Recent developments in new technologies have significant implications for distance education. There are now increased opportunities for interaction not only between teacher and individual learners but also between learners themselves.

This book documents a project investigating the impact of new technology on three aspects of distance learning: the course design process, learners' interaction with course materials and teachers' interaction with learners and materials. The research involved adult migrant learners of English enrolled in the AMES Distance Learning Programs in New South Wales, Victoria and Western Australia, using the AMES Distance Learning Course It's Over To You.

Teachers of ESL and other languages through distance programs and teacher educators will find this book directly relevant to their work. For classroom-based teachers, the book provides an insight into the range of possibilities offered by distance teaching.

Other books in the series are:

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   Giselle Mawer, 1993

2. Seeking Directions: Training Industry Trainers in a Multicultural Workforce
   Crina Virgona, 1994

   Marie Manidis and Patricia Prescott, 1994

   Catherine O'Grady and Mark Millen, 1994

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New Technology and Curriculum Design

A Research Project with NESB Distance Learning Students

Margaret Anderton and Ann Nicholson

Editor: Liz Bailey

National Centre for English Language Teaching and Research
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A Research Project with NESB Distance Learning Students

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# New Technology and Curriculum Design:
## AMES WA 1995

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Abstract

Nipper (1989) spoke of three generations of distance education. The first generation aimed to teach at a distance using print media; the second generation focused on audiotapes and direct communication with the teacher to enhance the program; and the third generation introduced opportunities for interaction not only between teacher and individual learners, but also amongst learners themselves through the medium of new technologies.

This project investigated the impact of new technology on the course design process, on students' interaction with course materials and on teachers' interaction with students and materials, in particular looking at variation in the nature of teacher intervention. Fifty-one adult migrant students, enrolled in Stages 2 and 3 of the Adult Migrant Education Service (AMES) distance learning programs in Western Australia, New South Wales and Victoria, were invited to take part in the project. Over half of these students were involved in audioconferences, ten were selected for audiographics and eleven took part in videoconferences. Data was obtained from several sources: learner, teacher and observer evaluation sheets, audio and videotapes recorded during sessions, teacher journals and anecdotal evidence. The researchers also wished to provide input regarding new modes of delivery which could be incorporated into the reworking of Stages 1 and 2 of the AMES distance learning course It's Over To You (IOTY).

Results of data analysis suggest that with these forms of technology there exists a huge potential for enhancing delivery and content of the IOTY course. Student enjoyment of the sessions, their increased motivation and high level of enthusiasm for technology sessions indicate the value of these technologies in supporting distance learners. The opportunities they provide for student interaction bring the classroom and all its advantages to the student studying at home alone.

The researchers identified a very close relationship between task design and choice of technology enabling them to design tasks that exploited each particular technology. Analysis of taped material provided valuable information on teacher to student and student to student interaction patterns and led to the development of appropriate strategies for maximising student interaction. Outcomes of the research included information for the development of training packages for these types of technology as well as ideas for the inclusion of technology in the re-write of IOTY courses.

The many advantages of using technology to support DL students led the researchers to recommend that audioconferencing be included as a regular component in the course provision for all higher level students, and that audiographics be an optional extra for those who can access the facility. While students enjoyed the videoconference sessions, the researchers found that the limitations of the Picture Tel system make it inappropriate for distance learning students and they do not recommend its continued use.
Chapter 1
Introduction

The project conducted by the present researchers in 1993–94 was designed to investigate the impact of new technology on the course design process. This second project planned to extend the scope of that investigation, looking at a greater range of students in three states: Western Australia, New South Wales and Victoria. Researchers also examined student interaction with materials, and teacher interaction with students and materials, with particular focus on whether the amount and nature of teacher intervention is changed by new technology.

Rationale

The most significant advance in distance education in the past decade is the degree to which technology has made it possible for teachers and learners to communicate directly and for learners to communicate among themselves.

(Kelly 1990)

While the use of new technology to support distance learners has been researched and developed at all levels of mainstream education, little research has been conducted into its use with adult distance learners of English as a Second Language (ESL). From its implementation in 1988 the Adult Migrant Education Program (AMEP) distance learning course It’s Over to You (IOTY) has emphasised the need for the distance between learner and teacher to be overcome, putting in place learner access to support systems and learning strategies that supply some of the aspects of face to face support provided in classroom tuition. This has been in the form of personal contact via letters, audio-cassettes, visits to metropolitan students, and telephone conversations. More recently there has been limited trialing of technology including videoconferencing, audio-conferencing and audiographics. These forms of new technology offer the advantage of group interaction in real time, and with immediate feedback. Participants in an earlier project expressed great satisfaction at being able to ‘meet’ their teacher and fellow learners and enjoy group activities (Anderton and Nicholson 1993). The role of the distance learning teacher has been described as guide, monitor, motivator and facilitator as the student interacts autonomously with the materials, but the introduction of new technology has created an environment that appears to lead to increased teacher control. In order to maximise the benefits afforded by interactive technology, teachers need to design tasks that minimise teacher intervention. The purpose of this project was to investigate whether increased exposure to technology together with involvement in tasks designed to restrict teacher mediation would facilitate more learner to learner interaction. Findings of this nature would have significant relevance for the reworking of Stages 1 and 2 of IOTY.
Aims and action plan

The project aimed to investigate:

- the potential of technology to enhance delivery and content
- the potential for the development of student support networks
- the potential for using technology in the delivery of IOTY Stages 1, 2 and 3

Research questions included:

- What impact does technology have on the course design process?
- What impact does it have on students’ interaction with materials?
- What impact does it have on teachers’ interaction with students and materials?

An overall aim of the project was to gather information that would provide input into the reworking of IOTY Stages 1, 2 and 3, so that the use of the new, interactive technologies investigated in this project could be considered when writing teacher guidelines for the revised courses.

The expected outcomes of the research were:

- information on the viability of using new technology, in particular audiographics and teleconferencing, as a support mechanism for the delivery of IOTY
- data for the development of training packages for various types of technology
- the development of materials which have been successfully trialed and adapted for use via technology
- a report, conference, and journal articles

The following actions were undertaken:

- formation of the project team, including appropriate support people in each state
- extensive background reading
- planning of periodic audioconferences with support personnel, and the project consultant
- identification of 50 to 60 suitable students in Western Australia, New South Wales and Victoria
- location of accessible technology in Western Australia, New South Wales and Victoria
- matching of students to technology sites
• identification of support for students at each site
• training of learners for audiographics
• training of lecturers for audiographics and videoconferencing
• identification of materials suitable for task design, and modification of curriculum principles in close consultation with the project consultant
• trialing and delivery of tasks and materials
• designing of data collection mechanisms
• collection of data
• analysis of data
• preparation of report

Structure

Following the introductory chapter, Chapter 2 reviews relevant literature from the distance learning, technology, and task design areas. The concept of learner support within the distance learning context is discussed, and the use of technology is examined in the educational framework. Principles of task design are then examined, and the impact of these principles on the design of tasks for delivery through the medium of technology is considered. Chapter 3 describes the methodology used, and Chapter 4 outlines the results of the investigations. The final chapter summarises the findings of this research, considers the major implications and puts forward recommendations for future directions.
Distance learning and learner support

When discussing distance education, Nipper (1989) spoke in terms of ‘generations’ of systems. He alleged that the first and second generations were concerned only with the production and distribution of teaching and learning materials, that communication with the learners was marginal, and communication amongst the learners almost non-existent. When the Adult Migrant Education Program's (AMEP) distance learning program It's Over to You (IOTY) was introduced it was intended to be the initial step in a range of learning opportunities equal to those currently offered within the classroom (Kleist 1986). The introduction of audiotapes marked the beginning of the second generation. Emphasis was placed on the need for distance learning programs to provide efficient communication between the teacher and the learner and ideally, opportunities for contact between learners. It was predicted that as technology developed, so too would the range of communication modes used in distance education (Kleist 1986). And with this development would come the third generation. While this prediction has been realised in mainstream education at all levels, there is little evidence in published literature of any significant progress in the use of new technology for teaching adults from non-English-speaking backgrounds.

