

RECOMMENDATIONS FOR TEACHING IN A DISTRIBUTED LEARNING ENVIRONMENT: THE STUDENTS' PERSPECTIVE

Geraldine Lefoe

Centre for Educational Development and Interactive Resources
University of Wollongong, Australia
glefoe@uow.edu.au

Cathy Gunn

School of Education
University of Auckland, New Zealand
ca.gunn@auckland.ac.nz

John Hedberg

Faculty of Education
University of Wollongong, Australia
jhedberg@uow.edu.au

Abstract

The University of Wollongong opened a new campus and two new access centres on the south coast of NSW, Australia, in 2000. The combination of distance with limited funding, after seed funding was expended, has provided opportunities to rethink teaching and learning strategies. Competition from traditional distance education providers in the area meant that, strategically, Wollongong had to "think differently". This paper provides an overview of issues identified by students through an evaluation of the inaugural year of a flexibly delivered Arts degree in a distributed learning environment. Actions taken by the University to resolve the issues are outlined and recommendations for implementation from the students' perspective are proposed.

Keywords

distributed learning environment, responsive evaluation, students' perspective, curriculum change, flexible learning

Introduction

In Australia a number of universities have set up national and international satellite campuses to broaden their student base through provision of better access to education (Cunningham, Ryan, Stedman, Tapsall, Bagdon, Flew & Coaldrake, 2000; Cunningham, Tapsall, Ryan, Bagdon & Flew, 1998; Davidson, Dekkers & Booth, 1994). The University of Wollongong has followed this path. It is a regional institution, located on the South Coast of NSW, Australia, which has expanded to include a centre in Sydney and an international campus in Dubai. In 2000, further expansion took place when two new access centres (at Bega and Batemans Bay) and the Shoalhaven Campus opened their doors to students. This initiative was funded by the Federal government with a view to using the latest developments in technology to support teaching and learning in rural areas.

Background and Context of the Study

The first year of an interdisciplinary Bachelor of Arts (Community and Environment) is the focus of this research. This new degree, developed over four years, is one of several degrees the University of Wollongong offers to students studying at the Shoalhaven Campus and at access

centres in Bega and Batemans Bay. The degree has been designed to utilise a flexible learning approach in this distributed learning environment. Lecturers for the subjects were based at the Wollongong campus and local tutors were located at each of the centres. Students were required to attend tutorial sessions either once per week or once per fortnight for each subject.

An interdisciplinary degree suggests the blurring of the boundaries, drawing from the approaches of a number of disciplines, with the focus on issues and themes. This approach would for example use readings from a number of different disciplines; e.g. history, literature, philosophy (Rinn & Weir, 1984). When the degree was developed in 1998 there were only a couple of other degree specialisations within the faculty that were not firmly based in single humanities or social science disciplines (Albury, Lefoe, Littler & Trivett, 2001). The new degree required flexible teaching and learning methods to be incorporated in the subject design because of the distance to the new campus and access centres and the perception that technology could support teaching and learning in these new learning centres.

Subjects may be flexibly delivered in distance, open, distributed and campus based learning environments (Hedberg & Corrent-Agostinho, 2000; Taylor, Lopez & Quadrelli, 1996). For the Faculty of Arts academics developing subjects for the degree meant also thinking about the nature of a distributed learning environment, since the new access centres were a considerable distance from the Wollongong campus. The subjects incorporated teaching and learning strategies that the developers determined would best fit their subjects. For one subject this meant providing printed content material that incorporated student activities. These became the focus of the weekly tutorials with the onsite tutor. A WebCT site was also included that provided an overview of the weekly activities and a discussion space. Another subject provided online course materials that included lecture notes and a discussion space. Videos of the Wollongong lectures were sent to the centres each week and videoconference was used for the tutorials, with the tutor rotating visits to each centre.

The Bachelor of Arts (Community and Environment) was implemented in 2000 when Bega Education Access Centre, Batemans Bay Library and Education Access Centre and the Shoalhaven Campus opened their doors to the first intake of students.

