

# Chapter 10

## DISTANCE EDUCATION IN THE ATAX NATIONAL CLASSROOM: AN AUSTRALIAN CASE STUDY

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ATAX is the Australian Taxation Studies Program (the Program) at the University of New South Wales (UNSW). The Program<sup>1</sup> provides taxation education in the form of undergraduate and postgraduate degrees to approximately 1,200 tax specialists, lawyers, accountants, and others working in the tax profession. Strongly supported by the Australian Taxation Office, ATAX combines print-based materials (developed in conjunction with Central Queensland University's Distance Education Center) with regular access to, and support from, leading UNSW academics via an extensive network of 25 learning centers across Australia. Retaining the elements of interaction and discourse central to traditional university learning environments, ATAX uses the latest in audio conferencing technology as well as providing regular opportunities for face-to-face contact to overcome the tyranny of distance across the vast spaces of the Australian continent. ATAX is an example of how collaboration between institutions of higher education and the tax profession has produced a program that responds directly to the needs of those in the tax industry.

### THE AUSTRALIAN CONTEXT

The vast physical spaces and dispersed population of Australia have provided the impetus for a long tradition of distance education in the country, commencing with the first correspondence studies at the University of Queensland in 1912. The subsequent evolution of distance study in Australia saw the establishment of early correspondence schools and the increasing adoption of distance-education methods by tertiary institutions.

In 1988, the Australian Federal government provided a major impetus for further expansion of distance education in the tertiary sector. Proposals were made to significantly increase the

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<sup>1</sup> For the purposes of this paper, the word "program" is used in two distinct ways. Where the first letter of the term is capitalized, the word is used to refer to ATAX as an organization. In lower-case form, "program" refers to a specific degree program, such as the undergraduate Bachelor of Taxation or the postgraduate Master of Taxation programs of study.

participation rate in tertiary studies (including specifically an increase in the number of distance-education students), and also to rationalize the provision of distance education across the nation with the establishment of eight Distance Education Centers (DECs). The DECs were to be responsible for the development of programs and materials for all Australian distance-education students (Dawkins 1988). By 1996, 60,000 university students, representing 12 percent of total university enrollments, were engaged in study at a distance (Dekkers and Hunt 1998).

Around the time of this government initiative, challenges to the legitimacy of distance education methods were being addressed by authors such as Holmberg (1989) and Keegan (1990). These questions were, to an extent, answered by an Australian study (Long 1994) that found no significant difference in the quality of academic results between on-campus and off-campus students.

Presently in Australia, as elsewhere, the lines between on-campus and off-campus study are becoming increasingly blurred as educational technologies enter campuses and concepts of flexible learning are adopted in the language of an increasingly competitive educational marketplace. Distance education, or the new paradigms of flexible learning and resource-based learning, are becoming an increasingly important part of the tertiary education sector as the profile of learners and their interests as "consumers" change in the real-world context of life-long learning.

#### **ATAX—BACKGROUND AND DEVELOPMENT**

In the late 1980s, the Australian Taxation Office (ATO) commissioned a number of studies investigating the skills and knowledge of graduates from existing tertiary programs employed in the organization. The studies consistently showed that university programs were not equipping graduates with the skills and knowledge required by the ATO. In order to compensate, the ATO was making major investments in its internal National Professional Training and Development unit to ensure that these employees possessed the necessary levels of skill and knowledge.

The ATO consequently sought applications in 1990 from universities to provide undergraduate and postgraduate programs in the multidisciplinary field of taxation. In order to provide such programs to ATO employees throughout Australia, the ATO required that delivery be predominantly through distance-education methods. It also stipulated that the programs should not be provided exclusively for its employees, as the intention was always to update and improve the knowledge and skills of the tax profession in general rather than the revenue authority in particular.

Ultimately, the ATO could not find a single institution possessing the required expertise in both the content area and distance-education-delivery methods. Subsequent negotiations established a contract with UNSW on the condition that the distance-education aspects of the program be subcontracted to Central Queensland University (CQU). CQU was a designated DEC under the national system that existed at that time. A detailed discussion of the educational partnership between UNSW, the ATO, and CQU can be found in a recent publication by Smith and Macmullen (1999), at <http://www.acs.ucalgary.ca/~iejll/volume3/smith.html>.