Distance learning programs, by tradition, have a high incidence of learner drop-out. Many reasons for this have been put forward, in particular the sense of isolation experienced by students working alone (O'Grady 1993). Learning is as much a social activity as an individual quest for knowledge, and there is need for interpersonal communication, with opportunities to question, challenge and discuss (Bates 1991; Holmberg 1989).

In a study of drop-out from the AMEP distance learning program, support was identified as the essential ingredient for improving learner persistence, and lack of external support cited as one of the conditions leading to distance learning failure (Harris 1994). Support in this program is largely dependent upon teacher-learner interaction and may be in the form of contact by letter, telephone, audio-cassette, or occasional face-to-face meetings. Students in remote locations rarely have the face-to-face experience. However limited trials in the use of videoconferencing with some of these learners found that the opportunity to ‘meet’ teachers and fellow learners was received with great enthusiasm and seen as the greatest advantage of this particular medium (Anderton & Nicholson 1993; Harris and Hague 1991).
The intention of the AMEP distance learning program is to offer a learning experience equal in quality to the classroom experience (Kleist 1986), maximising opportunities for interaction (Beaverson 1988). However, despite this, some learners in this program have expressed awareness of the absence of some classroom factors which provide a nurturing environment for study to take place (Harris 1994). One of these factors is the opportunity to practise language in a non-threatening environment, and another is social contact with peers who understand and appreciate the migrant experience. Harris found that while some learners have strategies that allow the active recreation of the positive factors associated with classroom learning, others are unable to counteract the negative feelings that arise out of solitary study and either drop out, or continue with such limited motivation that language gains are insignificant.

In her study (Harris 1994), the factors presented as inhibitors of successful progress in the AMEP distance learning program were categorised as academic, practical and affective. Some academic issues included the difficulties some learners experience with either the content or instructions in the study materials, and the lack of face-to-face assistance. A number of learners suggested that problem-solving would be easier in a face-to-face context (Harris 1994). While not always face-to-face, the use of new technology for collaborative learning including problem-solving techniques is well documented in the literature (Andrews 1994; Dallos 1984; Forsythe 1984; Snyder 1994; Sutherland 1993). Very recent evidence points to the use of new technology for real time (synchronous) communication between learners in a university setting (Boyd and Chang 1994; Kroonenburg 1994), using computer conferencing, with no requirement for the production of oral language at the same time. One study however, (Kroonenburg 1994) did note an associated improvement in all macroskills, as tasks were constructed to complement the interaction-via-technology component.

Despite in-built teacher/student telephone conversation, scaffolded in the initial stages and continuing right through to the final unit of IOTY, some learners in the AMEP distance learning program indicated drawbacks to telephone use such as the lack of demonstration and gestures, and translation by same-language-group peers (Harris 1994). Other research indicates that with training and extended exposure these factors can become part of interaction using new technology (Robinson 1984), and Harris (1994) suggests this as worthy of further research in the AMEP distance learning context. She also suggests that opportunities for distance learning enhanced by new forms of delivery may motivate learners to gain control of the practical issues such as domestic and work commitments, claimed to prohibit study. This too may overcome the affective factors which arise in part from the emotional experience of attempting solitary study (Harris 1994). While not concerned with the second language learning domain, research indicates that new technology can be used to overcome the isolation experienced by some students working alone, engendering a sense of belonging to a group or class (O'Grady 1993), and that the resulting feelings of rapport with teachers and fellow learners can strengthen and support study motivation (Dallos 1984; Forsythe 1984; Means and Olsen 1994; Ritchie 1993; Wyer, Thompson, Kindt and Danaher 1993).
New technology and educational implications

Throughout the history of distance education one of the major challenges has been the provision of meaningful interaction between learners and teachers (Andrews 1994). Despite an extensive ERIC search, little could be found on the use of new interactive technology to provide synchronous support for distance learners from non-English-speaking backgrounds (NESB). The scope of most research is restricted to higher distance education, looking in the main at studies from the United States of America, and Canada (Moore 1990; Mugridge and Kaufman 1986). More recently the use of technology in the primary and secondary sectors of education has received attention from researchers but in all reports the emphasis has been on the use of new technology for course delivery to isolated learners, geographically remote from higher educational institutions, or to learners within schools where low populations makes the provision of some specialist courses impractical (Oliver and Reeves 1994; Conboy 1992). Although the potential for interactive learning is acknowledged, less emphasis is placed on the small-group, learner-centred activities that were the focus of this project.

Several issues occur throughout the literature which do have relevance for this study. Primary amongst these is a warning about the pressure on teachers to use technology for its own sake (Bates 1984; McNamara and Heffernan 1993), and a caution about the necessity to resist this (Boylan and Hemmings 1993; Dallos 1984; Oliver and Reeves 1994; Dikkers 1991). New technology can be seen as seductive, and several researchers felt that too much attention can be paid to technology, and not enough to the educational need for it. They stress that teachers should be technology aware, but not technology driven and that consideration should still be given to older, simpler and cheaper forms which can be just as effective in terms of educational outcomes. They suggest that there is no sense in using new technology just because it is there.

In discussing new technologies, researchers are unanimous in their call for adequate teacher training in its use. This appeal has two strands: first, teachers should be made aware of the strengths and weaknesses of a particular medium and how best to integrate it into their program for maximum effectiveness. (Andrews 1992; Bates 1991; Dekkers 1991; McBeath and Atkinson 1992; Mansoor 1991; Snyder 1992). Second, teachers must not view technologies as just another tool, but be prepared to modify their practice in order to maximise the advantages of new technologies in the learning process (Coppinger 1994). Teachers are asked to consider what can be done now using new technology, that could not be done before, rather than doing the same old things in the same old way, but electronically (Mugridge and Kaufman 1986; Schiller and Mitchell 1993). In attempts to provide elements of the face-to-face classroom paradigm there is a problem of continuing the old traditions. Different approaches, ability and methods are needed to use different technologies effectively. (O’Grady 1993; Peck and Dorricott 1994; Tate 1993).
In their discussion of telematics (audiographics), Oliver and Reeves (1993) noted a far more teacher-centred and didactic approach than would have been observed in class-room presentations of the same subject. Other literature bears out this observation (Burge 1989; Bates 1984). Bates (1984) refers to Robinson’s research (1984) when he reports that in the view of participants, lack of visual contact in an audioconference appears to place the teacher more firmly in command of the event than would be found in an equivalent face-to-face group. The teacher is inclined to take control, taking the initiative in opening an interchange or in questioning. Robinson (1984) felt that interactive technology placed the teacher in a more authoritarian role than might be desirable for an adult learning group. O’Grady (1993), on the other hand, found that, though normally effective teachers felt they initially retreated into overly control-oriented behaviours in attempting to deal with the new environment, with longer exposure they became more comfortable and effective. The researchers were acutely aware of these considerations when approaching task design in the current research study.

