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A flexible delivery approach to a post-graduate health subject

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Abstract

The development of subject materials that can be delivered equitably to students enrolled both on-campus and at a distance is a challenge facing many tertiary institutions in these times. The department of Public Health & Nutrition (PH&N) at the University of Wollongong has several years' experience developing subject material for delivery via SBS broadcast to students enrolled at a distance.

A Flexible Delivery Approach to a Post-Graduate Health Subject

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The development of subject materials that can be delivered equitably to students enrolled both on-campus and at a distance is a challenge facing many tertiary institutions in these times. The department of Public Health & Nutrition (PH&N) at the University of Wollongong has several years' experience developing subject material for delivery via SBS broadcast to students enrolled at a distance.

The challenge now was to look at improving the way that distance education materials integrate with and improve on-campus teaching. For these students, weekly contact hours were reduced from 4 hours to 2 hours, as the 'content' component was covered by the Study Guide, the readings and the videos. In the remaining 2 contact hours, seminars were conducted on topics related to, but not repeating the Study Guide material. The trial described below was conducted during the Autumn Session of 1996.

In order to develop and trial the delivery of such a subject, $5000 funding from the University of Wollongong Strategic Development Committee was awarded to Heather Yeatman, a Senior Lecturer in PH&N. With the rapid development of internet services over the last 2 years it was seen as vital that the internet be trialled as part of the delivery system. As part of the planning process we surveyed all PH&N students who were already enrolled at a distance in order to ascertain their general computer skills and their access to the internet (among other things).

The results showed that:

- approximately 75% had access to computers;
- approximately 75% described themselves as moderately skilled (in the range: novice/moderate/advanced/expert) computer and word processor users;
- fewer than 25% had access to the internet;
- fewer than 10% were already internet users; and
- more than 80% expressed their desire to use the internet in their courses.
- 85% would like to use their computer to communicate with other students;
- 75% would like to communicate with their lecturer this way; and
- more than 80% would like to access the world wide web.

To overcome these access problems for the externally enrolled students we were able to loan portable computers and modems to them for the duration of the subject trial. This hardware was obtained with a $7000 grant from the University's Quality funds. This funding also allowed us to provide

each of the external students with the first $60 of an internet access account with Open Net.

Early Planning

The subjects which have previously been developed and delivered to students enrolled at a distance in the department of PH&N have relied largely on two components: the series of half hour videos that went to air via SBS and the student folder that contained such items as a subject outline, a session planner, a topic-by-topic study guide, and additional readings for the subject. The intention was to add computer delivery and/or support to these two in an effort to provide avenues for greater interaction for students regardless of whether they were on-campus or off-campus. Initially it seemed that the study guide should be turned into text for delivery on the world wide web. When this was trialled with a small section of the study guide however, it quickly became clear that the material would need to be rewritten to suit the medium, just as material is especially written for the videos and for the study guide itself from previous lecture notes. There did not seem to be any value in simply pasting the existing study guide text into www pages without adding value to them. The decision was then made not to proceed this way, not least because of ever-tightening deadlines for the delivery of the text and video materials.

The New Components

Given the willingness of students to communicate with their lecturers and peers using computers, and their desire to make use of the world wide web, several new components were incorporated into the structure of the subject

WWW site

The major additional component constructed was a world wide web site. Its purpose was to provide course information and learning resources to the students enrolled in the subject 'Public Health Nutrition'.
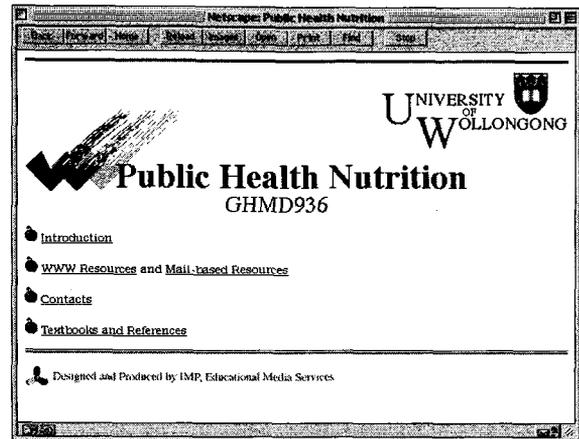

