How can we help students succeed with on-line courses?

NEW ZEALAND DIPLOMA IN BUSINESS CONFERENCE
Student expectations – academic delivery and content
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Abstract

All New Zealand Diploma in Business courses offered at UNITEC now have an on-line, web-based presence. This has therefore changed the way that courses are delivered. The manner in which students make use of the on-line courses differs from student to student and from course to course.

With the increasing number of courses being offered on-line various issues have arisen for students and lecturers. This paper examines some of these issues.

In Semester 2 1999 and Summer School 1999/2000 students were asked their opinions on an on-line course that had been developed for them as a teaching and learning resource and 132 responses were received. The results of this survey are presented in this paper and recommendations provided as to how on-line courses can be improved to enhance student learning.

The methods that we as educators can use to help students determine if their style of learning “fits” the on-line learning method are described as not all students are comfortable using an on-line learning environment.

The manner in which on-line learning is introduced to students is very important for the successful implementation of the course. This paper concludes by describing some successful models that have been used at UNITEC.

Introduction

On-line, web-based courses are just one of the many ways of providing students with the educational tools and resources they require to succeed in a course of study.

A variety of approaches can be used when making use of the Internet for educational purposes.(Keenan, 1996).
One method is to direct students to use the Internet in much the same way as students use the library i.e. to research information for assignments and for supplementary reading.

A second method involves having computers available for every student in the classroom or to have regularly scheduled sessions in a computer laboratory. Lecturers can then set-up exercises and class material for students to access from the Internet during class time.

The third method is where web-based courses take the place of traditional face-to-face student/lecturer contact and students complete their entire course of study through the Internet.

The first and second models described are currently being used within the New Zealand Diploma of Business at UNITEC. We have found that the class learning process has been extended and in some ways changed through the use of on-line learning resources. (Sherry, 2000).

UNITEC Developments

In Semester 2 1998 a prototype of an on-line web-based course was offered to students for evaluation. This course, 150 Computer Concepts, has subsequently been updated, refined and improved. Although it is a custom written, fully interactive course it now sits under the umbrella of Blackboard CourseInfo (the course authoring tool used at UNITEC) and is used extensively by students from on and off the campus.

In 1999 a decision was made within the Department of Accountancy Law and Finance that all NZ Diploma in Business, Bachelor of Business Studies and Certificate in Business (Introduction) courses would have, by Semester 1 2000, an on-line, web-based presence.

All courses have been set up using Blackboard CourseInfo, however not all lecturers have, as yet, incorporated this facility into their course delivery. It has become obvious that not only students but also lecturers require facilitation to make use of the opportunities available through web-based on-line courses.

Issues to consider when offering course on-line

Student preparedness

If students are expected to make use of on-line web-based course material they need to be able to function in a web environment. The generic skills that students learn by making use of on-line resources are very valuable to them in the workplace.

At the beginning of the semester it is discussed with all classes how much time they are expected to spend on course work outside scheduled classes. Included within this discussion should be the amount of course work that will need to be done on-line outside class time. Students who do not have access to the Internet from work or home will therefore have to have times when they can use the Internet on campus. At UNITEC allowances were made for this by extending computer lab opening times and attempting to
limit the amount of non-course related work that was being done on the computers. All students at UNITEC have free unlimited access to the Internet.

Students who are using the on-line course from home or work are recommended to check their browser settings (instructions on how to do this are included on the course home page) and warned that access speed from outside UNITEC, via a modem, will be slower than on campus.

Judging by the high level of demand placed on computer labs outside class time, an assumption was made that most students enrolled in 150 Computer Concepts or BBS Information Systems Principles in Semester 1 2000 would have experience using the Internet. In March 2000, students were asked what was their Internet experience before they started their course of study in Semester 1 2000. Of the 154 students who participated 64% had used e-mail, 18% had used chat-rooms and 62% had used the Internet for other than e-mail or chat. These results showed us that the majority of students should have been experienced Internet users. However, in reality lecturers found in the first few classes that many students had difficulty with quite simple web-based activities such as the use of search engines.