They were also aware that some studies had shown that teacher-facilitated interaction was preferred by some students. Ritchie (1993) observed that some distance learning students prefer a passive learning style, and may not wish to be reached by interactive technology. She also felt that learners actually need training to be interactive (Ritchie 1993). And in fact other evidence suggests that with adequate training for both teachers and learners and longer exposure to the use of new technology, teacher-centredness evolves into student-centredness, with the teacher once again working collaboratively with students.

To achieve this, training for teachers in the use of new technology ‘needs to be ongoing and relevant, tailored to their needs and to the idiosyncrasies of each medium’ (Hurst 1994; Schiller and Mitchell 1993). It should be in a non-threatening environment, with adequate provision for practice and planning time (Hurst 1994; Hancock and Betts 1994; Lentell 1994). Planning time is mentioned often, many researchers reinforcing the view teachers need to be exceptionally well prepared for technology sessions, and that this takes longer as teachers make choices about suitable content and formats. Teachers need to be highly organised so that materials are prepared and sent out well before each lesson (Bates 1994; Dallos 1993; Wyer, Thompson, Kindt and Danaher 1993; Robinson 1984; Schiller and Mitchell 1993; Thompson 1993; Wyer 1993). The researchers in the current project corroborated this observation.

Before leaving the discussion of technology, it is interesting to note a number of other issues raised in the literature. First, cost was considered a barrier to implementation. This includes the costs of purchase, installation, maintenance and transmission time (Andrews 1994; Dallos 1984). Second, the issue of equity of access is raised. Is it reasonable to extend to a privileged minority the use of technologies that are not accessible to all students? (Dekkers 1991; Snyder 1994) On the other hand, new technology offers access to educational opportunities formerly denied (Oliver and Reeves 1994). The issue of equity of access arose in the current research project as many learners were denied the opportunity to
participate by limits on their ability to be flexible about time and place of study, or restrictions on the availability and accessibility of the technology itself. For precisely these reasons, research has suggested that audioconferencing remains the most viable form of new technology, as it is the least expensive and most readily implemented (Bates 1984; Lentell 1994; Mugridge and Kaufman 1986; Robinson 1984), another finding borne out by the current study. The final issue is that of support. The use of new technology requires effective support and management systems, with particular emphasis placed on training, provision of equipment, and maintenance of the equipment (Oliver and Reeves 1993). In addition, there must be support for research into the use of new technology (Oliver and Reeves 1993), and collaboration amongst institutions for the sharing of technical facilities (Bates 1994; McBeath and Atkinson 1992), and amongst teachers to share their developing expertise (Bates 1994; Dekkers 1991; McBeath and Atkinson 1992; Means and Olsen 1993; Schiller and Mitchell 1993). The rewards for attention to these issues are described in a discussion of the impact of telecommunications on open and distance education, where it is suggested that the institutions that can organise themselves and provide appropriate administrative and technical infrastructure will be ‘the economic power houses for the 21st century’ (Bates 1994; Lich 1985).

Task design

The study looks at the development of tasks for delivery using new technology. While attention was paid to the concept of materials design in much of the literature, no appropriate models could be found. Rather, teachers are offered a range of principles that should be applied when creating new materials, or adapting those normally used in classroom or tutorial situations.

When considering task design, in whatever context, all areas of learner knowledge and awareness should be called upon. This may include general linguistic knowledge, specific linguistic knowledge drawn from their first language, and non-linguistic or world knowledge (Mah and Byrnes 1991).

Tasks may be pedagogical or real world (Nunan 1989), but no matter the type or the context, they should have particular objectives and appropriate content, from which certain outcomes will be expected (Breen 1987). Tasks need to focus on communication, learning and living (Byrnes 1992).

Task design may involve collaboration with learners as to what and how something is to be done (Davis and Chang 1994; Nunan 1989). It may be facilitated by means of a learning hierarchy, which allows skills to be analysed into a series of steps, beginning with the simplest objective and finishing with the final one (Inglis 1989; Noordink and Naidu 1994).

In discussing the use of new technology for educational purposes the general view of researchers is that the first stage of task design is the establishment of objectives. Teachers must be clear as to what the
participants should gain from the experience in terms of educational outcomes. This may include affective outcomes, so important in distance education (Boylan and Hemmings 1993; Inglis 1989; Sutherland 1993; Wyer, Thompson, Kindt and Danaher 1993).

The issue of support for distance learners is central to the current study. To use interactive technology to its fullest advantage tasks should encourage the pooling of ideas or the group creation of a piece of work (O’Grady 1993). At the same time they should allow for a variety of learning styles (Andrews 1994), with teachers bearing in mind that learners may have differing degrees of readiness for interaction (Kroonenburg 1994; Ritchie 1993).

The potential and limitations of each particular medium should be understood by teachers and considered when tasks are designed. A videoconference for example is especially appropriate for activities where the need for visual reference is high. This may include tasks which focus on persuasion or negotiation, where face to face contact is an advantage. Information sharing, problem solving and the exchange of opinions can be done just as effectively by telephone. An initial face-to-face meeting between teacher and learners is valuable, but this value becomes doubtful if the nature of subsequent interaction determines that it could continue just as successfully in a more cost effective, non-visual medium (Bates 1994; O’Grady 1993).

Teachers are advised to include visual, tactile and kinaesthetic stimuli in task design (Schiller and Mitchell 1993; Sikhanyiso 1989), as learners are inclined to tire more quickly in the new technology environment and lose concentration. For this reason teachers should time the various stages of a lesson carefully (Treagust, Waldrip and Horley 1993).

One of the chief values attributed to new technology is the opportunity for interaction in real time. Instant feedback can be provided from teacher to student and between students themselves (Andrews 1994; Dallos 1984; Forsythe 1984; Wyer, Thompson, Kindt and Danaher 1993). However students may not respond immediately to the opportunity for collaborative learning and tasks should be developed to provide training on strategies for the management of interaction, and the successful negotiation of meaning (Bygate 1987). Valuable learning-to-learn skills are gained as students realise the importance of these elements in the learning process (Eastmond 1994). Outcomes will include collaboration, problem-solving, and discussion techniques (Sutherland 1993), all valuable elements of self-directed learning (Richards 1987). Scaffolding learner-centred interaction can occur when the teacher employs question techniques which have increasing and longer pauses, and which lead eventually to a higher frequency of learner contributions (Ritchie 1993). The pauses, known also as ‘wait-time’ in the literature, require skilled judgement, as an extended silence can be most disconcerting to a remote audience, and can lead to loss of concentration (Behrendt 1989; Power 1993). Learners are more likely to be active participants if tasks are relevant to their personal experience (Davis and Chang 1994; Kroonenburg 1994; Newman and
There is also the view which suggests that as society becomes increasingly technologised, tasks which lead to the gaining of technology competencies (Eastmond 1994), will be of relevance to ESL learners, some of whom run the risk of being left further behind (Lich 1985).