Methodology

This initiative provides the context for an evaluation, which focused on the first year of implementation of a Bachelor of Arts (Community and Environment). An overview of issues from the preliminary analysis of the data focused on the student. A responsive approach which utilises a case study methodology (Stake, 1995) was used for this evaluation (Mark & Shortland, 1987; Guba & Lincoln, 1981). The responsive approach uses evaluation methods that are negotiated with the stakeholders who include students, tutors, lecturers and various members of staff of the institution. The methods chosen emphasise the issues, language, contexts and the standards of the stakeholders. Students were interviewed through focus groups and semi-structured interviews on two occasions during the implementation year, with two to six participants. Lecturers and tutors were also interviewed where possible late in the semester in which their subject was offered, although for some interviews this did not occur until the following semester. For the purpose of this paper the focus is on the student perceptions of implementation issues in their first year. Whilst the authors acknowledge the limitations of the small sample involved, the study can inform future research in the area.

Student Profile

There were a total of 29 students enrolled in Bachelor of Arts across the three campuses, including part-time and full-time students, with an age range from 19 to 60. The students at Shoalhaven Campus were predominantly post-secondary whilst at both of the other centres, they were predominantly mature-age students. Since this was the inaugural year for the degree there was much discussion amongst the developers about what the student profile would look like. An earlier report (University of Wollongong, 1996) had indicated that few post secondary students interviewed had indicated they would be attending a local campus as their preference was to leave home. Consequently the subjects had been developed with the view that the majority of students

would be mature age. An assumption was made that these students would be highly motivated and self-directed. For many of the post secondary students self-direction and motivation may have been a problem (McInnis, James & Hartley, 2000). These students indicated a number of reasons for attending the campus including financial, family and work related, not being accepted at their preferred institution and because they wanted to do this particular degree since it was not offered at the Wollongong campus.

Issues in Focus for Evaluation

From a preliminary analysis of the interview data, key issues were identified as having significant impact on students in their first year. The researcher provided feedback to stakeholders as issues were identified so that action could be undertaken to resolve them. Whilst some of the issues were addressed, a report was given to stakeholders in October so that further actions could be identified to resolve outstanding issues.

Whilst it is recognised that many of the issues could be described as logistical in nature, the major themes have been identified as pedagogical, technological, support and administrative issues. These are arbitrary distinctions made for the purpose of clearer reporting since many issues overlap though it is recognised that all have some impact on student learning. Categories were determined through analysis of focus group discussions after the researcher identified major themes during stakeholder interviews (Stake, 1995; Cresswell, 1998).

Pedagogical issues and solutions

Many of the issues identified by students could also be identified in an on-campus learning environment, however location meant it was more difficult for students to find answers to their problems, especially when they didn't know who to contact.

Pedagogical Issues	Students' Comments	Action
Workload	I really didn't expect the workload to be as heavy as what it is for four subjects. (BB student). It was an inhuman amount of work (BB student). Well, I'm unhappy, I don't have a life. I don't go for a walk any more, I don't speak to my children... (BB student)	Ensure students are aware of two hours per credit point time commitment. Reduce enrolment eg. full-time to part-time
Student role	It's a different style of learning too, she's incorporating, not a lot of academic jargon going on, mostly chitchat and learning through discussion. (Bega student)	Clearly identify changes to student role in orientation.
Academic role	Students often interchanged the terms tutor and lecturer in the discussion and many were unaware of the role of the Dean, Sub-Dean and Associate Dean.	Clarify roles.
Learning community	I must say that (Centre Coordinator's) encouragement, when I rang up, ...she sort of said 'Look yeah, I know it's hard. Don't give up. Don't give up'. Because I was thinking I could just bail out now before I fail, and so that, yeah...her support's great. (Bega student). That's another thing – time to spend with your teachers and discuss your work. We've had a couple of opportunities and I've found them to be really important and useful (BB student). I guess if you're on campus you can go knock on the door and say 'I don't get this idea can you explain it?' (Bega student). The other thing that kept us going was the fact that everyone else was saying the same so we didn't feel like such a freak (BB student).	Student support provided through coordinators, peer support. Informal communication with lecturers and other students through videoconferencing/ email/discussion space

Table 1: Pedagogical issues and solutions

Although much of this information was provided at orientation, students may have been overwhelmed by the information they received. A faculty handbook, "Studying on the South Coast", was produced to overcome some of the initial student problems. It identifies student and staff roles in this learning environment; provides information about accessing administration, subjects online, the library and introductory support for essay writing, using word processors and the coursework system.