It is therefore essential when courses are to include web-based components that students have all the “tools” they will need to function effectively.

The first on-line activities that students do in 150 Computer Concepts is an Internet tutorial http://learn.unitecnology.ac.nz/cc/tutorial/home.html and the Return of the Internet Detective, http://www.sosig.ac.uk/desire/internet-detective.html, an excellent interactive tutorial that helps with evaluating Internet resources.

Students also need to be aware that time management skills are very important when they are using the Internet and of the time that can be wasted “surfing” the net. Blackboard CourseInfo allows the lecturer to specify that external pages are opened within the Blackboard CourseInfo shell therefore students don’t get “lost” when going into different sites.

Very early in the course we check to see that all students have an e-mail address and if not we provide them with an institutional address or show them how to set-up an e-mail address under a commercial site such as HotMail or Yahoo. One of the features available through Blackboard CourseInfo is an e-mail system. This feature helps to facilitate group work and also allows the lecturer to contact individual or groups of students.

Which student learning styles best fit on-line learning and how can students learning styles be altered to fit?

There are many fun self-assessment questionnaires students can do on-line that help them determine if their style of learning is suited to on-line learning.
For example the online learning.net organisation (www.onlinelearning.net/ole/ho1wselfassess.html) has an on-line questionnaire in which students start by answering true or false to such basic questions as:

"I have ready access to a computer and, through it, the Internet. 
I know how to use the computer. 
Typing is not an overwhelming ordeal for me. 
Reading is not a nightmarish struggle for me."

Through to

"The words "software download and set up" don't normally send me into a total panic. 
Exploring new things has an appeal for me. 
Asking questions doesn't terrify me. 
I once read a book to learn how to do something. 
Being at the computer cannot be mistaken for a form of torture. 
I like the exchange of ideas and the sometimes lively give and take of a typical classroom experience. 
Direct, personal instructor feedback is something I value and benefit from."

By using a questionnaire such as this in a face-to-face situation a discussion can be opened as to how those students who don’t feel comfortable working in an on-line environment can be assisted.

For example, students can be reassured that personal feedback from the lecturer in an on-line course can be achieved through the use of e-mail or voice-mail as well as making an appointment to see the lecturer.

Lecturer involvement

Lecturers, obviously, have a very large part to play in enhancing students’ on-line experiences.

Lecturers teaching on a course offered on-line need to acknowledge that the on-line component of the course is as important as the face-to-face component. Using a tool such as Blackboard CourseInfo has meant that there is standardisation in layout, however the content of the various parts of the course still need to be considered. When students are expected to download information the normal web design procedures should be remembered. For example, it is possible to include fancy graphics, animations and sound but if students are accessing the on-line course from home, download speed is an important consideration, so these aspects should be kept to a minimum. Also, the site should be well
maintained – check the site to make sure it is free of grammatical and spelling errors and that all external links still work.

Students very quickly become accustomed to using e-mail and discussion boards to make contact with their lecturer. Lecturers need to formulate a policy with regard to how such communication will be handled and explain it to their classes early in the course. A lecturer may decide to answer each e-mail individually or perhaps in a very large class where there is the expectation of a very large amount of e-mail the policy may be that all course related questions are posted to a discussion board where the question may be answered by any class member, with the lecturer keeping a “watching brief” and only stepping in when required.

**Important personal characteristics that make a successful on-line learner.**

Students need to be confident enough to contact the lecturer or system’s administrator if parts of the course are not working. For example we need to know, and act immediately, if a student is denied access to a course, if a discussion board is not working or unusual error messages are appearing.

Other personal characteristics that help towards being a successful on-line learner are a high degree of motivation, feeling comfortable with the technology used in the delivery of the course, being able to work independently, being good at time management, having good reading and writing skills and not being prone to procrastination. (Phillips, 2000)

**What do students think of on-line learning?**

Each semester since the introduction of the prototype 150 Computer Concepts on-line course in Semester 2 1998, students have been surveyed on their opinions and usage of the course. Students’ recommendations for improvement have been used to make changes to the course. Students opinions of the course from a survey done in Semester 2 1999 and Summer School 1999/2000 are shown in Table 1. In the questions represented in Table 1 students were asked if they agreed with some given statements by indicating their responses by circling an option. (the options ranged from 1 = do not agree to 4 = strongly agree). They were also given the option if indicating “don’t know”. Table 1 shows the average responses.