Other issues related to task design include: the importance of establishing a non-threatening environment where risk-taking is encouraged by the use of appropriate reinforcement techniques; the structuring of tasks to allow all participants opportunities for interaction, and the development of voice techniques to compensate when visual cues are lacking (McNamara and Heffernan 1993). The particular idiosyncrasies of each medium should be understood, and conscious planning done to facilitate the interaction that is the main aim (Boyd and Chang 1994; Robinson 1984). This may include providing learners with carefully prepared materials before the lesson so that they might prepare in advance for active participation (Bates 1984; Wyer, Thompson, Kindt and Donaher 1993).
Chapter 3
Methodology

Description of participants

Learners

Distance learning lecturers in Western Australia, New South Wales and Victoria were asked to recommend suitable learners for the project. They were given a brief outlining an ideal student who was:

- eligible for AMES programs
- currently enrolled in the distance learning program in either Stage 2 or Stage 3
- had a minimum Australian Second Language Proficiency Rating (ASLPR) of 1+
- interested in participating in the project
- available during office hours
- had some computer or keyboard experience
- within reasonable proximity of available technology

Lecturers in New South Wales and Victoria were provided with charts indicating centres where appropriate technology was situated. Initially, consideration was given to including learners from workplace and pre-literacy contexts, but no suitable participants could be found. Plans to extend the trial to Christmas Island and the Cocos Islands were abandoned for the same reason. All learners recommended were contacted, and the project began with 24 Stage 2 learners and 28 from Stage 3. Of these, seven were from Western Australia, six were from Victoria, and the remainder from New South Wales. ASLPR levels ranged from 1+ to 4. Thirteen learners were available for videoconferencing, 11 for audiographics, and 40 for audioconferencing. In Western Australia only, limited trialing of audiographics occurred with one Macedonian speaker, newly arrived from Yugoslavia, unfamiliar with the Roman alphabet, and living in a remote mining community. No local support was available, so the alphabet section of the pre-literacy materials, Get Ready, was modified for delivery via this technology. Only two Stage 2 New South Wales learners were available to take part in all three forms of technology and one Western Australian learner was available for two forms. Students were asked to indicate on a form which type of technology they wished to trial and the time of day when they were unavailable. Participation requirements were made explicit, and the toll-free telephone service was extended from Western Australia to New South Wales and Victoria for the convenience of learners in those states who wished to clarify any aspect of participation. Despite intensive efforts
to match learners to technology at their preferred times and sites, a number withdrew either prior to the commencement of trialing, or soon afterwards. Some had genuine reasons such as illness and motor accidents, but other reasons given for non-participation at the last moment reinforced the view that many distance learners are unable to be flexible about the time and place of their learning other than within the confines of their own homes.

Appendix 1 provides a detailed summary of project participants.

**Researchers and lecturers**

Two experienced distance learning lecturers from Western Australia were appointed as project research officers. Each was appointed to the project for 0.5 of their time, maintaining normal distance learning teaching duties for the other 0.5. Both lecturers had worked together on earlier research which investigated the range of technology available in Western Australia, and examined the feasibility of using technology as a support mechanism for NESB learners in Western Australia (Anderton and Nicholson 1993). An additional two experienced lecturers from the WA Distance Learning program were involved in the audioconferencing sessions.

A contact lecturer in New South Wales and another in Victoria were appointed for ongoing liaison with the researchers. The contact lecturer in New South Wales worked with a team of experienced distance learning lecturers. The contact lecturer in Victoria, herself an experienced distance learning lecturer, liaised with distance learning staff, ethnic grant-in-aid workers, and home tutors.

Preliminary discussions with lecturers from New South Wales and Victoria commenced during the Distance Learning Conference held in Western Australia in July 1994. Contact continued by Email, fax and audioconferencing. Issues for discussion included:

- the aims of the project
- clarification of roles for lecturers
- the degree of assistance required at each site
- the frequency of contact with learners
- responsibility for training of students
- criteria for student selection

**Support staff**

Support staff who were familiar with the technology needed to be available at each site. Their duties included the provision of support, and possibly training, for the students at that site; the observation of student reaction to the technology, student and teacher interaction via the technology, and learner to learner interaction via the technology; and the recording of their observations on evaluation sheets, to be forwarded to the researchers as part of the data collection.
The contact lecturer in New South Wales assigned one member of the distance learning staff to each videoconference, and two members to each audiographics session. In Victoria, the contact lecturer arranged bilingual support for learners involved in videoconferencing, and a home tutor was asked to support learners involved in audiographics. This included childcare and transport.

In Victoria, technological support for videoconferencing and audiographics was provided by experienced personnel based at each site. These staff members also acted as observers. In New South Wales and Western Australia expert technological support was available at each site for videoconferencing. No designated technological support was available for audiographics in either state.

**Description of technology used**

Earlier research recommended that ESL program providers direct further research into audioconferencing, audiographics and compressed signal videoconferencing (PictureTel), these being the most viable forms of new technology in terms of cost and availability (Anderton and Nicholson 1993). These were, therefore, the forms of technology that the researchers focused on in the present project.

Audioconferencing is the simplest, most readily available, and most cost effective of the new technologies chosen for this project, as the only equipment required is a telephone. Bookings are made through Telecom’s Conferlink service, which links nominated participants at the appointed time, monitors the quality of the lines and makes a tape-recording of the call if required. In this project, the project officers and lecturers in Western Australia had a conference phone, but on occasions some chose not to use the hands-free option. Due to the three hour time difference between Western Australia and the other participating states of Australia, one lecturer chose to have early morning (WST) audioconferences linked to her home telephone.

Audiographics allows the exchange of both audio and visual information in a conference setting. Participants need access to a site which has a computer, a modem, a conference phone or similar, and two telephone lines. One telephone line is used for the audio link, and the other is reserved for the modem which connects the computers. In this project, the WA Distance Learning office was the site from which connections were made to either one or two other sites at a time. A hands-free telephone in the office permitted two separate locations to be dialled without operator assistance. A separate telephone line installed for a modem connection was split and a second socket attached permitting a second modem connection. As the host site (Lowe 1993), it was necessary to provide a modem connection for each other site. The computer used was a Macintosh Centris 610, and the communication software enabling the exchange of information between Macintosh computers was Electronic Classroom 2.5.7. This was installed on all computers in the project. It allowed the
transfer and sharing of text and graphics between all sites. Screen information could be created or edited at one site and seen almost simultaneously on computer screens at all other sites. Oral interaction could occur at each site, and between sites at the same time as the exchange of visual information. Screens to be used during the lesson could be prepared in advance, saved and either sent electronically to each site prior to or during a lesson, or transferred to a floppy disk, an identical copy of which could be posted to each site. These disks could then be opened remotely at each site. Copies of screens could be printed for reference and, in case of technical failure, could be faxed. During any transaction, the audio link provided a constant channel for communication.

