

Law school of the air: An example of adaptive technology in legal education

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Charles Darwin University (CDU) is unique in having the only law school in Australia whose distance program does not require a residential component. A key and innovative feature in teaching law externally at this regional and remote university is the use of web based audio conferencing to conduct tutorials. This paper is an exploratory reflection on the implementation of this educational technology. It describes the background to the introduction of the technology, how it works and practical experience to date. Within the online learning context and the place and value of synchronous and asynchronous components, the authors conclude that there is a need for further research into the effectiveness of the media and teaching methods being employed. This evidence will then be able to inform decisions about the future design of the Law School's external program.

Keywords: distance education, law, audio conferencing, online

Context

There are many challenges in operating academic programs in rural and remote locations. In the Darwin area there are only about 100,000 people who live within commuting distance of the university, so there is a limited pool of potential internal students. In order to provide access to a wider student base, the School of Law at Charles Darwin University (CDU) embarked in 2003 upon providing their various law programs (including the Bachelor of Laws) via external mode, incorporating an audio tutorial component.

Distance education has a long history in Australia and its development has been largely a response to providing educational needs in rural and remote areas (Arnott, Cameron & Shaw, 1999). Technology has always been central to the delivery of distance programs (Arnott et al., 1999). Perhaps the most well known example of audio teaching in Australia is the School of the Air, which famously utilised the pedal radio to provide education to isolated children in remote locations. Various schools of the air such as the Katherine School of the Air in the top end of the Northern Territory continue to deliver primary education in various modes today (DEET, 2004). The use of real time audio as a teaching tool in higher education is less well known although by no means without precedent. The telephone has been used as an educational tool since the 1960s (Greagg, 1985). In Australia, Deakin University has held teleconference tutorials in some courses since at least 1983 (Greagg, 1985). Among those pioneering the use of telephone conferencing worldwide since the 1970s were the Open University in the UK, the University of Wisconsin-Extension in the USA and the University of the South Pacific in Fiji (Evans, 2001).

While our attention in recent years has focused on the challenges of using asynchronous communication technologies in online education and 'blended' solutions, the use of real time synchronous communications continues to have value for the genuinely 'distant' learner rather than the on campus online student. The technology has evolved from telephone based audio to web based applications that can take the virtual classroom direct to the student's office or home. Many Universities, especially in North America, are building in a mix of mode and media to their online education that includes synchronous activities (Anderson, 2004).

External law introduced at CDU

A number of Australian law schools offer the opportunity to study for a law degree as an external student. CDU differs from these by having no oncampus or residential requirement in any law subject. This is recognition of the reality that the University's location in Darwin makes travel expensive and time consuming for many students. A further factor was student demand for a completely offcampus program. Now into its third semester of operation, the program has been enthusiastically embraced by students with external enrolments in semester 2 2004 exceeding 130. The first author of this paper is the academic course coordinator for CDU's School of Law and has been actively involved in implementing externalisation and in teaching with synchronous web based audio conferencing. Her experiences are the main basis of information for this reflective report. Feedback from staff and students was also gained through discussions with other Law School teaching staff, and communications with law students in tutorials, by phone and through email.

CDU's external law program is primarily delivered via Learnline, the University's online learning management system, supported by *Blackboard*. Within Learnline, instructional materials include print based (HTML and *Word* documents), *PowerPoint* presentations and audio file recordings of live lectures in *Windows Media* streaming format. The recordings are provided unedited and therefore somewhat 'raw' in delivery. Although some members of staff had reservations about recording live lectures, student feedback in audio tutorials and emails to tutors has been generally positive, with several comments on "usefulness" and "convenience". One student reported transferring audio lectures to a CDROM that he could then listen to in his car on the way to and from work. Students like the feeling of "being there" that they get from the live recordings, which can be lost in more polished productions. Negative comments sometimes arise from a low student tolerance for human or technological error. On occasions lectures have to be re-recorded and sound quality can be less than perfect. Students are supported in their use of these instructional materials through synchronous audio tutorials.