Communication with lecturers who were based at Wollongong was identified as a difficulty but perhaps no more so than on-campus where “knocking on their door” is also restricted by availability of the lecturers for a variety of reasons including their increased workload. However, faculty-student interaction is identified as an important component of student learning (Kuh & Vesper, 1997) and can be addressed through the effective use of available technologies such as email and discussion spaces or making a specific time available for these students to phone lecturers.

The building of a learning community, where all members feel they belong and their contributions are valued, is also clearly important. Campus coordinators were an integral part of this development, as were the tutors and the students themselves, supporting each other with their learning.

Technological issues and solutions

Technology issues (Table 2) were a major focus for students in the discussion and varied from centre to centre.

Technological issues	Students' Comments	Action
Computer access	It mightn't seem like much to ring her but when you're ringing long distance it is, and when you haven't got access to a computer, to email or anything, from Eden to Bega it's long distance. (Bega student) Student 1: And the web based stuff, I think my problem with it is having to download (and print)... because it's ten cents a page, if you don't have a computer, you can't leave it on there. Student 2: I found it a lot easier with the book last time... just give us the book (Bega student).	Extended access to computer labs out of hours. Provision of clear guidelines for assessment tasks and marking criteria. Provide hard copy of subject material when appropriate.
Training ...	Things like using databases – I've just started to scratch the surface now and it would have been really good had I had those skills earlier. (BB student) I was impressed that I could learn it off the screen. (BB student)	Include skill workshops in orientation activities plus online training resources like the Database tutorial
Troubleshooting ...	Very often just when you really need this technology it just doesn't happen to be working... (BB student) It's really frustrating especially when you go in to print something. (Bega student) I love (the computer) at home now because my kids turn to me to fix things, whereas they taught me how to turn it on and get it going... six months ago I was almost computer illiterate, and now I'm the one that fixes everything on the computer. It's so cool. I love it. (BB student)	Monitor equipment performance; provide checklists for problem solving with equipment; further training for students; encourage peer support.
Appropriate use a) asynchronous discussion space	Student 1: The one good thing about the Arts subject was the bulletin board because it was compulsory to do it – to put 2 postings on per module and a module went for 3 weeks. And so in that way the bulletin board really got a good use. Student 2: It made you really read what you had to read, you didn't want to just put something really wishy washy on there and everyone else is going to read it and go from that you wanted to put something really substantial on there. Student 1: That's right. At the same stage in some of the subjects in the early semester, without having a reason to be on the bulletin board it's just died. (Shoalhaven students)	Set clear expectations in assignments. Provide a clear purpose for students to use the discussion space.
Appropriate use b) video- conferencing	I hate that audiovisual thing that's completing alienating. (Bega student) Someone would say something off the top of their head and someone would say we couldn't hear that. You would have to get the speaker and put it closer to them and so (they would) want you to repeat it. You'd like, oh you know, it did make it a bit just a little bit different. (Shoalhaven student) By the end I think you were just – you know they are there and it didn't really matter. (Shoalhaven student)	Provide student training for using videoconferencing during orientation; increase training to ensure pedagogical-sound methods used. Increase number of microphones at each campus.
Appropriate use c) video/audio lectures	The tapes are great ... even in the other subjects they have tapes. (BB student) I actually find the lectures a bit useless – I have to say. And it's partly just because of the technology. The videotapes are often really, really hard to decipher and to hear what's going on... (Bega student)	Ensure high quality recordings through use of campus recording facilities.

Table 2: Technological issues and solutions

The majority of students at the Shoalhaven Campus indicated that computer training was not an issue for them as most felt that they were comfortable using the technology. Most of these students also lived within a reasonable distance to the campus though access to campus laboratories out of hours was an issue for them. Many of the students at Batemans Bay had access to computers at home and work and those who did not had extended access out-of-hours at the centre. Students in Bega indicated that most did not have computer access at home, in fact some had no electricity. Many had limited previous experience and for some, distance to the centre (up to 2 hours driving time) was an issue. Local Bega students used the 24-hour access at the centre.