Figure 1: Public Health Nutrition Home Page

The site contains a subject overview and the aims of the subject, as well as contact information and textbook resources. Numerous learning resources available via the world wide web which have been identified as being useful and enriching by the subject lecturer are also available through this site. Students are able to follow the links provided to gather useful information on their topic from sites situated around the world.
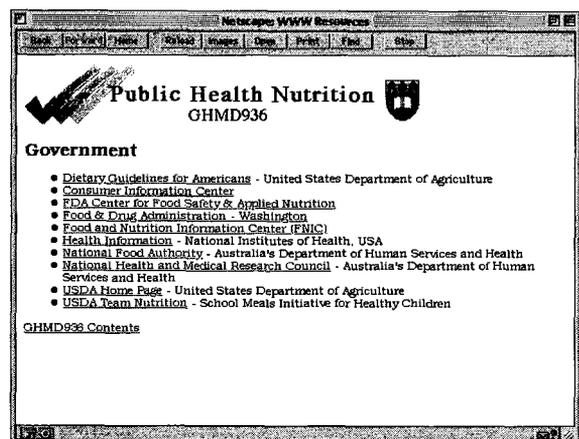

Figure 2: sample of world-wide resources available from web site

E-mail

In order to enable students to communicate with each other and with their lecturers and tutors, individual e-mail accounts were established. Off-campus students were provided with Eudora and information sheets on how to use it. This software enables students to transfer documents to their lecturer, so assignments could be submitted by e-mail.

An early intention was that students would also submit data this way as part of collaborative assignment work. Students enrolled on-campus were given accounts on a unix-based mail system - an outcome which caused them a lot of problems, due largely to the 'unfriendly' perception attached to the unix-based mail system. These difficulties also meant that the intention to use e-mail for collaborative work was put aside for this trial.

E-discussion group

An electronic discussion group was established (majordomo software running on a university server) so that students could begin and participate in discussions easily. Messages posted to the discussion group are automatically mailed on to all members of the e-discussion group - one to many postings. The www site was also used to advise students of other e-discussion groups that are available around the world, as well as providing instructions on how to join.
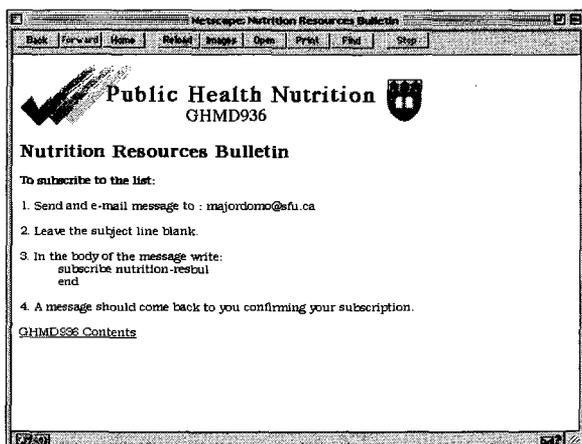

Figure 3: sample e-discussion instructions

The Design & Implementation Experience

WWW site

The final design of the www site was fairly close to that actually specified. The original specification of the Home screen (Figure 1) had suggested Granny Smith apples as the 'bullet' graphic. When the graphic designer came up with the 3 ticks idea (red-pink-grey) he also changed the apples to red so that all the graphic elements were then based around that colour.

The other change that was needed along the way was the addition of the 'Mail-based Resources' item. This became necessary as the list of resources grew and we wanted to provide a direct link to them from the Home screen. A similar change was necessary with the items in the WWW Resources link. Initially they were all listed on a single screen, but as the list grew, they needed to be categorised in order both to keep the design simple and the download time short.
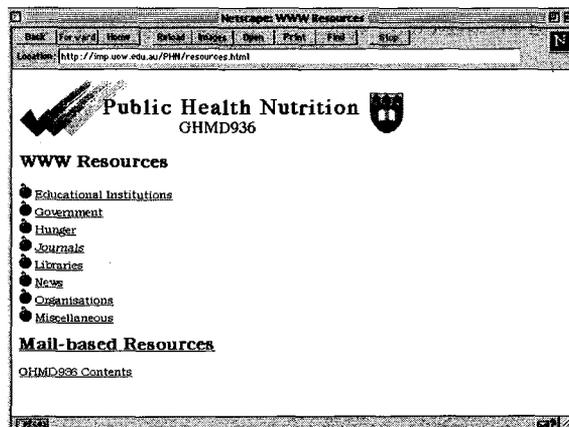

Figure 4: WWW Resources menu screen

E-discussion group

The establishment, control and running of the majordomo discussion group was a problem at times for three reasons: firstly the software runs on a mainframe machine that was not under our control; secondly the software seems to have some cross-platform

compatibility/stability problems; thirdly the mainframe interface was not found to be user friendly and easy to use by the majority of the students enrolled in the subject. There seemed to be many cases of discussion group messages 'bouncing' - i.e. not being received by the addressee. This seemed to be more prevalent in the instance where the original message was generated on a Macintosh and it was being sent via majordomo to a non-Macintosh computer. This situation was not unique to the Health discussion group, as it has been experienced by the authors in other groups using the same majordomo software. Perhaps future revisions of the software will cure this problem.