<table>
<thead>
<tr>
<th>Question</th>
<th>On a scale of 1-4:</th>
<th>Don't know</th>
</tr>
</thead>
<tbody>
<tr>
<td>N = 132</td>
<td>Mean =</td>
<td></td>
</tr>
<tr>
<td>1. The online course is easy to use</td>
<td>3.06</td>
<td>5</td>
</tr>
<tr>
<td>2. It is always obvious what I can do next</td>
<td>2.88</td>
<td>7</td>
</tr>
<tr>
<td>3. It is an interesting way to learn</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4. It motivates me to learn</td>
<td>2.62</td>
<td>6</td>
</tr>
<tr>
<td>5. It is an effective way to learn</td>
<td>2.88</td>
<td>6</td>
</tr>
<tr>
<td>6. The content of the online course is relevant to course assessments</td>
<td>3.19</td>
<td>6</td>
</tr>
<tr>
<td>7. The feedback provided is helpful</td>
<td>2.89</td>
<td>16</td>
</tr>
</tbody>
</table>
These questions showed that students were, generally, in agreement with the statements provided. The highest level of agreement was for question 6 - “The content of the online course is relevant to course assessments”. This analysis is confirmed by the question which asked students to indicate what they used the on-line course for. (Table 2). Students were permitted to answer more than one category. Of the 190 replies 44% of the responses indicated that students used the on-line course for exam preparation. This is consistent with research done by McNaught (1999) and indicates that students need an incentive to use a different method of course delivery and the greatest incentive is assessment.

<table>
<thead>
<tr>
<th>I have used the online course for:</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekly class revision</td>
<td>Assignment work</td>
<td>Help with language and terminology</td>
<td>Exam preparation</td>
<td>Gaining confidence using the Internet</td>
</tr>
<tr>
<td>13.16%</td>
<td>26.32%</td>
<td>10.00%</td>
<td>43.68%</td>
<td>6.84%</td>
</tr>
</tbody>
</table>

Table 2

Students were also asked about their preferred mode of study. (Table 3) Although the majority of students indicated that their preferred mode of study was to attend lectures many students enjoyed a combination of Books & Online and attending lectures.

<table>
<thead>
<tr>
<th>Preferred modes of study</th>
<th>Mostly books</th>
<th>Mostly Online</th>
<th>Books and Online</th>
<th>Lectures</th>
<th>With classmates</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.05%</td>
<td>7.02%</td>
<td>28.10%</td>
<td>31.82%</td>
<td>19.01%</td>
<td></td>
</tr>
</tbody>
</table>

Table 3

Although all 150 Computer Concepts students have the flexibility of being able to access course material when and where they want to, when they were asked if this facility was available for all papers would they use it instead of coming to class or as well as coming to class the majority of students replied that they would still prefer to attend class, (87% Semester 1 1999, 90% Semester 2 1999), with 61% of students electing to attend a lecture once a week and 27% electing to attend a lecture once every two weeks.

The obvious interpretation of these results, supported by research conducted at the University of Illinois,(1999) and McNaught (1999) is that students who have enrolled in a traditional, on campus course have done so because they enjoy being on campus and the face-to-face contact with other students and lecturers.
When the course was originally designed an assumption was made that students would find it useful to maintain an on-line journal (i.e. maintain their own notes about parts of the course). However when students were asked to rank the various parts of the course the student journal was the part that was the least used. It has not been removed from the on-line course however less emphasis is placed on it and feedback using traditionally methods such as class discussions are now being used.

The statement that provoked the highest degree of disagreement with students concerned the computer availability on campus. Many students expressed difficulties with accessing a computer when they needed one. This is an institutional problem rather than a course problem and has been partly solved by having computer labs open for longer hours and seven days a week.