Videoconferencing allows the two way transmission of televised images and sounds, allowing face-to-face interaction in real time between a number of sites. For this project, the Picture Tel system was used. The video signal is compressed and transmitted, along with sound and other data, through Telecom’s ISDN service. Compression reduces the amount of video data to be transmitted, making the cost of transmission less, but a consequence is reduced picture quality when compared with the standard broadcast quality video signal. Another disadvantage, especially in the ESL context, is the loss of sound/picture synchronisation. The two second sound delay can be disconcerting for novice users of this technology. A variety of peripheral technology can be incorporated into a videoconference. This can include pre-recorded video, computer-generated material, slides, photographs, sections of text, realia, and audio-taped material. The various communication channels can be selected by simple, keypad operation. A videoconference may be a simple point to point interaction with one or more participants at either end, or may be multipointed, allowing simultaneous communication between up to eight separate locations. With multipointing the videocamera is voice activated which is disconcerting, as the sound precedes the image by several seconds.

Selection of technology

The Telecom Conferlink service was selected as the most convenient option for national audioconferencing.

Two computer packages were examined for audiographics delivery: the Macintosh Electronic Classroom and the IBM Smart 2000. The former is the software used by the WA Ministry of Education Distance Education Centre, and was installed in over 500 primary and secondary schools throughout Australia (Oliver and Reeves 1993). However, installation of Electronic Classroom had been discontinued in the adult learning sector, leaving only four regional telecentres where it was available. The latter is an IBM (Windows) compatible product which offers a more comprehensive range of text and graphics sharing in real time. The advantage of using the Smart 2,000 software was that it had become the preferred choice of the TAFE Media Network and was available at approximately 40 telecentres throughout regional Western Australia. Unfortunately, the Western Australian researchers were unable to obtain information as to its distribution or availability in either NSW or Victoria. Therefore, the decision was made to proceed with the latest version of Electronic Classroom on Macintosh computers.
*Picture Tel*, the system used by the WA Department of Training, was chosen as the most convenient and appropriate system for videoconferencing. This videoconferencing network is referred to as TAFELINK, *Picture Tel* being a product name. TAFELINK is part of the WA TAFE Media Network, and is housed in the WA TAFE External Studies precinct. Previous research had indicated that videoconferencing via satellite was not cost effective for small group interaction. In addition, access to the service was extremely limited. Hence, it was not recommended (Anderton and Nicholson 1993).

**Research into location**

**Audioconferencing**

No research was required for the location of audioconferencing technology. Participants required access to a normal telephone, or a conference phone if group participation was arranged at a site. Bookings were made through Telecom’s Conferlink service. A convenor for the conference had to be nominated and a telephone number given for the recovery of all costs associated with a link.

**Audiographics and videoconferencing**

A survey of the Western Australian Telecentre Network and WALINK Centres was conducted to ascertain the range of technology available at each centre, costs of usage, and availability of support personnel at each site. Lists of all schools in Western Australia and Victoria with *Electronic Classroom* installed were obtained from the Telecommunications Support Unit of the WA Ministry of Education. Maps showing all *Electronic Classroom* sites in New South Wales associated with the Open High School, and other additional, non-associated sites, were obtained from OTEN in Sydney. The WA TAFE Media Network provided a list of all sites in Western Australia, New South Wales and Victoria where videoconferencing equipment compatible with their system was located. The project liaison officers in New South Wales and Victoria were provided with all relevant information about the geographic location of the technology required.

In Victoria, the timing of the project coincided with major changes to the structure and operation of the AMES distance learning program. The liaison officer was unable to locate any metropolitan sites with *Electronic Classroom* and the only regional site had no enrolled AMES distance learning students in the vicinity. No assistance was possible from teachers of metropolitan area students, so none could be found to take part in the project. However, the contact lecturer located two Stage 2 learners at Wangaratta, where *Electronic Classroom* was available at the North East Telecentre. Another Stage 2 family of three was found in Wodonga and they agreed to participate in videoconferencing at Charles Sturt University, Albury. Three additional learners in rural Victoria were available for audioconferencing only.

In New South Wales, eight distance learning teachers examined their class lists and identified a total of 28 learners as possible candidates for audiographics. They had not been consulted as to their willingness, availability, flexibility or degree of computer literacy, but were deemed suitable in terms of communicative competence and aptitude. The majority
were based in the Sydney metropolitan area. There being no central contact person to give information, access to Electronic Classroom sites outside the Sydney area could not be guaranteed, so it was decided that provision for audiographics would be established at the New South Wales distance learning office at Burwood. The rationale was that distance learning lecturers would be on hand for initial training of students, observation of interaction and general supervision of the technology; and the opportunity to develop practical skills in the use of the technology would be extended to New South Wales distance learning teachers. Since teachers were rostered for duty from 9am to 7:30pm Eastern Standard time (EST), there was more scope for contact time with the Perth Distance Learning office, which was an advantage with the three-hour time difference. For similar reasons, The University Centre in Sydney was selected as the site for videoconferencing.

In Western Australia, one metropolitan learner only was suitable and available for audiographics. Despite the wide distribution and use of Electronic Classroom in rural Western Australia, no students could be matched. Four distance learners, concurrently enrolled in a Community Access course for general English skills at a south west college of TAFE, were invited to take part in videoconferencing. The studio was within the TAFE college and was one of the TAFELINK sites. Adjacent to the TAFE was a senior high school where Electronic Classroom was installed. Three members of staff had received training in its use but lesson delivery had not yet commenced. It was hoped that the same group of southwest learners could use the audiographics equipment at the senior high school, providing the staff with an opportunity to practise their computer skills at the same time. Permission and encouragement from the relevant Education Department personnel were given, but no staff member was available at the high school to support the project. It should be noted that the project budget allowed for payment of audiographic support staff where necessary.

Matching of students

Once both students and technology sites were located, matching proved to be a complicated and time consuming exercise. The process included:

- the creation, distribution and collection of a form on which participating students could indicate the times at which they were unavailable each day of each week during the project delivery time
- the seeking of information as to dates and times when videoconferencing studios were available
- the analysis of students into groups according to the technology for which they were available, according to the unit of IOTY that they were studying, and according to the time when they were available on two or three consecutive occasions
- the matching of student dates and times with dates and times of studio availability
Audioconferencing

Many New South Wales students had indicated interest in all three forms of technology but could not be included in audiographics or videoconferencing due to constraints on their time. These students formed the nucleus of audioconferencing groups. Using the same criteria as for audiographics and videoconferencing, ten groups with up to four students in each were organised. Each group included learners from either two or three states of Australia, or from various regions of New South Wales. Two audioconferences for each group were booked through the Telecom Conferlink service.

A preliminary schedule of audiographics and videoconferencing was prepared and distributed to each student concerned. Following some adjustments, the following arrangements were confirmed:

**Videoconferencing**

Stage 2: two lessons, one week apart
- 3 NSW students
- 3 Vic students

Stage 3: three lessons, one week apart
- 3 NSW students
- 4 WA students

Videoconference bookings for four studios in three states were coordinated from the WA TAFELINK network.

**Audiographics**

Stage 2: three lessons over four weeks
- 4 NSW students
- 2 Vic students

Stage 3: three lessons over three weeks
- 3 NSW students
- 1 WA student

The North East Telecentre studio in Victoria was contacted and arrangements were made for the audiographics service. New South Wales lecturers were given the dates and times of audiographics links to their office.