E-mail

The staff community on campus makes use of a user-friendly GUI e-mail system (Microsoft Mail) that is very easy to use. However, the on-campus student e-mail system available during this trial was a Unix-based system which the students did not find very easy to learn and use. They were also only given one short seminar on how to use the system - they didn't get a hands-on workshop. The off-campus students used the shareware version of Eudora, which is a very user-friendly and stable package. They found 'getting into' e-mail a much easier task. The University is currently reviewing the e-mail environment on campus and hopefully it will change before this subject is run again. A requirement of any implemented e-mail system is that formatted documents are able to be transferred easily using the system, as both Microsoft Mail and Eudora already have this capacity.

ISP's

Part of this trial was the use of an external Internet Service Provider (ISP). The reasons were that for the University to provide access to the www and all other internet services it would have to expend large amounts to install the necessary infrastructure, and long distance phone call costs for remote students would have proved very expensive. Our experiences should provide a timely warning to others who may be in the same situation. A couple of things happened that sound a note of caution. One was that during the session some student accounts were suddenly deleted by the ISP without reason or warning. No real damage was done in any sense, but there was a lot of inconvenience caused and a lot of time spent getting the problem resolved.

A more serious event was that part way through the session the ISP made a business decision and changed its policy. Fortunately for us, they arranged a smooth changeover to a different ISP and the students wouldn't have noticed any difference. The warning, though, is that if commercial ISP's are used there is always the possibility of the business closing - for whatever reason. This could prove disastrous for the students studying that course, and may even have legal implications for universities in terms of their obligation to deliver the subject to enrolled students. Universities may, in the long run, be better off installing their own infrastructure so that they have control over the provision of internet services, particularly if the trend towards delivering more and more subject material via the www continues.

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THE CHANGING COMPUTER/NET PROFILE OF THE GRADUATE PUBLIC HEALTH STUDENT AUTUMN 1996 VS AUTUMN 1997

Background

In week 1 of the 1996 autumn session, students enrolled in GHMD936 (n=33) were surveyed to discover what access they had to computers and the internet, and to discover how they rated their skills as computer and internet users.

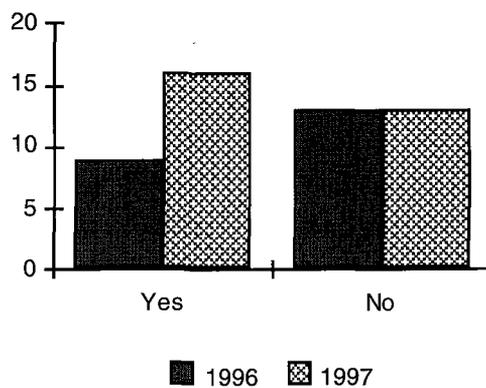The same survey was conducted recently for students enrolled in the same subject for the autumn session 1997 (n=34).

A summary of the results follows.

Survey Results

Do you have access to a computer?

■ 1996   ▨ 1997
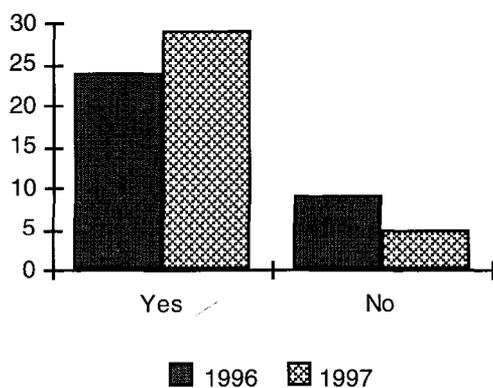
Does your computer have a CD-ROM?

