

**8th Pacific Rim Real Estate Society Conference
Christchurch, New Zealand
January 2002**

Teaching Online Property Programs

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Abstract

With the gradual demise of external studies and growing expectations of more programs/courses being available anytime/anyplace in online format we have to review how we do this form of teaching to achieve our overall goals.

This paper reviews the literature with respect to online teaching and draws out the implications for teaching introductory rural and construction in property programs. The paper also discusses how to measure the quality of online discussion and how to ensure that the discussion is being done in a way to aid fellow class members rather than just to impress the lecturer.

Introduction

At UniSA during the nineties the staff were encouraged (enforced) to provide all materials in flexible mode. There was also a drive to increase markets for delivery in a variety of modes including online. By 2001, the university had discovered that offering small courses in flexible mode was extremely expensive and had implemented a system of fines for schools that offered external courses to less than ten students.

This now drives us to convert our flexible delivery material to an online delivery. UniSA's expansion in students, in new markets with more limited infrastructure, is also driving towards online programs and online supplemented materials. This paper is written from the perspective of academic having to be involved and a Head of School having to shift the direction of programs. Online education has impacts on students, staff and Universities. I will cover just a few of these and some of the paradoxes created.

Approach

The information presented in this paper was generated from the following sources:

UniSA resources relating to online education

The Flexible Learning Center has provided a range of resources to assist academic staff develop online teaching and learning (Appendix B). An interactive online resource 'Web-based teaching and learning' is also available (Day 1999). Contact was made with several staff members known to have an interest/expertise in the online environment. These sources yielded details on numerous books, articles and web sites.

Bibliographic databases available through UniSA web site

Databases searched included Emerald Fulltext, BUILD, ELIXIR, STREAMLINE, EVA, VOCED, AUSTROM (AEI and APAIS), ABSOHost (Academic Search Elite, ERIC, Professional Development Collection and PsycINFO and AUSTGUIDE. The strategy for searching endeavoured to incorporate a wide range synonyms associated with three concepts: mode of delivery (ie online, web-based, asynchronous etc), activity (ie education, teaching, communication etc) and program (ie real estate, building construction, property – this was refined to university in most cases as there was very little information related to specific programs).

World wide web

An extensive search of the web was not undertaken. However, much of the information located through the first two sources was available from various web sites. This in turn provided further information on other web sites that were explored as time allowed. Appendix B provides information on the web sites located.

UniSA library catalogue

Recent texts relating to online and distance education were located using the UniSA, Flinders University and Adelaide University library catalogues.

An attempt was made to restrict the search to information published within the last five years (except for books). The sources above, particularly web sites and reference lists from articles and books, were the start of numerous pathways to further information. It was not feasible to follow the majority of these 'referrals' except in a few cases. Thus, the information reviewed in this paper will not provide a complete picture of material related to online teaching but will be indicative of the information available.

The research approach undertaken has strengths and limitations.

Strengths

- Extensive database search
- Direction from UniSA resources and UniSA staff

Limitations

The information sourced is indicative, but not a complete picture. It is likely that unpublished online education relating to introductory property, rural or construction programs has been overlooked. The key limitations would include:

- Research or reporting lags application.
- Lack of surety that the data sources chosen are representative of the information required.
- Nature of the topic means that much information is available through the Internet – a difficult medium to search and be confident of 'completeness'.

The process of acquiring information for this review also highlights difficulties of using the web as a resource – separating the gems from the lode for both staff and students. There are also issues with keeping web links up to date.

Internet technology and teaching methodologies

Online, web-based, distance, external, asynchronous, synchronous and computer mediated communication (CMC), computer aided instruction (CAI), computer supported education are just some of the terms used to describe a mode of communicating with students other than the conventional face to face method. In this paper online means all of the above with the exception of distance.