Providing tutorials

Assessment in most law subjects involves applying legal principles and reasoning to problems, usually under exam conditions. Tutorials in law often take the form of a problem, which is answered during the session by students with direction from the tutor. This approach, which is long accepted in the face to face teaching mode, is valued by teachers and students at least in part because it is important in teaching students how to pass law exams. To both teachers and learners in law therefore, the tutorial holds a particularly important place in the range of learning approaches. Once it was decided that residential face to face tutorial blocks would not be held for external students, it became necessary to determine what other strategies could be employed to take their place. Law staff were unanimous that provision of audio lectures and print based online study guides and readings was not sufficient. One CDU law lecturer, Ken Parish, was familiar with audio chat rooms common on the Internet and proposed employing a version of this web based technology to enable real time audio chat sessions as a means of instruction, and this suggestion was taken up.

Technical issues

The School of Law purchased a licence to operate two chat rooms in *VoiceCafe*, a proprietary web conferencing program. The cost of licensing is about US\$125/month for a 25 seat room (*VoiceCafe*, 2004). Once the monthly fee is paid usage is unlimited, so cost compares favourably with telephone conferencing. The software can support a video conferencing link, however current arrangements are for audio only. The primary reason for this is that many students do not have an Internet connection of sufficient bandwidth to cope with video files.

Students access the virtual tutorial rooms via a link from the relevant subject site in *Blackboard*. Features of *VoiceCafe* include the ability to speak to tutors and other class members in real time and text chat facilities. A 'follow me' feature allows tutors to 'push' web pages to students. Other functions include 'hand up' or question waiting and 'boot and banish' that allow tutors to control discussion and, where necessary, exclude anyone behaving inappropriately. Tutors and students can also draw on a virtual 'whiteboard' or view pre-loaded documents. The 'whiteboard' enables collaborative contributions to answer a problem as it is worked through in the tutorial, much as would be done on the board in the

classroom. This tool has great potential as a generator of interaction between participants and could be a significant audiographic element of learning, however it has provoked mixed staff reaction on ease of use. One student commented in an email that his tutor did not use the whiteboard enough (Day, M. 2004, personal communication) indicating that staff training may need to be more comprehensive. A manual or handbook, particularly for the assistance of new or contract tutors, may also be of assistance.

Most students are able to log on and participate in *VoiceCafe* with little difficulty, however the system works much more reliably with broadband than a dialup Internet connection. A small, but significant, number of students are from remote areas of Australia where broadband is only available via satellite. Sometimes these connections are not 'two way' broadband. A few students in *VoiceCafe* tutorials gave up in frustration after several sessions. Although the Law School undertook some technical investigations the cause of these disruptions was not firmly established. Interestingly, tutors observed that a student might have difficulty maintaining a connection on one evening, but sail through the tutorial with no technical issues the next week.

It quickly became clear that students with old computers and slower modems were much more likely to have problems than those with up to date equipment. Though, even with new equipment and a reasonable connection speed the program occasionally 'drops out' altogether, requiring reconnection. Also, there can be a disconcerting momentary break in transmission, sometimes mid-word, for a second or two. Whilst this is annoying, students to date have not identified it as a major issue. At other times, poor sound quality, time delay and poor responsiveness in the program have been experienced, mostly by those with older computers and slower modems. This is an equity and access issue, but students are warned upon enrolment that there are minimum hardware and software specifications in order to participate in the course on an external basis.

Logistical issues

Most students who choose to enrol in law as external students do so because their lifestyle makes it difficult for them to enrol on an internal basis. Largely, this is because they are in full time, or nearly full time, employment and cannot attend lectures or tutorials in normal working hours. In scheduling real time tutorials it is necessary to take this fact into account, so there is great pressure upon virtual tutorial room use between 6.00pm and 9.30pm, with relatively little use at other times. Although students have been told that they can book rooms to use for private study groups when they are not otherwise in use there has been little response to this invitation. More recently, a few tutorials are being scheduled between 12noon and 2.00pm, so that students can attend from their workplaces if possible.