In late 1990, ATAX was established as a Board of Studies at UNSW, bridging the Faculties of Law and Commerce. After a period of frantic activity in writing and developing program material and an infrastructure for delivery, ATAX commenced offering courses for the Bachelor of Taxation (BTax) and Graduate Diploma in Taxation Studies (Grad Dip Tax) degree programs in 1991. The Master of Taxation (MTax) and the Graduate Diploma in Advanced Taxation (Grad Dip Adv Tax) programs followed in 1992.

Subsequent to the establishment of ATAX, over 350 students have graduated. There are currently over 1,200 students (approximately split 40 percent undergraduate and 60 percent post-graduate) actively enrolled in the four degree programs or on a non-award basis. Typically, up to 40 percent of the students are from outside the ATO, with the balance being employed by the ATO. Virtually all of the students are employed in tax or related professions, and most on a

full-time basis. As a result, study is predominantly in part-time mode, typically involving one or two courses per semester. There are more than 50 different courses available to students, approximately half of which are exclusively tax options. Further details of the structure and related aspects of the programs can be found in Evans and James (1996).

As a specialist taxation provider, ATAX attempts to pull together perspectives crossing traditional disciplines. ATAX aims to integrate the separate accounting, legal, economic, and information science traditions, giving educational form to a growing awareness by accountants and lawyers of the need for an integrated approach to tax problem solving. ATAX students are provided with a study path that ensures a solid grounding in core tax knowledge. The programs also permit students to select options that allow for specialization in particular areas of the tax profession.

Initial ATO funding (front-end loaded) ensured the effective and rapid establishment of ATAX. Under the contract between UNSW and the ATO, the ATO paid development costs for ATAX courses. The ATO also provided learning-center facilities for all ATAX students (whether ATO employees or not). However, the initial contractual arrangements have since changed such that ATAX is now funded from several sources, including the Australian Federal government, the ATO, UNSW, full-fee-paying students and commercial conferences, seminars, and training. This level of funding has allowed ATAX to attract a critical mass of academic staff (currently there are 14 full-time and a number of part-time teaching and research staff) and to properly resource its activities.

### THE ATAX LEARNING ENVIRONMENT

One of the central challenges to the ATAX program has been to create a learning environment that allows access by students located throughout the country, facilitates the opportunity for university-level study for part-time students working in the tax industry, and maintains the intellectual rigor and integrity of a legal education program. These challenges have been overcome through the use of a combination of distance-teaching methods, educational technologies, and traditional on-campus educational models. Now approaching a decade of operation, ATAX has continually sought to enhance the quality of its educational delivery through the use of the best combination of methods and technology available, a learning process that will inevitably continue as new technologies and changing student requirements necessitate the renewal of educational practice.

#### The National Classroom

The ATAX Program is administered from a sub-campus of UNSW, where the core staff is based. All programs are delivered through a combination of distance education and decentralized campus methods. ATAX provides student support, student facilities, and physical resources. It not only makes regular student/instructor contact available in all courses, but also allows for students to work with relative independence.

ATAX has developed the concept of a “national classroom,” encompassing the idea of “distributed learning” through a “learning network.” The aim of the “national classroom” is to overcome the isolation experienced by many students studying at a distance. It has been suggested that students’ persistence in a program of study may be related to their ability to acquire a sense of social involvement (Sweet 1986). The unique aspects of the ATAX learning network provide opportunities for interaction and contact with teaching staff and fellow students that might be otherwise unavailable in distance study.

The concept of the ATAX “national classroom” is based on a number of essential features including:

- print-based learning materials,
- a network of learning centers around the country,
- audio conferencing,

- the opportunity for face-to-face contact with students in a variety of guises, and
- regular communication through other media.

Discussion of each of these aspects is provided below.

### **Print-Based Learning Materials**

The core content for all ATAX courses is delivered in the form of print-based study packages that are developed in collaboration with instructional design staff from the Division of Distance and Continuing Education at CQU. Each of these packages features a study guide that serves as a set of comprehensive lecture notes for the course. The instructional template includes features that integrate all other components of the course and provide activities and feedback to facilitate independent learning. The study packages may also include textbooks, resource readings, and other forms of educational media. Students are normally expected to spend about 12 hours per week during the 14-week semester on the print-based study materials, although this may vary depending on the base knowledge level of the student and the content of the package.

### ***The Role of Instructional Design***

An important factor in the development of high-quality, print-based study materials for ATAX has been the effective collaboration between tax-content specialists at UNSW and instructional designers based at CQU. In this relationship, the instructional designer provides a critical perspective as a surrogate student for course materials to ensure that the broader conceptual framework of a course is appropriately constructed and that the final learning package is genuinely inclusive of a range of learning styles. The objective of the instructional designer is to ensure that study materials are “a complex mixture of pedagogical and personal teaching methods and are not simply the replacement of lecture notes” (Parer 1993, 423).