Within Universities the online environment has a communication role, which can be used to varying degrees. These include:

- Informational and administrative issues, including enrolment.
- Supplementing course information or dialogue.
- Dependent - where major course components are only provided online.
- Fully online – where entire course content and activities are on the web (adapted from University of Washington web site)

The University academic who is involved with communicating information and ideas to the students and also encouraging communication between students can use a variety of online tools to supplement or replace face to face lectures and tutorials and hard copy assignments, similarly for external or distance learning. Table 1 outlines what the online teaching toolbox might contain:

Table 1 The online tool box

Internet technologies	Uses of web tools
Email	Interactive – with subject, tutor, guests or other students (on same courses or international and cross-cultural exchange): Noticeboards Online office hours Online study notes and readings Exercises, assignments and assessment Debates or threaded discussion – synchronous or asynchronous – including guest lecturers Study groups Group projects Quizzes Mentoring Virtual field trips Videos and audio tapes Submission of work Uni administrative uses Online study support Suggestions from students for improvements
WWW pages	
Embedding files	
Links	
FTP	
Newsgroups	
Discussion groups	
Listserve	
Chat	

We find many combinations of computer supported education. These include:

- Same time/same place - traditional classrooms with computers for every student.
- Same time/different place - ie when lectures are taught at the same time to students in different places, traditional classroom is networked.
- Different time/different place - use a common place to leave messages.
- Different time/different place - distant classrooms where students and tutors rarely meet face-to-face. (Benbunan-Fich 1999 p 3).

Berge (1995) describes the possible uses of CAI and Table 2 summarises the benefits and limitations.

Table 2 Benefits and limitations of CAI as described by Berge(1995)

Benefits	Limitations
Liberating instruction from the constraints of time and distance - the Holy Grail of distance education.	
Promotes self-discipline and responsibility for learning.	Independent learning may not suit students who need more structure.
If designed well CMC can be used to facilitate collaboration - among students, tutor, guests and experts.	
Text based - writing skills are essential across the curriculum and CMC by necessity supports this. In asynchronous interaction there are no time limits in reading or writing a message.	Writing can be a struggle and time-consuming for some.

Benefits	Limitations
Promotes equalisation of users - empowerment for persons who are hindered by face-to-face discussion ie disabilities, or disfigurement.	Non-reticent personalities may abuse the medium - dominating, aggressive or inflammatory.
Promotes multi-cultural awareness.	Dominant use of English may perpetuate cultural hegemonies.
Reduce sense of isolation.	Lack of socialisation.
	Purchasing (hardware and software for students, staff and universities) and learning the systems.
	Reliability.
	Information overload
	Potential to accentuate the gap between the haves and the have-nots.

It should be noted that many of the benefits and limitations demonstrate contradictory beliefs or opinions of educators operating with a different perspective. Further benefits and limitations will become apparent from other cited information.

Online paradoxes

There are many paradoxes in relation to using the online medium as an education tool – the online environment will be good for this... but watch out in case it does this...

Paradox for the university - global opportunities vs. quality of service vs. cost

Online teaching opens up possibilities for Australian universities in the global market with the potential to overcome Australia's isolation (Leask 1999). However, there are cautions in the rush to incorporate online technology and there is a need to ensure that quality and service are not sacrificed. "It is important that when educational institutions make choices about what and how they will teach online, they make them on the basis of educational principles as well as market principles" (Leask 1999 p2). Leask (1999) believes that the use of technology has the ability to harm a university's reputation if it not based on educational principles.

The university bears the cost of the equipment, development, operation, maintenance and upgrading. The major downside of this new way is that it is more expensive to operate. Online teaching requires support for students and staff. Additional expenses occur due to expectation changes where web material needs to be better designed and the videos, audios and other add-ons require additional initial costs and must be maintained.

If all education were to convert to online with bells and whistles web enhancement then university administrators would face bankruptcy.

In order to fund online course development universities have had to rationalise the course and program choices available to students. However, the web enables universities to increase the choice available to students by creating partnerships with other institutions or purchasing their products.

Virtual universities have the potential to develop in various forms as noted by Tiffin (1998 p3), such as corporate, subject based, cultural, regional and global. Whilst all these opportunities are possible they are occurring in a climate where universities are shifting from a paradigm of supporting an industrial society to supporting an information society.