Students were critical of how technology was applied in some of their subjects and were able to identify where it was used well (Table 2 – discussion space). The choice of appropriate technology in subject design is an important component in any curriculum. Video and audio recordings of Wollongong lectures were not produced professionally so the students found it difficult to focus on the content and frequently didn't use them. This was the response by some subject developers to reproduce a traditional learning environment because they did not come to terms with changing the teaching and learning strategies used in this new environment. Scott (1999) identifies that poor implementation support for innovation is often the reason for failure. He identifies implementation as the hardest part of change:

“The context in which such programs are to be implemented is so complex and changeable that it is impossible to expect pre-packaged innovations to operate exactly as predicted, unless they are particularly simple” (Scott, 1999; p. 49).

Scott (1999) also suggests that staff support can be haphazard, that the timing can be poor or not practical. As a result, he suggests that staff may return to “old, safe, proven strategies” (p. 49) leading them to be disillusioned and less likely to become involved in further innovation. Two subjects in the first year involved faculty who took responsibility for the subjects of staff who had recently left or were on leave. They had not been involved with the development of the subjects, nor in the staff development activities that the developers had engaged in over the previous year. A team approach to subject development would ensure that the departure of a critical person would not have this impact on the subject.

Support issues and solutions

Support for student learning is identified in much of the literature as critical for effective teaching in any learning environment (Chalmers & Fuller, 1996; Prosser & Trigwell, 1999). The need for flexible access to resources and learning support is even more imperative in a distributed learning environment (Chalmers & Fuller, 1996; Fowler & Branch, 2000).

Support Issues	Students' Comments	Action
Student support	If someone could come and talk to us, if there was an adviser that we could talk to about it, computer problems, stress, big workload, maybe we could pop in a mini-bus and head up to Wollongong. (BB student)	Provide support through visits to centres, email, and videoconferencing.
Access to resources	When books are on reserve you can only sort of have them overnight ... I'm only 30 km away but other people are about 50-60. (Bega student)	Electronic reserve initiative implemented plus increased online journal access. Library processes reviewed to extend reserve loans.
Career counselling	(I'd like to see) a careers person so you could sort of sit down and say well you know, if I do this where's this going to take me. (Bega student)	Provide support through visits to centres, email, and videoconferencing.
Learning support	It was quite good; it could have been better if it was scheduled (to meet our timetable). (BB student). He came down the day we had a big test - one for English on a Tuesday (Bega student).	Online and paper based learning support materials provided. Learning support embedded in 100 level subjects.
Academic advice	That would have been a good point to give to us at the start of it, like the start of 1 st semester, just say look, these...these subjects that you'll be covering this year are very broad, just sort of like an introduction (Shoalhaven student)	Provide support through visits to centres, email, and videoconferencing.

Table 3: Support issues and solutions

At the University of Wollongong, learning support for students is provided through academic staff in Learning Development. Their approach of providing all students with assistance in making the transition to tertiary and discipline-based studies is an innovative and systemic approach to learning support (Skillen, Merten, Trivett & Percy, 1998; Skillen, Trivett, Merten & Percy, 1999). For this new degree, learning support was initially provided through workshops on such things as essay writing skills which many students did not attend because of timetable conflicts or other commitments. The provision of access to online support will mean that students can use materials when they require assistance. Future offerings of a core compulsory subject with embedded learning support will ensure that all students develop the skills required.

The decision by the library to initiate an electronic reserve collection meant increased access to resources for these students. Whilst the Shoalhaven students had access to their own library it was new and had limited resources. The Bega and Batemans Bay centres had their small collection stored at the local regional library and access was limited not only by the small number of resources but also by the opening hours. The electronic reserve collection meant that lecturers could provide readings, including single chapters of books to provide a much wider and up to date resource base for their students (Albury et al., 2001).

Visits to the centres by the Dean and Associate Dean to give academic advice provided visible support for students (and tutors) and modelled a practice they were encouraging teaching staff to follow. It also highlighted the importance they placed on the success of the centres.

Administrative issues and solutions

Administrative issues (Table 4) can be a major stumbling block for students at a distance from campus. A lack of email access can prevent a student from accessing key learning materials in the first week of session at a time when new students are nervous about their ability to learn in a new environment. Administrative systems that provide students with control and easy access to information about their enrolment can simplify the process.