All ATAX courses are developed in a standard educational template that has been developed by CQU instructional design staff through extensive consultation with ATAX academic staff.<sup>2</sup> The template contains typographical features and incorporates instructional icons (see Exhibit 1) to optimize readability and accessibility. In addition, the template prescribes the structure of materials in terms of the statement of objectives, provision of activities and feedback, and identification of key concepts—all of which are important to the overall quality of the final product.

### ***Development Models for Study Packages***

In the process of writing and developing separate print-based study packages for the courses in the ATAX Program, several models have emerged that allow for the optimum combination of delivery options for specific course requirements. The standard model assumes that the course will use:

- a study guide,
- one or more textbooks,
- a collection of resource readings,
- an audio conference preparation guide, and
- assignment topics and other components such as past exam papers.

Other models represent specific variations of the standard model. The “wrap-around” model is used in courses where a large amount of material already exists in the form of textbooks, and

<sup>2</sup> Smith (1994) and Macmullen and Smith (1996) provide extensive discussion of how this collaboration between ATAX and CQU staff has been managed to effectively create a continuous quality-improvement process. The degree of successful collaboration in the design and development process has been a key factor in the development and enhancement of ATAX study materials.

**EXHIBIT 1**  
**ATAX Instructional Icons**



compulsory reading



note this point

optional reading



write response in  
Study Guide



watch TV



write response  
outside Study Guide

listen to tape



use software



watch video



perform fieldwork

watch film



recall earlier work



attend audioconference  
or dataconference



pause to reflect

work with a computer



undertake research  
or investigation



discuss with a group



discuss with co-worker

phone or fax  
lecturer or University



mail material to  
lecturer or University



“

beginning and end of  
reading/quote

”

continuation of  
reading/quote

the emphasis in the study materials is on commentary, activities, and feedback. The “everything you need” model is used where no single resource is available to cover the content area. In these courses there is often no appropriate textbook and the study guide must provide detailed content and all essential reading. The “multiple component” model is used where resources can be best provided through a range of media, including audio/video tapes, computer disks, and Internet resources. Finally, the “integrated readings” model involves the careful editing of readings for inclusion in the actual module text of the study guide. This model is especially useful where a range of references can be used to present content, and a constant tutoring role is desired to guide student reading and assist interpretation.

The models are neither prescriptive nor restrictive. Instead, they arose out of the developmental needs of various courses and identification of those study packages that might be considered “best practice.” Since courses do not always fit neatly into one category, each model is considered complimentary to all other models.

### ***Revision and Quality Enhancement***

All study packages are subject to annual revision as part of a standard four-year cycle. This allows for complete rewriting every fourth year, with minor revisions (up to 10 percent of the material) occurring in the first and third years of the cycle, and a major revision (up to 40 percent of the material) in the second year. Due to the dynamic and changing nature of the discipline of taxation, it is necessary to have such a process to ensure that ATAX courses remain current in terms of both content and pedagogy. The revision cycle also incorporates the “ATAX Quality Enhancement Process” (Smith 1994; Smith and Teague 1995; Dekkers and Smith 1995), which facilitates the collection of a range of information about each study package (from the ATAX student-evaluation surveys, instructional-design reports, and ATAX Evaluation Committee reports). Through this process, educational issues, as well as content issues, can be identified and prioritized to guide the collaborative work between UNSW content experts and CQU instructional design staff.

### **The Learning Centers**

ATAX utilizes a network of 25 learning centers, all located in Australian Taxation Offices in major cities and towns across Australia. These learning centers provide students across the country with access to resources, tutorials, and the opportunity to develop learning networks.

Learning centers serve ATO students working at a particular office (and sometimes other offices within the immediate area) and non-ATO students located within a reasonable distance of the office. Non-ATO students have security-approved access to learning centers. Every learning center has a coordinator, whose role is to ensure that communications flow effectively and that learning centers at all times are set up properly, with all equipment fully functional and available to all ATAX students. Students who are not within reasonable distance of a learning center are classified as “remote” students and special services are provided to them to assist their participation in ATAX communications and activities.