■ 1996   ▨ 1997

Do you have a computer at home?
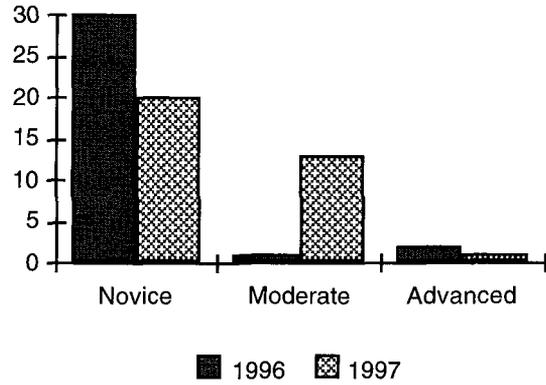

■ 1996   ▨ 1997
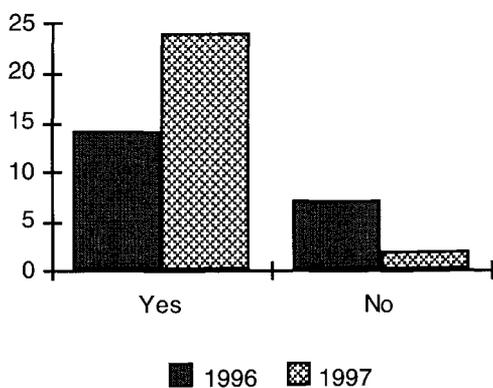
Is your computer connected to a network?
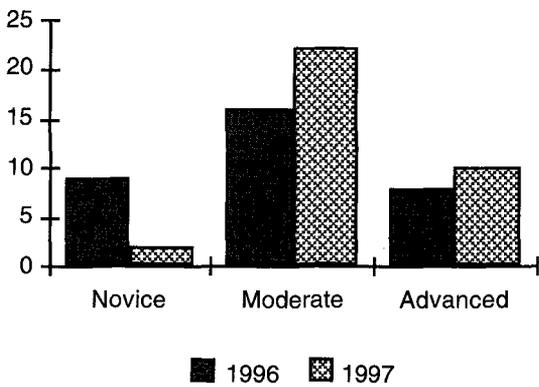

■ 1996   ▨ 1997
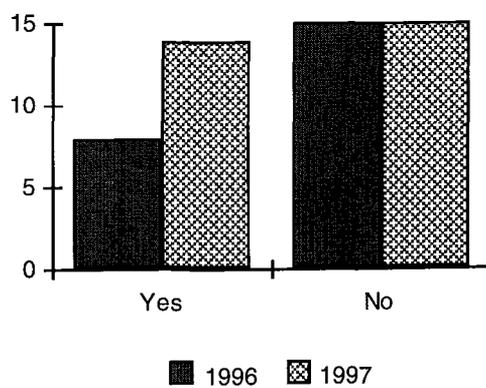
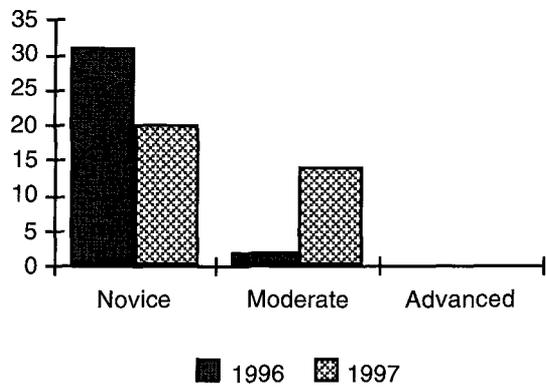How would you rate your skill as a computer user?
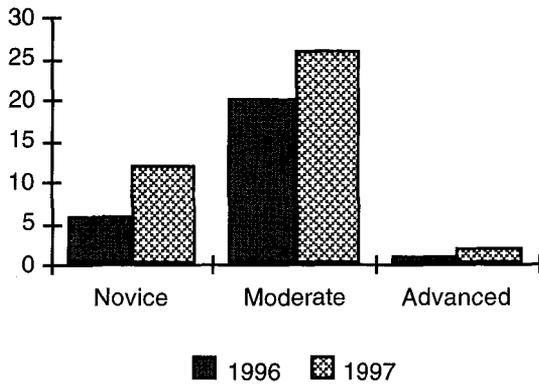
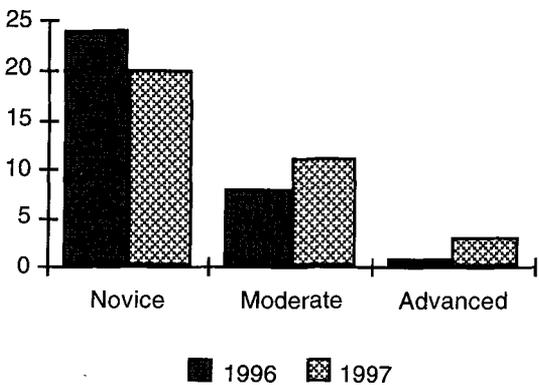How would you rate your skill as an e-mail user?

How would you rate your skill at word processing?

How would you rate your skill at accessing the internet & the www?

How would you rate your skill at spread sheeting?

How would you rate your skill at accessing databases via the on-campus network?