For each audiographics and videoconferencing session observers were appointed, plus technological support where possible. In New South Wales student support and observation was provided by two teachers rostered per audiographics session, and one per videoconference. In Victoria, the formal observations were made by studio personnel. In Western Australia, the researchers acted as observers for each other at Perth sites. No observer was available at Albany.
Materials and curriculum design

Principles

The guiding principles to be made explicit to all distance learners of the course IOTY are described in the Stages 1 and 2 Teachers’ Guide as:

- language is real and everyone has the ability to learn a language
- there are many ways to learn
- you do not have to understand every word in order to understand the meaning
- do not expect too much of yourself.

(AMEP Distance Learning Course Project Team 1990)

These basic beliefs underpinned the design of tasks to be exploited via new technology, but the major principle was the promotion of spontaneous and sustained learner interaction with minimum teacher intervention. To that end, additional principles were observed when language tasks were planned. The researchers endeavoured to make allowance for a range of student backgrounds, experiences, language levels and learning styles. They aimed to maximise the particular advantages offered by each technology. They planned to keep student groups small to encourage as much student interaction as possible. They bore in mind the assertion that tasks should provide opportunities for the practice of appropriate interaction in a social setting, in particular the management of conversation through turn-taking, topic nomination and change, negotiation of meaning, indication of lack of comprehension, and asking for repetition (Nunan 1991). They also took into consideration the theory that learners can learn more through using language features that they already know, and that, therefore, activities should extend and enhance those studied and practised in IOTY course materials.

Description of material

All materials used were exchange of meaning oriented, that is, they searched for understanding through dialogue. There was no intention to instruct learners on any language issues. Tasks were based on the assumption that Stage 2 learners were familiar with units 6 and 7; and that Stage 3 learners were familiar with the Access Book, and Book 1, Your Local Area.

All materials focused on the production of conversation and included video clips, graphics, audiotaped segments, authentic reading such as travel brochures, check-lists, postcards, and ‘human interest’ newspaper clippings.
For the audioconferences, topic outlines were sent to each learner several days ahead. Each topic outline or checklist included some or all of the following:

- the names of group participants
- Telecom operator procedure
- hints on how to give appropriate feedback
- specific focus questions on the topic for discussion
- reference to relevant pages of IOTY
- hints on how to ask open questions, or how to ask for clarification
- reading material such as brochures, newspaper articles, teacher-prepared worksheets.

For audiographics three or four screens were prepared prior to each lesson. Materials included:

- student and teacher photographs
- scanned images
- teacher prepared graphics
- teacher prepared text
- authentic texts such as insurance claims, maps and advertisements, which were posted or faxed to other sites ahead of the lesson

Lesson materials were either prepared and saved on the computer hard disk, or loaded on to a floppy disk and posted to the other site/s.

For videoconferencing, materials consisted of:

- videoclips
- text
- photographs
- maps

**Consultant advice**

When designing tasks the researchers were advised to select language activities appropriate to the mode of delivery; to consider the nature of the task, whether it be writing, listening, or speaking; to consider the purpose of the task; and to be clear as to how the task was intended to develop. It was suggested that they design tasks to allow maximum interaction, which would be more readily achieved if they set the scene for tasks by sending materials ahead of lessons. They needed to set up codes, such as how to interrupt (Can I just come in here...?) prior to group discussion. In addition, they had to think about the amount of time required for each stage of an activity, to break the activity into stages, and to allow an approximate amount of time for each one. It was necessary to be prepared to discuss accuracy, and to point out how and where learners could...
improve linguistically. Tasks had to be structured so as to allow for discourse analysis, and ideally tasks had to be set up in such a way that the teacher could take a back seat. This did not mean that teacher mediation had to be avoided, but that teachers needed to intervene in a way that students would see as valuable.

Task design

Following discussion with the consultant, it was agreed that tasks should be designed to build on the knowledge learners had gained by studying up to Unit 7 of Stage 2 and Book 1 of Stage 3. A number of tasks seen as appropriate to these course materials, and also to the various modes of delivery, were sketched out. These were then modified in conference with the consultant. A checklist for task design was provided. It divided task focus into ideas for the development of:

- grammatical competence
- sociolinguistic competence
- discourse competence
- strategic competence

Most tasks were designed with a listening/speaking emphasis, although reading was necessary for task preparation. For the most part, tasks focused on the development of sociolinguistic and strategic competence, especially the use of ‘strategies to question, clarify, and negotiate communication’ (Byrnes 1992). They were designed to maximise the specific advantages of each form of technology. For example, audiographics included a written discourse focus. The consultant recommended a grid format for task description, analysis and evaluation. This grid is reproduced in Appendix 2.

Training of participants

Lecturers

The distance learning lecturers in Western Australia had experience in audioconferencing. Since all audioconferences were convened in Western Australia, no training was necessary for lecturers in New South Wales and Victoria.

Both project research officers in Western Australia had received training in audiographics, and one had been involved in two earlier projects using this mode of delivery. As considerable time had elapsed since these projects, some further training was recommended. Consequently, the researchers contacted experienced audiographics users at OTEN in Sydney, and some on-line tutoring was given on aspects of screen design. They also attended a three-day workshop on audiographics which introduced special features of Electronic Classroom 2.5.7, and they arranged practice sessions with Western Australian experts to fine-tune their skills in linking computers, multipointing, sending files electronically, and opening floppy disks remotely.
In New South Wales, lecturers organised their own initial training on *Electronic Classroom* 2.5.7 some of which was provided by personnel from OTEN in Sydney, with additional advice from the developer of the software. Trial links were made between New South Wales and Western Australia and various skills reinforced. No training was required by support staff in Victoria. Linking sessions were arranged, however, to ensure that equipment was compatible.

In Western Australia, the project officers arranged for a revision session on videoconferencing. A member of the TAFELINK staff explained key strategies for camera setting, key pad operation, use of the video remote control, and document camera presentations. Further experience was provided with the voice-activated camera. No training of lecturers was required in New South Wales or Victoria.

**Learners**

In Western Australia, the only learner involved in audiographics commenced private keyboard skills tuition. Arrangements were made for her to come to the Distance Learning office for audiographics training. Macintosh skills, in particular using a mouse, were achieved by working on a *Mac Basics* program installed on the office computer. *Electronic Classroom* tools were introduced and a series of worksheets prepared for independent practice. After three weekly sessions the learner felt that she was proficient and confident enough to take part in a link. Two computers were linked in the Distance Learning office and further practice was provided in a simulation of lessons between remote sites.

In New South Wales, learners attended the Distance Learning office for training, where they were taught *Mac Basics*. Therefore, an introduction to the tools and menus of *Electronic Classroom* was given from Western Australia as part of the first lesson to both Stage 2 and Stage 3 learners. Further practice was available at the New South Wales office. In Victoria, learners were trained by specialist staff at the North-East Telecentre. Two training sessions were arranged prior to trials commencing. One learner was an experienced typist.

Studio personnel in New South Wales, Victoria and Albany (south west Western Australia) were available to assist learners with technical aspects of videoconferencing. Some students in New South Wales and Western Australia learned to use the document camera and to alter the camera settings.