Initially, learning centers occupied an average physical space within the Australian Tax Office of 50–80 square meters. A primary role of the learning centers was as venues for audio conferences with lecturers based in the ATAX office in Sydney. The centers were equipped with high-quality conferencing equipment to facilitate these classes. Other equipment and resources available in each learning center included a dedicated fax machine, at least two PCs with modems (enabling access to UNSW’s substantial computer resources), a laser printer, and a television monitor, and video player. Depending on the specific center, a library of print-based resources may have been kept in the learning center, or alternatively in the ATO library, which was also accessible to all ATAX students.

There is currently a shift away from the notion of a permanent, physical learning center toward the concept of a virtual-learning center. This development is being driven by the rationalization of ATO office space. The shift to a virtual-learning center represents a major challenge to the ATAX Program over the next few years that will need to be addressed by the creative use of technology together with the development of learning centers outside ATO premises (for example, using facilities of legal and accounting firms).

### **Creating Dialogue through Audio Conferencing**

The centrality of interaction in the educational process is a widely held principle in general educational theory (Shale 1988; Holmberg 1989; Evans and Nation 1989). It has long been suggested that the success of students studying at a distance is largely dependent on the availability and quality of "mediated communications" (Garrison 1987). In the context of distance education, the development of technologies that facilitate noncontiguous dialogue and interaction is vital. Audio conferencing (or audio teleconferencing) is an educational technology with great application to distance-education programs as it provides the opportunity for a noncontiguous mode of interaction of a virtual quality that is equivalent to the face-to-face conventional classroom interaction.

The strengths of audio conferencing include its relative accessibility, simplicity, and cost effectiveness in comparison with more sophisticated technology such as video conferencing and interactive computer programs. Research into audio conferencing as an educational technology has long suggested that it supports interactive teaching approaches, which are independent of a visual medium, that has a standard of quality comparable to traditional face-to-face teaching (Paul 1989; Johnson 1990). It has also been suggested that instructors can reasonably easily adapt approaches that they have used in traditional settings to audio conferencing (Daniel 1996). In the context of a distance-education program servicing a student body scattered across a country with the vast expanses of Australia, audio conferencing is a simple, inclusive technology that effectively supports print-based learning packages.

The vast majority of ATAX courses involve five separate audio conferences spread within the 14-week time frame of the semester, each audio conference being approximately 90 minutes in duration. These sessions are conducted within the hours of 9 AM and 5 PM (Sydney Eastern Standard Time) and the exact placement of each audio conference within the 14-week session is at the discretion of the instructor for each course.

Audio conferences are conducted by the course instructor, who is normally responsible for the current version of the printed study materials. The instructors operate a user-friendly, state-of-the-art bridging system developed for ATAX by ADTEC Australia. It is a dial-in system that links students from all over Australia to the instructor in Sydney. This technology allows all participants to hear and interact directly with any other participants in the audio conference, allowing dialogue between student and student as well as student and instructor. Gallagher (1994) provides a more detailed discussion of the audio-conferencing technology used at ATAX.

A majority of students call in as a group from their local learning center, creating the potential for face-to-face student interaction as part of the audio-conference process. Remote students who cannot travel to a learning center do not enjoy this student contact, but do have the option of phoning in from an ordinary telephone terminal.

The number of participants in any single audio conference ranges from one to more than 100, depending on the number of learning centers involved and the number of students in a particular course. However, on average an audio conference includes between five and ten learning centers and involves between ten and 35 students.

Although audio conferences are strongly recommended for all courses and attendance is encouraged in the study materials, they are not compulsory components of the course work. This policy is aimed at providing a level of flexibility for students studying with ATAX. However, the

levels of participation in audio conferences appear quite high, with a 1999 survey indicating that, on average, 92 percent of respondents attended at least one audio conference for each course, and 73 percent attended most of the audio conferences offered in each course.

As a consequence of the policy that attendance is not compulsory, material that is new or additional to the printed course materials is not introduced in the audio-conference component of a course. The audio conferences are therefore intended to revise and build upon the study material content. The focus on dialogue and interaction is fundamental to audio conferencing at ATAX, and this is often achieved through discussing activities in study materials and introducing further activities or problems for collaborative work in the audio conferences.

It is worth noting briefly that audio conferences are not the only form of direct interaction that students have with instructors and each other. As will be discussed later, many courses provide tutorials at centers around Australia, and others feature intensive regional classes that are usually held in the last four weeks of the session. However, while a significant number of students in the program do enjoy some form of face-to-face instruction, for many students—particularly those who are isolated geographically—the audio conference provides the primary form of direct communication and interaction with instructors.