At an academics level Kasser (2000) presents an insight into the potential of university partnerships (and also a consultancy model which overcomes the difficulties of intellectual property issues), particularly for courses which present rapidly changing information and suffer from a shortage of suitable presenters. However, the difficulties of partnership foundation and maintenance are noted by Kasser (2000) and have been a part of the University of South Australia's experience as a partner of the Global University Alliance, particularly where more than one partner is involved.

Universities must also be aware of engendering and entrenching a computer culture.

Paradox for the academic - improved efficiency vs. new techniques and pedagogies vs improved teaching vs new role

It is suggested that online teaching will improve efficiency for the academic. However, it is also suggested that this medium requires more time and is a concern for the academic (Aft 2000, Gabany 1997) whose workload and expectations have increased dramatically over the last decade.

Academics will have to come to grips with new technologies and a different set of pedagogical issues. Web addresses change constantly and hackers enjoy re-linking web addresses to pornographic or other sites. Asynchronous chats can occur 24 hours a day, 7 days a week. This means the moderator of these chats (usually the tutor) should ideally be logging in daily but at a minimum three times a week. Students may well have expectations that tutors will respond almost immediately.

The following are some of the issues raised when putting a class online:

- New skills - teaching, technology and facilitation/moderator (the latter are discussed briefly under 'Online Discussion').
- From desk to disc or from chalk to clicks
- Identify suitable material
- Layout of material
- Changing work practices
- Time to establish, maintain and interact
- Outsourcing, intellectual property and quality control
- Adapting to the new online opportunities has been complicated by the changing role shift from instructor-centered to student-centered learning.

Leask (1999) outlines UniSANet, which is UniSA's attempt to provide professional development assistance to staff to use the online environment. UniSANet provides a structure for tutors to transfer resources and teaching online. Extensive resource material is also provided to assist with technical and pedagogical issues. Other universities have developed, or are developing, similar support mechanisms. It still all takes time

Paradox for the student - bring in the technology vs. anytime anyplace vs. widening the divide

Online teaching provides the medium for anytime, anywhere communication. It "liberates instruction from the constraints of time and distance" (Berge 1995 p2) and is particularly useful for distance education. The teaching and learning environment is enriched with vast quantities of information, videos, audio, graphics, simulations and whatever new technology is waiting round the corner. There is the potential to empower and embrace those who have felt inhibited by the face-to-face environment but also alienate those who do not suit the online medium (Berge 1995).

Harper et al (2000 p 40) cite several sources that support the opinion that the online medium empowers and state "online learning environments have been shown to be particularly beneficial in terms of facilitating participation for mature-aged, female and handicapped students, and in supporting those students for whom English is a second language". It is also noted that whilst "it has been found that students who tend to participate less frequently in face-to-face classroom situations contribute much more online learning situations (Harper et al 2000 p 40).

Harper et al (2000) in undertaking their review of online education for the National Centre for Vocational Educational Research (encompassing information on universities) note the following issues for students:

- The need for students to develop new skills in attendance, listening and socialising online.
- Time management, especially as there is more time required in preparing for online subjects.
- Retention rates are higher for online learning mode than traditional distance learning.

The opportunity for students to interact with and develop partnership with practitioners in different fields is noted as another opportunity for students and business to develop human resources (Benbunan-Fich and Hiltz 1999 p 16).

Students will need skills to deal with information overload and many will struggle to know what to keep and what to discard.

You only need a computer to join in the online environment and the money to pay for it! In the medium term, the availability of online resources is limited by the bandwidth of communication available to users. Currently, fast internet communication and broad bandwidth is only available in the capital cities and not in the suburbs or rural areas. The bells and whistles features of online delivery demand larger and faster computers and regular software upgrades. Universities need to be careful to not widen the gap between the haves and the have-nots. The online environment is occasionally unreliable leading to inconvenience, wasted time and frustrated students!