**Delivery plan**

It was planned to deliver a number of sessions with each technology in order to observe the effect of repeat exposure on learners. The researchers wished to look at whether increased exposure to technology led to increased confidence, facilitating more learner to learner interaction with decreased teacher mediation.
Once technology sites and learners were matched, the following preparations were made before delivery of the lesson:

- Students were notified of each session in which they were involved. This information included the type of technology, the location of the technology, and the date and time of each session. Where students were unable to attend a session further negotiations were undertaken to either fill the gaps with other students, or re-schedule the session.
- Bookings of all forms of technology were made, and confirmed.
- Audio and videorecordings of TAFELINK and CONFERLINK sessions were requested.
- Technical assistance was booked for students at all videoconference sites, and at the Victorian audiographic site.
- Transport and childcare were arranged where required.
- Training for lecturers and learners was scheduled.
- Observers were requested for each audiographics and videoconference session.
- Session evaluation sheets for observers of audiographics and videoconference sessions were prepared and sent out prior to each session.
- Learner evaluation sheets for each form of technology were prepared and a copy sent to each learner prior to each session participated in. Free-post envelopes were distributed to facilitate return of the evaluation sheets.
- Teacher evaluation sheets for audioconferences were prepared.
- Tasks for each technology session were planned and materials gathered. This included the compilation of video and audio tapes, the selection of authentic texts, the preparation of audiographic screens, the copying and sending out of floppy disks, the preparation and sending out of pre-session learner preparation materials (by booking of courier delivery when necessary), and telephone confirmation of learner availability where considered necessary.

After the lesson delivery, these actions were taken:

- the collection of evaluation sheets from participants and observers
- the collection of video and audiotapes
- the modification of tasks for future delivery
- the notification of Telecom’s Conferlink service of changes to names and or phone numbers of participants

Delivery took place from November to December 1994.

**Methods of evaluation**

Journals were kept for the recording of day-to-day progress, plus anecdotal evidence. Anecdotal evidence was gathered during incidental discussions.
with learners, observers, support and technical staff, and between the researchers.

Learners were asked to complete a questionnaire, which is included in Appendix 3, at the conclusion of each session. The questionnaire was identical for each form of technology, and the final questionnaire in each set enquired about the learners willingness to participate in that form of technology again. Learners were asked to indicate:

- their feelings before and after the session
- the advantages and disadvantages of the technology
- any problems experienced

They were asked to comment on the opportunities for learner/teacher and learner/learner interaction; the group size and the length of each session; and the tasks. An opportunity to make additional comments was given on each questionnaire.

Observers were asked to answer a questionnaire, which is included in Appendix 4, after each videoconference and audiographic session. Information was sought on:

- the amount of support required by learners
- learners’ reaction of the technology
- the degree and nature of learner to learner interaction
- perceived advantages and disadvantages of the technology and its appropriateness for a distance learning program

Observers were invited to comment on the suitability of the lesson material, and space was provided for further comments.

After each audioconference, the conveners were asked to evaluate their experience, and complete a questionnaire which is included in Appendix 5. They were asked about:

- perceptions of the students’ and teachers’ roles in an audioconference
- how they planned for maximum student interaction
- variation in the nature and amount of teacher intervention experienced during an audioconference compared with that produced in a typical classroom session
- the degree and nature of teacher intervention in the instructional or non-instructional mode
- the appropriateness of tasks, the factors that influenced their selection, and whether the tasks required modification before re-use

Conveners were asked to comment on any technical or other problems experienced during a session, and for any suggestions they could offer on ways of preventing their reoccurrence. They were also asked about the learners’ reaction to the technology.
A tape-recording of each audioconference was requested from Telecom. These were available for conveners to assess the success of tasks and the nature of students’ responses prior to planning the next session. More intensive analysis was completed by the researchers. Similarly, videotapes were recorded by TAFELINK. The researchers were able to assess their own and students’ responses to the technology after each session, as well as analysing task suitability.
Chapter 4
Results

This chapter presents and analyses the formal data collected from three sources: written student surveys, written observer or teacher assessment forms and taped lessons. Informal data from teachers’ journals and anecdotal evidence has also been included. The student survey evaluation is presented in the following order: audioconferences, audiographics then videoconferences, and a discussion of the responses completes each section. Observer assessments of audiographic and videoconference sessions follow, and the feedback from the teachers’ observations of audioconferences is examined. The taped audio and videoconference material is also examined, as well as observers’ informal audiographic notes to identify any teacher intervention patterns. (The audiographic sessions were not recorded). The chapter ends with a list of the teachers’ concerns as recorded in their journals as well as anecdotal evidence relevant to the project.

The students were asked to complete an evaluation of each session in which they participated. A copy of the evaluation form they received is included in Appendix 3. Tables 1 to 6 record their responses according to:

- the technology used: audioconferencing, videoconferencing or audiographics
- the level of the student: Stage 2 or 3

Student evaluation of sessions

Audioconferences

A total number of 19 audioconferences were held with each student being invited to participate in two sessions. The maximum number of students per conference was four, but several had two or three participants. The same form was used for both evaluations, with an extra question (Would you choose to participate in audioconferences again?) on the second evaluation form. For a number of reasons (difficulties with transport, childcare, scheduling problems), the total number of participants was reduced from the original 40 to 33. From these, 44 evaluations were received, 18 from Stage 2 students and 26 from Stage 3 students, which represents a good overall return rate of 67.7% (62% for Stage 2 learners and 72% for Stage 3 learners). As an examination of the responses to the first and second evaluations revealed no great variation between the two, their findings have been recorded together. Table 1 records the responses from Stage 2 students while Table 2 shows those from Stage 3.
Discussion of responses

Students responded very favourably to their audioconferences with some very enthusiastic comments such as the following (quoted verbatim in italics):

• *That was great! Fantastic! I enjoyed it very much it was exciting*

It was very interesting to compare their feelings before and after the audioconferences, and surprising that while no one said they felt nervous before the first session, there were five Stage 3 students who admitted to it before the second one. It’s possible that the first session proved to be more demanding than expected and that they were therefore apprehensive of what could follow in the second. The only reservations were the following comments:

• *If I can see everybody, I can understand who want to talk next by there some movings or gestures, but the case (the teleconference of) over three people was difficult to seize an opportunity to speak.*

• *Tied [sic] because it is difficult to keep listening and attention by phone one hour.*

Many positive comments were made about the advantages of using this technology (question 4) including the following:

• *This is a very good decition [sic]*

Students identified very few disadvantages and those that follow were isolated examples. They do show, however, that students were prepared to be open, or even critical where they felt it to be justified, and were not constrained by cultural mores forbidding criticism of the teacher.

• *I would like to have the information letter before the teleconference.* (This referred to delays in postal delivery and emphasised the necessity for teachers to be prepared well in advance of the lesson.)

• *I prefer an other theme with more creativity.* (This was a reference to the learning task which had been selected to relate to the contents of the section of the course currently being studied.)

• *I couldn’t see any gesture the other telephoner.*

Most students (82%) were happy with the opportunities to interact with the other learners. It is of interest that no Stage 2 students wrote any comment on this question, whereas the higher level ones gave detailed responses.