Administrative Issues	Students' Comments	Action
Enrolment, subject changes, timetable changes	Many students commented in first few weeks about difficulties with these issues. (The timetable) was totally changed, it was totally different. (Shoalhaven student). It's a pretty big issue for us because I'm trying to work and support myself at the same time (Shoalhaven student).	Student Online system (SOLS) introduced and updated to allow students to make changes as required and to access up to date information.
Email accounts	First semester there were troubles with the bar codes, log on. Took us about 2 weeks. So that (was) really frustrating trying to work it out. And getting their account numbers and all this nonsense. That was a real shemozzle. They didn't work. (Shoalhaven students).	Online initiation system introduced Generic accounts established for subject access when email problems arise.

Table 4: Administrative issues and solutions

The University of Wollongong has in place an online student management system which now allows students to enrol, set up email and internet access, change subjects and personal details, access results, as well as a student inquiry centre.

Recommendations for Teaching in a Distributed Learning Environment

Factors influencing change in higher education have had a marked influence on how the student now experiences university, particularly their learning experience. This changing context has presented new opportunities for teachers to examine the way in which they teach and how learners learn (Biggs, 1999; Chalmers & Fuller, 1996; Ramsden, 1992). Whilst research in the area of student learning is relatively new there is a shift in the focus on teaching improvements to improving the ways that teachers can assist students to learn (Marton & Booth, 1997; Prosser & Trigwell, 1999; Ramsden, 1992).

Seven Principles for Good Practice in Undergraduate Education (Chickering & Gamson, 1987) provides some indicators of ways in which faculty can improve the learning experience for their students in on-campus environments. They include student-faculty interaction, peer interaction and cooperation, active learning, feedback, time on task, high expectations and respect for diversity and learning styles (Chickering & Gamson, 1987). These principles were later adapted in *Implementing the Seven Principles: Technology as a Lever* (Chickering & Ehrmann, 1996) which provides “cost-effective and appropriate ways” to use technology to advance these principles. The issues identified by students in this study bear remarkable resemblance to those principles, with the exception of perhaps administration which may not be seen as impacting on student learning on campus, or possibly the lecturers are further removed from it.

The issues identified by students provide the basis for some guidelines for subject design and implementation in a distributed learning environment.

1. Set me clear role expectations

Students indicated a need for a clear idea of time commitment required for each subject and reasonable workloads. Many students are working part-time or full-time and have family or other commitments. A recent study by Kember and Leung (1998) examined students’ perceptions of workload. Where students perceive their workload as overly high it can lead to a reduction in class enrolments and has a negative effect on their learning. Although they point out that actual workload is difficult to measure with any precision, their research identified that when workloads are perceived as high by students they tend to resort to a surface approach to learning, that is they rote learn material. The converse was also true that when students rote learn material or use a surface approach to learning, they perceive their workload as high (Entwistle & Ramsden, 1983; Marton & Booth, 1997).

In a student-centred learning environment they also require an understanding of the changed role of students and their lecturers (Biggs, 1999; Ramsden, 1992). If students are to take more responsibility for their learning, as they are required to do in a distributed learning environment, then clear expectations must be set for all facets of their learning.

2. Talk to me

Although students had face-to-face contact with local tutors they also indicated that contact with the lecturer or subject coordinator was important to them. This could be supported through various communication technologies and when used asynchronously provide opportunity for students and faculty to respond at a time which is convenient to them (Pascarella, 1985; Kuh & Hu, 2001). Student satisfaction and development generally improves as the amount of contact they have inside and outside the classroom increases (Astin, 1993).

Laurillard’s conversational model also suggests that students need feedback on the concepts they are learning (Laurillard, 1993). Although the tutors were providing this to some extent, interaction with the lecturer could also provide this feedback, though it could also be provided to some extent through automatic feedback in web-based self-testing, since prompt feedback is not always possible in a distributed learning environment.

3. Provide opportunity to work and talk with other students

Contact with students from other centres is also important when students are in small isolated groups but even at the larger centre students indicated that group-work provided an opportunity to get to know other students and facilitated a feeling of belonging to a community (Gabelnick, MacGregor, Matthews & Smith, 1990). Collaborative and cooperative activities are highlighted in the Seven Principles as increasing students’ involvement in their learning (Chickering & Gamson, 1987). Information and communication technologies can support such activities as group work, study groups, and discussion of assignments where the students are separated by location.