Issues for students also include training to use technology, cross-cultural communication development and awareness for the tutor of differences in learning styles,

Research and reporting

The references and bibliography for this report reflect only a small portion of the literature available in regard to the online environment. Due to the nature of the topic much of this is accessible through the web and there is no shortage of information. In looking at the literature, many of the publications are based on staff or student's personal reflections rather than serious research. Experienced online teachers have often only been involved for five years and anyone who has taught online often becomes a reference to newcomers despite their limited experience.

That the majority of literature appears to be personal reflection is not entirely unexpected, as research lags behind application. This provides great opportunities for research students but not necessarily grant assistance to new comers.

Comparing existing research needs care for the following reasons:

- There is little long-term data available.
- Different online tools are used.
- Is the study considering macro or micro?
- Is the research making a comparison between the shift from face-to-face to online or distance to online?
- Studies undertaken are of different courses or programs. It has been suggested that the online medium will be more or less suitable for students enrolled in different subjects (Bancroft 2000). Some studies are made on students studying to use the online environment for education, where the mode of communication is also part of the content. It is also suggested that females more readily adapt to the online medium (Cox et al 2000b).
- Studies undertaken use different research methodologies and theoretical frameworks. Hiltz and Benbunan-Fich (2000 p 3) have noted that "there are three major sources of theory for ALN [asynchronous learning network] - pedagogical theories from educational research, media effect theories from communications research, and group interaction/social influence theories from social psychology and sociology. Each of these can be adapted to, applied and integrated to help to explain what happens and why in on-line classes".

The types of research located for this review show that researchers in online education have so far endeavoured to study:

- Students attitudes to online education (Bancroft 2000, Chang 1999, Keens 2000)
- Keeping asynchronous discussions on topic (Beaudin 1999, Cox et al 2000a)
- Effects of gender (Cox et al 2000b)
- The use of ALN (Benbunan-Fich and Hiltz 1999, Hiltz 1997, Hiltz and Benbunan-Fich 2000, Kumari 2001),
- Extent or importance of collaborative learning (Curtis 2001, Newman, Johnson and Webb 1997)
- Analysing construction of knowledge (Gunawardena and Anderson 1997)
- Community development online (Haythornwaite et al 2000)
- Using message frequency and length to measure student learning (Geer and Barnes 2001)
- Faculty participation - inhibitors and motivators (Schifter 2000)

It does not appear that research has examined the process from the university perspective – cost, quality, reputation, enrolments. With respect to the former, Harper et al (2000 p 2) notes "the real costs of developing on-line programs are rarely fully examined before projects are begun, and more comprehensive costing and cost-effectiveness studies are required to inform administrators and funding bodies in decision-making". Within this are practical efficiencies or inefficiencies and the impacts on grades, time saving, and how well tutors adapt/incorporate technology.

The challenge remains to undertake research, which clarifies the value of the medium, compares the paradoxes and enhances the learning environment but without adding to the information overload. We can research forever and a day to unpick and understand all the benefits and limitations and resources would not permit this.

Online discussion

There are several issues to consider when using the online medium to generate quality discussion to enhance teaching and learning and they are closely linked to the role of the moderator:

Beudin (1999) has considered the issue of keeping the asynchronous discussion on topic. The tutor is unlikely to be present all the time and if the participants discussion goes off the topic there is a delay in bringing the discussion back. Beudin (1999) discusses online instructors four top rating techniques for keeping asynchronous discussions on topic: designing good questions, providing guidelines for participants to use when preparing their responses, rephrasing the original question when discussion moves off the topic and providing regular discussion summary.

As noted above the discussion may lose focus but lack of quality may also result from 'not digging deep enough'. Table 3 outlines Collison et al (2000 p129) suggested tools to improve the quality of the chat.

Table 3 Critical thinking strategies

Critical-Thinking Strategies	
Sharpening the focus	Deepening the dialogue
Identifying direction	Full-spectrum questioning
Sorting ideas for relevance	Making connections
Focusing on key points	Honouring multiple perspectives

The quality of discussion can be affected when students have different levels of ability or motivation for achievement. On this issue Hiltz (1997) argues that less able students can learn from more abled students but also that more abled students will benefit from the process of providing an explanation.