Providing most tutorials 'out of hours' is problematic as the workload of most full time teaching staff precludes conducting the tutorials themselves. This has meant the employment of casual tutoring staff and this in itself is a management issue as casualisation of the academic workforce is a widespread concern in higher education (Johnstone & Vignaendra, 2003). In the longer term the need to squeeze nearly all of the tutorials into the after hours timeslots may prove a significant problem. In semester 2 2004 there are six subjects vying for online tutorial times. By semester 2 2006 all law subjects will be available online. Potentially, therefore 17 subjects could be seeking time each semester. Even allowing for the fact that many electives do not have tutorials, there will still be 8-10 core units per semester. The current practice is to hold one tutorial per week in each core unit. In the near future it will be necessary to develop a longer term plan to manage this inevitable growth. Possible solutions will include purchasing licenses for additional virtual rooms and alternating synchronous audio tutorials with asynchronous tutorials, such as those employed by the ANU Legal Workshop (Foley, 2003).

Teaching and learning challenges

The audio and audiographic tutorial, as a teaching mode, has some aspects in common with face to face delivery and little similarity with asynchronous teaching. Audio/audiographic delivery at a distance is, however, different from face to face and has its own pedagogy. The first and biggest issue for users is that communicating in audio only is not natural for humans for whom a significant element of communication is nonverbal. Conducting a discussion in *VoiceCafé* audio tutorials can be somewhat stilted, particularly at first. This is increased by the fact that the system is not like a telephone, where audible (non-word) cues have some place, but more like a two way radio, or satellite telephone, in that it is not possible to

interrupt or cut in. The tutor speaks into a vacuum and hopes that students can hear. Communication via the program is slower than in face to face presentation. Tutors report that it takes about 1.5 hours to cover material that would be delivered in 50 minutes in a face to face class.

A further issue involves the way in which the technology is used. Synchronous audio technology is not an effective teaching medium for transmissive lecturing where the teacher does all the talking (Garrison, 1995; Evans, 2001). If it is to add value to learning, participants need to take advantage of synchronous audio's communicative and interactive possibilities. In *VoiceCafe*, tutors need to facilitate discussion in groups and to ensure that as many students as possible contribute. With tools such as the question notification function, students tend to want to jump in as soon as another student stops talking. Not only is this difficult to manage but it seems to exacerbate slow modem drop out. It is therefore necessary to orientate each new tutorial group to the technology and what to expect from it before attempting to cover extensive content areas. On the positive side, experiences so far indicate students respond well to being taught about the technology and will respect rules and procedures that facilitate better communication.

Conclusion

As technology has evolved it has made it possible for students to study from their comfort zone, usually their own home or workplace. This is a major difference between the experience of current CDU law students and those in previous times who needed to attend a special learning centre to participate. Law students today are busier than ever in their 'non-student' lives and continue to demand greater flexibility in delivery of legal education (Johnstone & Vigaendra, 2003). The *VoiceCafe* audio conference facility, incorporating as it does audiographic learning, has significant benefits as a relatively cheap and easily accessible synchronous teaching and learning tool. The web based audio tutorial, although it requires some adaptation and training, mimics the dynamics of the face to face classroom. It is perhaps not surprising that many staff feel more comfortable with this mode of tutorial rather than managing the less familiar territory of a series of asynchronous discussion boards.

Both students and staff have expressed a liking for audio tutorials because of the personal interaction and immediacy of communication. As students "attend" each week they get to know each other and their tutor, and a group dynamic develops engendering a sense of belonging and community. These factors add significant value to distance learning where student isolation and lack of interaction can be problematic. While such points give rise to cautious optimism there is still a need to evaluate the longer term viability of the delivery mode. As 'extra' chat rooms are purchased costs increase both for access and staff, including additional administration. Logistical/management issues need to be examined along with the academic usefulness of *VoiceCafe* and the quality of teaching and learning that it promotes.

Having made the decision to offer all Law units externally, the use of audio tutorials was part of a pragmatic solution to enable this to happen in a short space of time with limited staffing resources. It is now necessary to ask what place and value synchronous communication technologies have in the CDU external law program. Does the audio tutorial, in its virtual simulation of the face to face classroom, simply represent and attachment to the comfort zone of a familiar educational model, or does it have distinct advantages that cannot be achieved in an entirely asynchronous environment? Technology presents many options and the best answers often lie in choosing a judicious and blended mix. Further research on such questions and issues is needed to ensure quality and best practice in future teaching and learning experiences.

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