4. Choose the best medium for the task at hand

The choice of the best media for the task is essential as well as ensuring that high quality resources are developed that meet the learning needs of students. Earlier research focused on the impact of different

media used to transmit information rather than the nature of relationships or the nature of interactions or indeed the quality of the resources (see Jonassen, 1996). Clark (1983) initiated some interesting debate in his landmark paper that questioned the current research on conditions under which media influenced learning. He stated that ‘media... are mere vehicles that deliver instruction but do not influence student achievement any more than the truck which delivers our groceries causes changes to our nutrition’ (Clark, 1983). This issue continued to be debated in 1994 (see Kozma, 1994) and is still provoking debate today about whether researchers are asking the right questions (Ehrmann, 1997).

Determining the most appropriate technology to support learning can be a time consuming task for lecturers and students. When audio and videotapes are used they should be high quality recordings if students are to make use of them.

5. Teach me to use the technology

Although some training was provided for students in orientation week they indicated that they need flexible access to training. Although there is an expectation that many students have developed IT skills during high school, many of the mature age Shoalhaven students may not have used computers (Candy, Crebert & O’Leary, 1994). Moran (1995) identified that students require “support and training ... in accessing and learning how to use ITs in the context of their study (p. 16). Barraket & Department of Education Training and Youth Affairs (2000) also identified from the literature that:

productive use of CIT by students is achieved through the interaction of convenient and reliable access to ‘front end’ infrastructure, appropriate use (both by the student and the academic) of CIT which is part of a broader learning design, and reasonable support for this use by the staff, systems, infrastructure and processes of the University (Barraket & DETYA; p. 111).

Training students to use technology could be embedded in subjects to ensure that students develop the skills, as they are required. Computer based training packages and support will allow flexible access to meet student needs.

6. Provide resources I can use

Creating new library systems can be a challenge, not only within the university but also in terms of creating partnerships with local town libraries in order to provide students with access to information resources (McPherson, Curry & Humphreys, 1997). In one centre the local library had not yet moved to an electronic catalogue system and this not only limited students’ borrowing but also restricted the support the library was able to provide students in accessing materials available electronically (Fowell & Levy, 1995). Students at the other centres were extremely positive about the library access but needed further skill development in using databases and electronic resources. Access to library and other resources can be extremely limited in isolated areas. Efficient and effective systems that support these students can be provided through access to full-text databases and electronic journals together with flexible borrowing systems (Albury et al., 2001).

7. Let me know what support is available

As the student profile has changed significantly in higher education in Australia since 1988 and the move to a mass education system, support services have been identified as critical to enrolment attrition (Promnitz & Germain, 1996). On-campus student support services are often well developed but may be difficult for non-local students to access or may simply not be used. Integrating learning support within subjects improves the skills of all students (Skillen et al., 1998). Visits to more isolated centres or the use of technology such as videoconferencing can be used for individual meetings with other services such as career development and counselling services. A student handbook which lists all support services and how to access them is also worthwhile.

8. Guide me through the administrative nightmare

Administration difficulties for on-campus students can be challenging and when they are removed from the campus the frustration levels are even higher. Administration should not be a nightmare if systems are in place to support students. An online administration system allows students to review and change their subjects, access timetables, and initiate their email accounts can simplify this process. A helpdesk facility is also essential to support remote students (Innovations in Distance Education Faculty, 1998). The report, *An Emerging Set of Guiding Principles and Practices for the*

Design and Development of Distance Education, suggests that students at a distance should have administration access that is at least as good as that available on-campus. We would suggest that they deserve a better system.

Conclusion

The inaugural year of any new degree is a challenge for students and staff alike. In a distributed learning environment the challenge is greater, particularly when everyone at the local sites is also new to the institution and how its systems work. The issues identified here don't portray the many successes achieved in this first year, or the hard work of all those involved in making this innovation a success. Nor do they portray the enthusiasm and dedication of the students to overcome the challenges they faced.

The University of Wollongong has used the lessons learnt from this implementation to develop more flexible teaching and learning practices at the Wollongong campus, the Dubai campus, and at international locations where the University currently has partnerships with other institutions. Whilst the current case study cannot be generalised to these other contexts, ensuring the key issues are resolved provides an opportunity to target other issues in teaching and learning for all students at the University of Wollongong.