An important aspect of online discussions is that the tutor must be active and the activities will include monitoring interaction, includes verifying attendance, encouraging participation, establishing regular log-ons, extending responses and providing timely responses and feedback.

The intricacies of the role of the tutor/moderator are further highlighted by Cox et al (2000a) in discussing key facilitation skills for effective online discussion groups. They suggest that summarising and weaving are both important components of moderating online discussions and Table 4 summarises the points made in relation to this issue:

Table 4 Summarising and weaving as facilitation skills for online discussion moderators

Summarising	Weaving
Acknowledge contributions	Acknowledge contributions, correct misconceptions
Summarise contributions in factual manner	Summarise contributions in factual manner. Clarify areas of agreement and disagreement Point out perspective vs. fact issues
Comes at end of discussion, once	Many 'weaving' as discussion progresses
Closure	Encourages and directs further discussion
Praising	Challenging
Done by tutor, almost by definition	Could be done by students, at least partially, particularly if weaving is 'modelled' for them by tutor.

Traditional external teaching has generally been a lonely experience in which materials are sent to the student who then reads them with no interaction with others. Assignments are submitted and finally maybe an exam undertaken. In some cases small group discussions have been initiated by letting fellow students know who lives or works in close proximity and encouraging discussion with others. This latter method is more of a rarity. The students may have had written material supplemented by tapes or videos. The major gain of shifting to online form is that students can interact with fellow students and participate in class discussion. Again some of these could be undertaken by email by providing email addresses of others in the class. You would expect that a structured and moderated online discussion would yield a 'richer' discourse than email.

Other issues

- Introduction important to involvement (UniSA – pedagogical issues in online delivery) – creating a community
- Is interactive discussion appropriate for all students? Maybe less applicable for independent research projects and staggered enrolments. Also requires that students are willing to work collaboratively.
- Critical mass - too many can be managed by breaking into groups and too few (ie small external enrolments) will not generate enough discussion or debate.

Assessment of students

The way of assessing the use of the asynchronous and synchronous chats has to be determined. Early experiences of chat sessions had many students wanting to be noticed by the lecturer, but with no meaningful discussion (some UniSA lecturers stopped synchronous chats in response to this). Assessment needs to be a combination of participation and meaningful contribution. The students need to understand that meaningful contribution consists of undertaking preparation and bringing insights based on that which adds to fellow students' contributions.

Difficulties arise for synchronous chats in finding appropriate times for all participants to participate. At UniSA we have staff that have to organise chat sessions at 11pm in order to provide an appropriate time for Singapore.

Gosper (2001) provides a summary of issues raised by the tutors who are part of Macquarie University's Centre Flexible Learning Teaching Online discussion group. The summary notes two reasons for formally assessing participation of students in online discussion (Gosper 2001 p1):

- To recognise workload and time commitment associated with online discussion
- To encourage participation, and in so doing to complete the required learning activities

The following is a summary of assessment issues highlighted in Gosper's (2001) summary report:

- Quality vs participation - three issues are noted brainstorming discussions may be stifled by assessing for quality, assessing quality may raise the standard of discussion and criteria need to be set.
- Intervention - will tutor intervention disadvantage students or 'spoil' the assessment? Lack of intervention may lead to off-topic discussion and lack of focus.
- Discussion vs statement - if assessment is based on quantity then this may promote statements rather than active participation in the discussion.
- Inappropriate comments - it is possible to tackle the individual outside discussion forum if this occurs but guidelines will also assist.
- Controlling verbal participants - one control option might be to limit the number and length of postings.
- Timeframe for discussion - tutors could suggest an overall timeframe but request postings at certain times within the overall time.
- Tutor workload - suggested that students could print out the discussion and highlight their contributions.

Analysis of online discussion can be time consuming. Geer and Barnes (2001) discuss the issue of the generation of large volumes of discourse through discussion groups and propose a method which can be used to provide an indication of the use of email discussion technologies and student learning. Rather than analysing message content they have studied message length, frequency and timing and grades.