### **The Face-to-Face Elements**

In addition to the purely distance-educational methods employed by the ATAX program, special effort has been made to maintain a level of more traditional student/instructor contact where contiguous campus-based approaches can be incorporated in the learning environment. Different forms of face-to-face contact utilized in the program are briefly described in this section.

#### ***Orientation Sessions***

At the commencement of each session of study, orientation days are held at each of the ATAX learning centers around Australia. ATAX staff members travel the country during a ten-day period coinciding with the dispatch of study materials to the learning centers. The orientation sessions are primarily conducted to introduce new students to the Program and provide opportunities for discussion with continuing students. The orientation of new students into the ATAX Program includes a discussion of the operation of the Program, an introduction to the effective use of ATAX study materials, a demonstration of audio conferencing, and advice on study skills and other matters relevant to distance-education students. These orientation sessions are considered an important means of presenting the “human face” of the Program, and also reflect the importance placed on being proactive about including students in the ATAX culture and the social fabric of the Program.

#### ***Tutorials***

Tutorials are provided in approximately eight of the 24 undergraduate courses (mainly in courses students encounter early in their study programs) to foster an awareness of the benefits of groups of students working together. They also provide additional support to students while they develop the skills necessary for independent study. Tutorials, like audio conferences, last for 90 minutes, and there is provision for three tutorials (as well as the five or six audio conferences) in each course where they operate.

Tutorials were initially face-to-face meetings of students with local academics expert in the specific course areas. In the past, all tutors were brought to Sydney for instruction in the ATAX approach and explanation of their role as facilitators of learning. Over time, the best tutors have been identified and maintained, providing increased continuity in tutorial activities. In addition, more emphasis has been placed on using audio conferencing to both increase student access to



tutors and capitalize on the skills of the best tutors available to ATAX. Lecturers maintain constant contact with tutors and provide detailed outlines to ensure that tutorial content remains relevant.

### ***Intensive Regional Classes***

One- or two-day intensive regional classes (IRCs) are offered on a face-to-face basis in major regional centers for all postgraduate and selected undergraduate courses. In these classes, the instructors focus on high-level applications of learning in each course and aim to hone students' critical-thinking skills in preparation for the final examinations. Classes typically involve between ten and 30 students, and involve a mixture of micro-teaching sessions, group work on pre-distributed case studies, and plenary discussions.

Due to the expense of offering these IRCs, they are only held in regional centers where sufficient student numbers (normally taken as ten students) can be obtained. Where course numbers are too small to warrant a face-to-face class in any of the learning centers, the audio-conference bridge has been used successfully to facilitate IRCs at a distance. For students in regions where IRCs can not be offered, videotapes of the class are made available in their local learning center so that they still have some form of access to these events.

### ***Summer Schools***

A series of summer schools was offered at ATAX for the first time in 1999. This involved the offering of four postgraduate courses that were each based around a two-day face-to-face program held at the ATAX premises. This face-to-face component was consistent with the format of an IRC. The same study packages used in standard sessional offerings formed the basis of the summer schools. In fact, the major difference between the two formats was that the normal contact components of the courses (including audio conferences and IRCs) were concentrated in a two-day period for the summer school. As distinct from all past offerings, the summer school required attendance as part of the course requirements. This is consistent with residential requirements found in other selected distance-based programs.

The summer school was thoroughly evaluated both after each face-to-face class and after all assessment work had been completed. The evaluation revealed that the option of fast-tracking study, through intensive courses held outside of standard university semesters, is extremely attractive for students who are in a position to attend on-campus classes. Problems that arose from the evaluation mainly concerned lack of student preparation prior to attending the face-to-face sessions and difficulties in providing opportunities for reflection and consolidation of learning in an intensive format. There was also some concern expressed by students about the lack of formative feedback on assessment tasks, which would normally be provided through the 14-week standard semester.

While no summer school was offered in the 1999/2000 summer break (due mainly to the involvement of most ATAX academic staff in aspects of the major tax reform currently taking place in Australia), the concept of summer schools will no doubt play a part in the longer term ATAX strategy. The summer school format has the potential to increase flexibility in the program structure at the postgraduate level, and there are indications that many undergraduate students are also keen to have similar opportunities.

### ***Student/Instructor Interaction***

The flexible combination of distance education and more traditional modes of delivery means that the amount of student/instructor interaction is largely dependent on how the individual student chooses to use the available resources and support. Consequently, it is difficult to quantify overall involvement and interaction using traditional measures.