Despite the early implementation issues, it is appropriate that the final words come from the students:

- I just think that it's a fantastic opportunity here, to be able to learn, it's just amazing.
- Yeah, it's great. I love it too. We're very lucky really; we've got it good.
- And we've got really good tutors; we've got a really good course.

References

- Albury, R., Lefoe, G., Littler, C. & Trivett, N. (2001, July). *Creating partnerships in a distributed learning environment: some lessons learned*. Paper presented at the HERDSA annual conference, Newcastle, Australia.
- Astin, A.W. (1993). *What matters in college: Four critical years revisited*. San Francisco: Jossey-Bass.
- Barraket, J. & Department of Education Training and Youth Affairs. (2000). *Equity and the use of communications and information technology in higher education: a UTS case study*. Canberra, A.C.T.: Evaluations and Investigations Program Higher Education Division.
- Biggs, J. (1999). *Teaching for quality learning at university: What the student does*. Buckingham: Society for Research into Higher Education and Open University Press.
- Candy, P.C., Crebert, G. & O'Leary, J. (1994). *Developing Lifelong Learners through Undergraduate Education* (Commissioned report No.28). Canberra: National Board of Employment, Education and Training, Australian Government Publishing Service.
- Chalmers, D. & Fuller, R. (1996). *Teaching for learning at University: Theory and practice*. London: Kogan Page.
- Chickering, A. & Ehrmann, S. (1996). Implementing the seven principles: Technology as lever. *AAHE Bulletin* (October), 3-6. [Online]. Available: <http://www.aahe.org/technology/ehrmann.htm> [24 September 2001].
- Chickering, A. & Gamson, Z. (1987). Seven principles for good practice in undergraduate education. *AAHE Bulletin* (March), 3-6. [Online]. Available: <http://www.hcc.hawaii.edu/intranet/committees/FacDevCom/guidebk/teachtip/7princip.htm> [24 September 2001].
- Clark, R. (1983). Reconsidering research on learning from media. *Review of Educational research*, 53 (4), 445-459.
- Creswell, J.W. (1998). *Qualitative inquiry and research design: choosing among five traditions*. Thousand Oaks, Calif.: Sage Publications.
- Cunningham, S., Ryan, Y., Stedman, L., Tapsall, S., Bagdon, K., Flew, T. & Coaldrake, P. (2000). *The Business of Borderless Education*. [Online]. Available:

- http://www.detya.gov.au/archive/highered/eipubs/eip00_3/bbe.pdf [24 September 2001]
- Cunningham, S., Tapsall, S., Ryan, Y., Bagdon, K. & Flew, T. (1998). *New media and borderless education: A review of the convergence between global media networks and higher education provision*. Canberra: Department of Employment, Education, Training and Youth Affairs.
- Davidson, G.R., Dekkers, J. & Booth, C. (1994). *Branch campus models in Australian higher education*. Canberra: Australian Govt. Pub. Service.
- Ehrmann, S. (1997). *Asking the Right Question: What does Research tell us about Technology and Higher Education*. [Online]. Available: <http://www.learner.org/edtech/rscheval/rightquestion.html> [24 September 2001].
- Entwistle, N.J. & Ramsden, P. (1983). *Understanding student learning*. London: Croom Helm.
- Fowell, S. & Levy, P. (1995). Developing a new professional practice: A model for networked learner support in higher education. *Journal of Documentation*, 51 (3), 271-280.
- Fowler, J. & Branch, S. (2000). *Supporting students and staff in flexible learning environment: A case study*. Paper presented at the ASET/HERDSA Joint Conference: Flexible learning for a flexible society, Toowoomba, Queensland.
- Gabelnick, F., MacGregor, J., Matthews, R.S. & Smith, B.L. (1990). *Learning communities: Creating connections among students, faculty, and disciplines*. San Francisco: Jossey-Bass Inc.
- Guba, E.G. & Lincoln, Y.S. (1981). *Effective evaluation*. San Francisco: Jossey-Bass Publishers.
- Hedberg, J. & Corrent-Agostinho, S. (2000). Creating a postgraduate virtual community: Assessment drives learning. *Educational Media International*, 37 (2), 83-90.
- Innovations in Distance Education Faculty. (1998). *An Emerging Set of Guiding Principles and Practices for the Design and Development of Distance Education*. [Online]. Available: http://www.outreach.psu.edu/de/ide/guiding_principles/ [24 September 2001]
- Jonassen, D.H. (Ed.) (1996). *Handbook of research for educational communications and technology: A project of the Association for Educational Communications and Technology*. New York: Macmillan Library Reference USA.
- Kember, D. & Leung, D.Y.P. (1998). Influences upon students' perceptions of workload. *Educational Psychology*, 18 (3), 293-307.
- Kozma, R. (1994). A Reply: Media and Methods. *Educational Technology, Research and Development*, 42 (3), 11-14.
- Kuh, G.D. & Vesper, N. (1997). A comparison of student experiences with good practices in undergraduate education between 1990 and 1994. *The Review of Higher Education*, 21 (1), 43-61.
- Kuh, G.D. & Hu, S. (2001). The effects of student-faculty interaction in the 1990s. *The Review of Higher Education*, 24 (3), 309-332.
- Laurillard, D. (1993). *Rethinking University teaching: A framework for the effective use of educational technology*. Open University Press.
- Mark, M.M. & Shotland, R.L. (Ed.), *Multiple methods in program evaluation: New directions for program evaluation*. San Francisco: Jossey-Bass.
- Marton, F. & Booth, S. (1997). *Learning and Awareness*. Mahwah, N.J.: L. Erlbaum Associates.
- McInnis, C., James, R. & Hartley, R. (2000). *Trends in the first year experience in Australian universities*. Canberra: Department of Education Training and Youth Affairs.
- McPherson, M., Curry, D. & Humphreys, J. (1997). *Hervey Bay Library: A new joint-use public/university library service: Lessons for tomorrow*. Paper presented at the *Creating Tomorrow Today: Can you imagine..., Proceedings of the 1997 Public Libraries Section and Reference and Information Service Section Conference*, Brisbane.
- Moran, L. (1995). *National Policy Frameworks to Support the Integration of Information Technologies into University Teaching/Learning*. Canberra: Department of Employment, Education and Training
- Pascarella, E.T. (Ed.). (1985). *College environmental influences on learning and cognitive development: A critical review and synthesis*. (Vol. 1). New York: Agathon.
- Promnitz, J. & Germain, C. (1996). *Student support services and academic outcomes: Achieving positive outcomes (96/10)*. Canberra: Evaluations and Investigations Program, Higher Education Division
- Prosser, M. & Trigwell, K. (1999). *Understanding Learning and Teaching*. Buckingham: The Society for Research in Higher Education and Open University Press.
- Ramsden, P. (1992). *Learning to Teach in Higher Education*. London: Routledge.

- Rinn, F.J. & Weir, S. (1984). Yea, team. *Improving College and University Teaching*, 32 (1), 5-10.
- Scott, G. (1999). *Change matters: Making a difference in education and training*. St Leonards, Australia: Allen and Unwin.
- Skillen, J., Merten, M., Trivett, N. & Percy, A. (1998, November). *The IDEALL approach to Learning Development: a model for fostering improved literacy and learning outcomes for students*. Paper presented at the AARE Conference, Adelaide, Australia.
- Skillen, J., Trivett, N., Merten, M. & Percy, A. (1999, July). *Integrating the instruction of generic and discipline specific skills into the curriculum: a case study*. Paper presented at the HERDSA Annual International Conference, Melbourne, Australia.
- Stake, R.E. (1995). *The art of case study research*. Thousand Oaks: Sage Publications.
- Taylor, P.G., Lopez, L. & Quadrelli, C. (1996). *Flexibility, Technology and Academics' Practices: Tantalising Tales and Muddy Maps* (EIP 96/16). Canberra: DEETYA.
- University of Wollongong. (1996). *Submission to the Commonwealth/ State Working Party on Higher Education Provision on the South Coast of New South Wales*. (Unpublished Report): University of Wollongong.

Copyright © 2001 Geraldine Lefoe, Cathy Gunn and John Hedberg.

The authors assign to ASCILITE and educational non-profit institutions a non-exclusive licence to use this document for personal use and in courses of instruction provided that the article is used in full and this copyright statement is reproduced. The authors also grant a non-exclusive licence to ASCILITE to publish this document in full on the World Wide Web (prime sites and mirrors) and in printed form within the ASCILITE 2001 conference proceedings. Any other usage is prohibited without the express permission of the authors.