By collating email transcripts Geer and Barnes (2001) determined information relating to student learning behaviours and learning outcomes:

- Different types of messages can be identified - shorter messages, probably associated with socialising, exchanging information, clarifying and organising and longer messages relating to the requirement for a reflective comment.
- Timing of messages can be examined in relation to assessment dates for transcripts and time of day. 75% of messages were sent outside tutorial times.
- By comparing summative grades with message frequency and length it was found that there was a positive relationship between overall learning outcomes and message frequency and message length. This relationship remained constant over three years.

Geer and Barnes (2001 p 6) state "student learning behaviour can thus provide an explicit measure of 'time on task' and be used as a proportional indicator of student learning performance. It provides an extra formative tool beyond that of summative assessments to assist instructors in managing their students". This reducing the need to read and monitor messages.

Property courses

Virtually no literature was found about the delivery of introductory rural or building courses online apart from the use of teleconferencing and satellite in real estate education (Harrison 1990). Mention is made of using slides to simulate field trips and the issue of information protection between students who were employed by different agencies. World Lecture Hall (see Appendix B) provides a connection to free online courses from around the world and lists Fundamentals of Real Estate and Building Construction I and II as possible courses to study. No further details were obtainable.

The online medium has been used in other areas including health area (Gabany 1997, Gillham et al 2000), engineering (Aft 2000), ICT (Bancroft, McKeogh and Doherty 2000, Kasser 2000, Kumari 2001), economics (Bredon and Curnow 1996), library (Haythornwaite et al 2000) and no doubt many other not found through this review.

I suspect the evidence of the use of the online medium for property programs is being presented or networked at this conference. Property courses, I believe, have the need for more online delivery given the demand and benefits of combining industry, work and study. It is increasingly difficult to meet the requirements of part-time students in providing a suitable time for lectures.

Virtual property inspections of both rural and building can be developed and in many cases could be shared with colleges elsewhere. We could provide our students with other speciality subject areas that our individual markets do not justify. Currently we need 30 students to make a course viable.

The web interaction could be a suitable medium to bring in guests to discuss issues or provide lecture material. Universities could contribute to each others programs. The late Emeritus Professor Lindsay Barker was running MBA courses for UniSA as well as for his American classes. He just logged in, communicated with his students (whatever their location) and location was no longer a barrier. You can presume that he had superior electronic access than that provided by the Grand Chancellor Hotel.

Conclusion

The use of the online medium as a teaching and learning tool is evolving and developing rapidly. Harper (2000 p 1) notes in regard to online education that "there is currently no universally accepted exploration and experimentation. There is currently no universally accepted wisdom on the best method for implementing on-line learning, either in Australia or internationally. Early indicators of success are beginning to emerge as a significant cohort of innovators implement and evaluate a variety of models".

Due to the myriad opportunities for using the online medium and the multitude of ways in which it can be researched it will be some time before educators have concrete answers on what will work best in their area.

Harper (2000 p2) also notes "while there may be some criticism about the lack of cohesiveness in on-line delivery, policy-makers should not be too concerned since this is indicative of its current stage of development in Australia. It may be such an environment is necessary to support innovation and the development of a variety of models.'

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Appendix A – Common acronyms used in online and distance education

ALN	Asynchronous learning network
CMC	Computer-mediated communication
CAI	Computer aided instruction
CMCS	Computer-mediated communication systems
ICT	Information and communications technology
IT	Information technology
ODL	Open and distance learning
WWW	World wide web

Appendix B - Relevant web sites located during search

The University of South Australia - Flexible Learning Center

<http://www.unisanet.unisa.edu.au/learningconnection/otl/index.htm>

Provides resources to assist academic staff develop online teaching and learning.

UniSA conference

UniSA hosted the ICDE Regional Conference on 11-13 Sept 2000. UniSA's web site has the keynote, referred and non-referred papers online:

http://www.com.unisa.edu.au/cccc/papers/keynote_address.htm

http://www.com.unisa.edu.au/cccc/papers/refereed/index_author.htm

http://www.com.unisa.edu.au/cccc/papers/non_refereed/index_author.htm

Asynchronous Learning Networks

<http://www.aln.org/>

Includes an online course directory, online Journal of Asynchronous Learning Networks (JALN) and links to WebCenter below.