From the perspective of the student, opportunities for interaction comprise, at a minimum, involvement in the one-day, face-to-face orientation session at the beginning of the semester and in the five or six audio conferences that take place in each course, together with the opportunity to contact their instructors by telephone, facsimile, or email throughout the semester. For post-graduate (and some later undergraduate) students, there are additional opportunities of participation in the IRCs and summer schools, while undergraduate students have the opportunity for interaction through tutorials in the early courses.

In addition, students are actively encouraged to form their own local study groups. To assist students in developing these learning networks, a list of student names and contact points is made available. A number of student-based study groups operate on a face-to-face basis at learning centers, while others use the ATAX audio-conference facilities in the evenings and when it is otherwise not in use.

From the perspective of the instructor, the amount of contact time with students may vary markedly depending on the number of enrollments in individual courses. Some courses, especially at the postgraduate level, may have more than 100 students enrolled, while the average would be approximately 60. However, enrollments in particular courses can grow substantially beyond these numbers. For example, Australia is currently in the process of introducing a Goods and Services Tax (GST, similar to a value-added tax) to replace its existing Wholesale Sales Tax, and two new courses in 1999 looking at policy and technical aspects of the GST had enrollments of 170 and 330, respectively.

In addition to participation in orientation, audio conferences, tutorials, and IRCs, a great deal of instructor time is spent on grading assignments (with emphasis on providing detailed feedback to distance students) and examinations. Instructors also deal with student inquiries and develop and update printed course materials. Rough parity of teaching loads is attempted by the adoption of a mechanism for measuring and applying equitable teaching loads (based on such factors as student numbers, type and level of courses written and taught, and travel required), but the overall impression is that the ATAX teaching load is more onerous than conventional teaching loads in campus-based modes of delivery.

### ***The Weekly Bulletin***

Regular communication with ATAX students is maintained by the *Weekly Bulletin*. While this document was originally sent exclusively by means of a facsimile to ATAX learning centers, it is now sent via email for posting on the ATO Intranet and to individual students who have email access. The option for facsimile transmission of the *Weekly Bulletin* remains available to students who do not have Intranet or email access.

The *Weekly Bulletin* communicates information of an administrative nature, such as notice of dates and deadlines for variations of enrollment, fee payment, and so on. It is also used by teaching staff to provide various types of information including preparation details for audio conferences, tutorials, and IRCs, references to new cases and information, clarification of points raised in discussions, and progress on the grading of assignments.

### **Enhancements through Other Media**

The combination of well-designed print-based materials and audio conferencing utilizing the national network of learning centers has proven to be a robust, accessible, and economical approach to delivering tax education at a distance. While other media have been used in specific courses, there has been no rush toward technological options in the Program.

In terms of the more low-tech media options, videotape has been widely used for short introductions to each course recorded by the course instructors, which are then circulated to all

learning centers as part of orientation. Both audio and videotapes are also used as a method of providing some access to IRCs and audio conferences for students who are unable to attend.

Other applications of audiotapes have been used in the ATAX Program quite effectively. Some courses have included an audiotape with the study materials to deliver structured interviews or discussions by content specialists. This is an easy and cost-effective way of utilizing, for example, overseas experts and creating some variety in the method of content delivery. Audiotapes have also been used to provide discussion of activities in the study guide and feedback on students' assignments.

There has been little use of computer-based resources thus far. However, instructors in some accounting courses have developed simple floppy-disk resources for spreadsheet activities and the like. In the past year there has been some attention paid to developing Internet resources at ATAX, and an ATAX web site is currently under development (<http://www.atax.unsw.edu.au>). Individual instructors have developed simple web sites to provide some selected resources for their courses, but web-based activities for the most part are at the embryonic stage. The near future will inevitably see ATAX making greater use of the Internet to increase the flexibility and accessibility of its programs. The sound design of existing print-based materials should assist in the transition to the new medium.

ATAX has also experimented with the use of audio graphics to supplement standard audio conferences by providing a dynamic visual medium. The use of audio graphics is well documented elsewhere (Macmullen and Ritchie 1996) and a recent online publication by Smith and Walpole (1998) provides a concise description at: <http://www.law.warwick.ac.uk/jilt/98-3/smith.html#3.4>.

