible;
- aim to engage learners in meaningful, relevant and authentic learning experiences including assessment tasks; and
- promote opportunities for active learning and collaboration where students are engaged in ‘deep’ learning experiences that develop their capacities to be self-reflective and critical citizens.

In AUQA’s terms, ‘quality’ is about establishing fitness-for-purpose where an internal quality agenda is created to serve the unique purposes of the organization. In these terms then the educational ‘product’ becomes the focus and customer satisfaction (for us, the students) becomes the final arbiter of quality.

Monash University has policy documentation that implicates IT in teaching as a key strategic goal to support initiatives in advancing student-centred flexible learning and improving the quality of teaching. However, if the way in which the majority of WebCT sites are perceived by students in our study is any indication, then the University needs to pay more heed to the institution’s key stakeholders, students and to find support imaginative ways outlined earlier to support academic staff and to advance the widely recognised potential of online learning..

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