WebCenter for Learning Networks Effectiveness Research

<http://www.alnresearch.org/>

Lists published research evaluating the effectiveness of ALN. Published in a variety of journals, including JALN.

The Technology Source

"The purpose of The Technology Source (ISSN 1532-0030), a peer-reviewed bimonthly periodical published by the Michigan Virtual University, is to provide thoughtful, illuminating articles that will assist educators as they face the challenge of integrating information technology tools into teaching and into managing educational organizations."

<http://ts.mivu.org/>

Indiana Higher Education Telecommunication System

http://www.ihets.org/learntech/distance_ed/fdpapers/index.html

"In 1997 and in 1998, Indiana higher education faculty were invited to write on their experiences with the use of technology in instruction and on how these affected their teaching. A selection of the papers submitted, which were peer-reviewed, are published online "

Computer-Mediated Communication Studies Center

<http://www.december.com/cmc/study/center.html>

For people interested in computer mediated communication. Hosts an online book shop, CMC Magazine and a resource list called The December List (named after the site developer - John December) which is described as " a comprehensive collection of information sources about the Internet and computer-mediated communication. A popular resource for Internet trainers and students to learn about the Internet, it is updated continuously. This list remains one of the most widely known Internet reference documents ever created."

The resource section contained a link to Mind Edge (<http://www.newpromise.com/home/index.phtml>) listing 196 online degree offerings from US Universities - no property, agriculture or building degrees.

This site also provided links to:

Journal Computer-Mediated Communication - <http://www.ascusc.org/icmc/>

Information, Communication and Society – [wysiwyg://38/http://www.infosoc.co.uk/00112/contents.htm](http://www.infosoc.co.uk/00112/contents.htm)

(Electronic journal starts 1998. Only the abstracts were available and individuals have to subscribe to obtain the full version).

Journal of Interactive Media in Education - <http://www-jime.open.ac.uk/>

Association of Internet Research

<http://aoir.org/>

"The Association of Internet Researchers is an academic association dedicated to the advancement of the cross-disciplinary field of Internet studies. It is a resource and support network promoting critical and scholarly Internet research independent from traditional disciplines and existing across academic borders. The association is international in scope".

Links to numerous journals, associations, online resources etc.

World Lecture Hall

<http://wwwhost.cc.utexas.edu/world/lecture/>

A listing of free online courses from around the world including:

- Fundamentals of Real Estate - <http://www.execpc.com/~lcarnaha/>
- Building Construction I and II

Australian Association for Research in Education (AARE)

<http://www.aare.edu.au/index.htm>

This site was not searched but it was used to access and print articles found through database searches.

Australian Journal of Educational Technology

<http://www.cleo/murdoch.edu.au/ajet>

Vol 14 1998 onwards.

Higher Education Research and Development Society of Australia

http://www.herdsa.org.au/vic/cornerstones/table_of_contents.htm

HERDSA produces the Higher Education Research and Development journal. The above link takes you to the table of contents for an international conference 'Cornerstones: What do we value in higher education?'

The following sites were found through the **Property Professionals** web site:

<http://www.propertyprofessionals.com.au/education.html>

Australian Property College

http://www.australianproperty.qld.edu.au/s_course.htm

Students can study with the College "part attendance based, part external studies or via the Internet" in the following subjects:

- Certificate III in Real Estate Agency Support

- Certificate IV in Property Services (Real Estate Operation
- Certificate IV in Property Services
- Real Estate Agent Licensing Competency Requirements
- Resident Unit Manager's Licensing Course
- Certificate III in Real Estate Agency Support
- Certificate IV in Property Services (Real Estate Operation
- Certificate IV in Property Services (Real Estate Operation)
- Diploma in Business (Real Estate Management) – provides a credit for 1st year study at University

Open Training Network: The Institute of Distance Education

<http://www.oten.edu.au/oten/>

UniSA Internet resources for Property

<http://www.library.unisa.edu.au/internet/pathfind/property.htm>