An important issue that requires careful consideration before major incorporation of computer-based educational technologies is the potential marginalization of the educational experience for those students who do not have access to, or sufficient technical expertise in using, computer-based resources. At present, students are not required to have access to a computer, although this will no doubt change in the near future. A survey of students at the beginning of 1999 indicated that while 92 percent of students had some access to a computer, 68 percent were limited to no more than 5 hours of use per week for study purposes. The results of the survey also indicated that 37 percent of the respondents did not have access to the Internet, 35 percent did not have access to a CD player, and 16 percent did not have access to email. Finally, the survey indicated that students have a preference for print-based materials, face-to-face classes, and audio conferences over computer-based delivery and communication technologies. These results could be attributed to a lack of familiarity with computer-based educational technologies. However, these data do not suggest that students are driving the move toward more sophisticated, technological delivery methods.

### **Assessment**

Assessment for all courses is organized along distance-education lines. Students in the Master's program submit one research paper (on a topic agreed upon with the instructor and usually of 5,000 to 6,000 words) during the semester, and complete a three-hour, open-book exam at the end of the semester. The research paper constitutes between 40 and 60 percent of the overall grade for the course, with the balance derived from the examination. Students in other programs submit two in-course assignments (on a pre-set topic and usually of 2,000 to 3,000 words, counting for between 40 and 60 percent of the overall grade) and also complete a three-hour examination.

All research papers and assignments are submitted by mail. Options for electronic submission have been considered, but thus far have been rejected by teaching staff, primarily because the instructors prefer the flexibility of grading assignments away from PC terminals. A strict penalty regime for late assignments is administered by ATAX administrative staff in order to ensure

consistency and equity. Instructors normally seek to grade and return assignments, with feedback, within three weeks of submission in order to assist students with subsequent assignment submission or to help them with examination preparation.

Examinations are organized at all major regional locations (using the facilities of other educational institutions), and geographically remote students (including overseas) are able to organize their own venues, subject to satisfying ATAX criteria for suitability and integrity.

### **PROGRAM EVALUATION**

ATAX employs a variety of approaches in terms of evaluating the quality of educational provision. Several reports on various aspects of the ATAX program have been produced by the ATAX Evaluation Committee, which consists of senior members from each of the three key stakeholders: ATO, UNSW, and CQU. These reports are based on intensive research incorporating formative and summative components. Each investigation uses a survey instrument sent to all current students, as well as a series of structured interviews conducted with smaller samples of randomly selected students.

The understanding of the Program, and students' experiences within it, has also been guided by informal feedback received by individual lecturers. A major source of such feedback is the face-to-face sessions held as part of the orientation program, involving academic staff traveling to each learning center at the commencement of each session. These are unstructured focus-group-style sessions, where comments and feedback are invited from the students.

The student-evaluation surveys are centrally coordinated and distributed through a separate mail-out to all students at the end of each academic session. All results from the teaching survey are returned in strict confidence to the relevant lecturer, and results from the materials survey are made available to both the course writer/reviser and CQU instructional design staff. A report on the combined results across all courses for both the teaching and materials questionnaires is prepared and submitted to the Teaching and Curriculum Committee (ATAX's primary internal pedagogic review body). In reaching an overall evaluation, the data generated by the ATAX student-evaluation surveys on student perceptions of teaching quality is considered alongside research undertaken by the ATAX Evaluation Committee and other informal avenues of feedback accessed by individual teaching staff in their contact with students.

### **ATAX—INTO THE NEW MILLENNIUM**

ATAX has now reached the end of a period of development and consolidation and faces several challenges and opportunities in the future. The funding arrangements with the ATO (designed to provide front-end funding for the Program) are in the process of conclusion and pressure is increasing for ATAX to find new markets for its courses and programs. Strategies are currently being developed to identify potential markets (for example, high school graduates) and guide effective promotion of the Program. Inevitable changes in the profile of ATAX students will also require further examination of pedagogy in order to maintain the optimum combination of teaching and learning methods to support quality tax education in a flexible learning environment.

The growth in the use of Internet and computers more generally is having a profound effect on university teaching. The conversion to new technologies will require good management and effective staff development. It can be expected that the lines between traditional and distance education will continue to blur as on-campus students use computer-based resources more extensively and off-campus students benefit from evolving communications technologies. As the major provider of distance education at UNSW, ATAX offers a model that might be adopted in other areas of the University. Interest from overseas in the structure and delivery of the Program has also increased in recent times, with ATAX being used as a model for other organizations to follow.

The nature of the ATAX Program has also meant that professional-education activities have been developed to compliment the core university courses. ATAX instructors are now actively involved in organizing and delivering seminars, conferences, and workshops to those in the tax industry.