When students were asked if they had any problems gaining access to online course during normal working hours 52% replied occasionally and 10% replied frequently. This was of concern to the administrators of the course as access was available 24 hours a day, seven days a week. One interpretation of this could be that students couldn't access computers therefore they couldn't access the online course. Another interpretation could be that students had difficulties with usernames and passwords. This has been remedied in Semester 1 2000 by making use of the on-line course during supervised class times so that from Week 1 all students should have been very familiar with how to access the on-line course.

**How can lecturers be prepared for delivering a web-based course?**

With the demands of teaching, administration, service and research that are placed on teaching staff it is not surprising that some lecturers are not enthusiastic at having, what they perceive, as yet another burden placed upon them.

Lecturers at UNITEC within the law, accounting and computing areas who have used Blackboard CourseInfo are enthusiastic about the additional benefits it offers their students. For example, all students can be kept up to date using course announcements or group e-mail, tutorial exercises and assessment items can be posted on-line and suggested solutions provided immediately the assessment is submitted, discussion boards can be setup for tutorial exercises or for any questions regarding an assessment item and links to external Internet sites can be provided for students to allow for additional learning resources.

However, until recently it has been the enthusiasts who have made use of these opportunities. A strategic plan for the Faculty of Business detailing exactly how on-line learning is going to be implemented across the faculty was introduced in April 2000. Within this, details are provided as to the training and facilitation that will be provided for each staff member to move forward in the area of online learning.
What successful methods have been used to introduce on-line learning to students?

It is essential that very early in their course of study students are introduced to on-line learning. An IFAC report on Internet and Distributed Learning in Accounting Education (2000) recommends that if students are to work independently and to utilise distributed learning technology to fulfil program requirements, institutions should ensure that students possess the prerequisite knowledge, skills and attitudes to succeed in the program of studies. (p 12).

A number of different approaches are used at UNITEC. One option is to give students a handout containing instructions on how to self-enrol in the on-line course. Non-entry level courses have used this method successfully. From Semester 2 2000 all students will be given a pamphlet describing how to use Blackboard CourseInfo. For students for whom the course utilising on-line modules is one of their first courses at a tertiary level there is the need to go beyond this. Internet tutorials, described earlier in this paper, which are accessed through the on-line course, ensure that students are actually able to access the on-line course and can navigate it sufficiently well to be able to access the Internet tutorial. A hands-on worksheet done in class which allows students to explore different parts of the on-line course has also been used to great affect.

A focus group of students was asked about their initial experiences using on-line courses. Some students said that they found it very confusing initially and had difficulty with logging on and navigation. Lecturers have therefore decided that trying to cover all of the necessary administrative procedures plus introduce students to on-line learning in the first week is counter-productive. From Semester 2 2000, students will not be introduced to the on-line resources until the second week of the semester.

All students enrolled in courses offered with an on-line component have access to an on-line help facility. This has been custom written at UNITEC and incorporated into Blackboard CourseInfo. Students have access to the answers to many frequently asked questions such as “why can’t I log in” as well as the facility to ask a question which can be automatically routed to the course administrator. Students can also access an on-line manual provided by Blackboard CourseInfo or link directly to the Blackboard site to ask questions.

Conclusion.

Learning institutions which are able to offer all or parts of their courses via the Internet can make use of this unique selling point. Although many students are familiar with using the Internet their use of the Internet for educational purposes needs to be supported. Students need to be provided with the tools to succeed in an on-line environment and efforts made to ensure that all students can access the technology in the manner intended.
Lecturers need to be aware of the possible problems that can occur when students access an on-line course and have plans to overcome these problems.

Students enjoy the flexibility of having course material available on-line, however, at this stage, the on-line material within the NZDipBus at UNITEC is an additional resource not a substitute for good face-to-face teaching.
REFERENCES

International Federation Of Accountants. (2000). Quality Issues for Internet and Distributed Learning in Accounting Education. New York. USA.


The On-line Learning.net Self-Assessment Quiz. Available URL. www.onlinelearning.net/ole/holwselfassess.html