With ATAX well established, plans to expand the range of services and to develop new and improved teaching and learning methods incorporating new technologies are high on the list of priorities. New methods of program delivery are currently being investigated and the conversion of print-based materials to an electronic format is already taking place. The experience of ATAX in collaborating to create a high-quality synthesis of distance education and traditional teaching methods should prove invaluable in maintaining its position at the cutting edge of tax education in the technologically driven environment of the new millennium.

### REFERENCES

- Daniel, J. S. 1996. *Mega-Universities and Knowledge Media: Technology Strategies for Higher Education*. London, U.K.: Kogan Page.
- Dawkins, J. 1988. *Higher Education—A Policy Statement*. Canberra, Australia: Australian Government Publishing Service.
- Dekkers, J., and A. Smith. 1995. Process and partnership: Key elements in ensuring continuous quality improvement in open learning materials. In *One World Many Voices, Proceedings of the 17th World Conference of Distance Education*, edited by D. Stewart. Birmingham, U.K.: ICDE.
- , and A. Hunt. 1998. The evolution and future use of distance education in Australia. In *Papers from the National Open and Distance Education Student Network 7th Annual Conference*, edited by B. Cranston. Rockhampton, Australia: Central Queensland University Publishing Unit.
- Evans, C., and S. James. 1996. A comparison of the education and training of taxation professionals and officials in the UK and Australia. *British Tax Review* 4: 438–450.
- Evans, T., and D. Nation. 1989. Dialogue in practice, research and theory in distance education. *Open Learning* 4 (2): 37–42.
- Gallagher, P. 1994. Bridging Australia—Student and staff communication in the ATAX program. Paper presented at the Open Learning 1994 Conference, Brisbane, Australia, November.
- Garrison, D. R. 1987. Researching dropout in distance education. *Distance Education* 8 (1): 95–101.
- Holmberg, B. 1989. *Theory and Practice of Distance Education*. London, U.K.: Antony Rowe Ltd.
- Johnson, R. 1990. *Open Learning: Policy and Practice*. Published for the National Board of Employment, Education and Training. Canberra, Australia: Australian Government Publishing Service.
- Keegan, D. 1990. *Foundation of Distance Education*. London, U.K.: Croom Helm.
- Long, M. 1994. *A Study of the Academic Results of On-Campus and Off-Campus Students: Comparative Performance Within Four Australian Tertiary Institutions*. National Board of Employment, Education and Training Commissioned Report No 34. Canberra, Australia: Australian Government Publishing Service.
- Macmullen, P., and K. Ritchie. 1996. Data-conferencing—Vision for the national classroom. In *The Changing University*, edited by L. Hewson, and S. Toohey. Sydney, Australia: University of New South Wales.
- , and A. Smith. 1996. Converting courses to distance education: What can we learn from the ATAX experience. In *The Changing University*, edited by L. Hewson, and S. Toohey. Sydney, Australia: University of New South Wales.
- Parer, M. 1993. The educational developer's role—Present and future. In *Distance Education Futures*, a selection of papers presented at the 11th Biennial Forum of the Australian and South Pacific External Studies Association July 21–23, edited by T. Nunan. Underdale, Australia: University of South Australia.
- Paul, R. 1989. Canada's open universities: Issues and perspectives. In *Post-Secondary Distance Education in Canada*, edited by T. Nunan. Athabasca, Australia: Athabasca University.
- Shale, D. 1988. Toward a reconceptualization of distance education. *The American Journal of Distance Education* 2 (3): 25–35.
- Smith, A. 1994. An approach to quality improvement in distance education: Case study in the development of the quality enhancement process in the ATAX program. Paper presented at the Open Learning Conference, Brisbane, Australia, November.

- , and M. Teague. 1995. The never ending story: Selecting, developing and integrating appropriate technologies into a major distance education program. In *Distance Education: Crossing Frontiers, Proceedings of the 12th Biennial Forum of ODLAA*, edited by A. Nouwens. Rockhampton, Australia: Central Queensland University.
- , and M. Walpole. 1998. An Australasian experience of the use of selected technologies in the delivery of a legal education program—Some lessons for faculties and educational program planners, commentary. *The Journal of Information, Law and Technology* (3). Available at <http://elj.warwick.ac.uk/jilt/98-3/smith.html>.
- , and P. Macmullen. 1999. Educational partnerships in flexible learning: A case study of the Australian Taxation Studies program (ATAX). *International Electronic Journal For Leadership in Learning* 3 (5).
- Sweet, R. 1986. Student dropout in distance education: An application of Tinto's model. *Distance Education* 7 (2): 201–213.