• *No because we had not know [sic] each other very well. But I am sure after few times, will be better.*

• *The teacher gave us enough time to ask each others whatever we want.*

• *No, my questions weren’t correct, so our conversation didn’t go fluency [sic].*
### Table 1: Tabulated responses to student evaluation of audioconferences: Stage 2

<table>
<thead>
<tr>
<th>Question</th>
<th>No. of responses (max 18)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Did you enjoy the teleconference?</td>
<td>Yes: 16, No: 0, Not much: 1</td>
<td></td>
</tr>
<tr>
<td>2. How did you feel <strong>before</strong> the teleconference?</td>
<td>Nervous: 0, Excited: 11, OK: 4, Worried: 1, Confident: 1, Something else: 1</td>
<td><strong>Excited and worried</strong></td>
</tr>
<tr>
<td>3. How did you feel <strong>after</strong> the teleconference?</td>
<td>Happy: 15, Disappointed: 1, Relieved: 1, Something else: 1</td>
<td><strong>Happy and disappointed</strong></td>
</tr>
<tr>
<td>4. What were two or three good things about using the technology?</td>
<td>A variety of responses as follows: Develop telephone skills 1, Speaking practice 3, Listening practice 2, Gain in confidence 2, Can improve 1, Discussion opportunities 1, Make new friends 1, Interact with other students 2, Interact with different teachers 2, Learn about other countries 1</td>
<td></td>
</tr>
<tr>
<td>5. Was there anything you didn't like about using the technology?</td>
<td>Yes: 1, No: 9</td>
<td><strong>We can't see each other.</strong></td>
</tr>
<tr>
<td>6. Were there enough opportunities for you to interact with the other students?</td>
<td>Yes: 17, No: 1</td>
<td></td>
</tr>
<tr>
<td>7. Were there enough opportunities for you to interact with the teacher?</td>
<td>Yes: 17, No: 1</td>
<td><strong>1 student said yes and no</strong></td>
</tr>
<tr>
<td>8. Was the group size...</td>
<td>OK: 12, Too big: 6, Too small: 0</td>
<td></td>
</tr>
<tr>
<td>9. Was the length of the teleconference...</td>
<td>OK: 17, Too long: 1, Too short: 0</td>
<td><strong>Would prefer 45 minutes.</strong></td>
</tr>
<tr>
<td>10. Could you follow the teacher's instructions?</td>
<td>Yes: 18, No: 0, Sometimes: 0</td>
<td></td>
</tr>
<tr>
<td>12. Is this a good way for distance learners to learn English? Please say why or why not.</td>
<td>Yes: 17, No: 0</td>
<td>Similar responses to question 4. Two students mentioned the opportunity for immediate feedback. Another student appreciated the chance to talk about his own experiences.</td>
</tr>
<tr>
<td>13. Were the language learning tasks in this session useful to you?</td>
<td>Yes: 17, No: 0</td>
<td>Only comment was from one student who wrote <strong>very useful.</strong></td>
</tr>
<tr>
<td>14. Any other comments? Suggestions for learning</td>
<td>Most did not respond to this question. <strong>Suggestions:</strong> A teleconference once a week: 2, 2/3 students per group is best: 1</td>
<td></td>
</tr>
<tr>
<td>15. Would you choose to participate in a teleconference again?</td>
<td>Yes: 8, No: 0</td>
<td><strong>Comments:</strong> 1 student commented that the second session was better than the first.</td>
</tr>
</tbody>
</table>
### Table 2: Tabulated responses to student evaluation of audioconferences: Stage 3

<table>
<thead>
<tr>
<th>Question</th>
<th>No. of responses (max 26)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Did you enjoy the teleconference?</td>
<td>Yes: 26</td>
<td>5 were very enthusiastic. 1 said it was fantastic.</td>
</tr>
<tr>
<td></td>
<td>No: 0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Not much: 1</td>
<td></td>
</tr>
<tr>
<td>2. How did you feel before the teleconference?</td>
<td>Nervous: 5</td>
<td>None were nervous before the first session, but 5 were before the second one.</td>
</tr>
<tr>
<td></td>
<td>Excited: 3</td>
<td>Worried that she wouldn’t be able to speak well.</td>
</tr>
<tr>
<td></td>
<td>OK: 14</td>
<td>Interested.</td>
</tr>
<tr>
<td></td>
<td>Worried: 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Confident: 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Something else: 1</td>
<td></td>
</tr>
<tr>
<td>3. How did you feel after the teleconference?</td>
<td>Happy: 20</td>
<td>Tired: session was too long.</td>
</tr>
<tr>
<td></td>
<td>Disappointed: 0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Relieved: 5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Something else: 1</td>
<td></td>
</tr>
<tr>
<td>4. What were two or three good things about using the technology?</td>
<td></td>
<td>Great variety of responses as follows:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Good speaking/listening practice on phone at home: 15</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Listening to different accents: 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Immediate feedback: 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Exchange of ideas/broadens the topic: 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Can communicate cultural information: 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Learn about other parts of Australia: 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Increased confidence: 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Make new friends: 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Practice without leaving home: 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Easy to timetable: 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mutual support: 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Learn from other students: 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Contact with teacher: 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Useful for everyone: 1</td>
</tr>
<tr>
<td>5. Was there anything you didn’t like about using the technology?</td>
<td>Yes: 4</td>
<td>2 misread the question, 1 had a sore ear from the receiver and another complained about not seeing the other students. Another complained about the topic.</td>
</tr>
<tr>
<td></td>
<td>No: 14</td>
<td></td>
</tr>
<tr>
<td>6. Were there enough opportunities for you to interact with the other students?</td>
<td>Yes: 19</td>
<td>1 complained because the group was too big. Another said yes but that she didn’t take advantage of them because she was too hesitant at her first teleconference.</td>
</tr>
<tr>
<td></td>
<td>No: 5</td>
<td></td>
</tr>
<tr>
<td>7. Were there enough opportunities for you to interact with the teacher?</td>
<td>Yes: 19</td>
<td>2 students appreciated the teacher’s help very much, another welcomed the chance to speak to a different teacher. Another said there was insufficient time to talk with the teacher individually.</td>
</tr>
<tr>
<td></td>
<td>No: 5</td>
<td></td>
</tr>
<tr>
<td>8. Was the group size...</td>
<td>OK: 17</td>
<td>Most of those who said too big were in a group of 4. Suggestions were for 2 or 3 students per group.</td>
</tr>
<tr>
<td></td>
<td>Too big: 7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Too small: 0</td>
<td></td>
</tr>
<tr>
<td>9. Was the length of the teleconference...</td>
<td>OK: 21</td>
<td>Each session was timetabled to take 1 hour, but in a few cases they went overtime (up to 10 minutes).</td>
</tr>
<tr>
<td></td>
<td>Too long: 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Too short: 3</td>
<td></td>
</tr>
<tr>
<td>10. Could you follow the teacher’s instructions?</td>
<td>Yes: 22</td>
<td>One student said she needed the instruction to be repeated. Another complained that she wasn’t prepared because she hadn’t received the lesson materials in time (she had changed her address).</td>
</tr>
<tr>
<td></td>
<td>No: 0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sometimes: 4</td>
<td></td>
</tr>
</tbody>
</table>

30 New Technology and Curriculum Design
Similarly, responses to the question about enough opportunities for interaction with the teacher reflected those of the previous question with an overwhelming (82%) ‘Yes’ vote. The following comments came from Stage 3 students:

- The teacher leaded [sic] teleconference quite well.
- It was very good that the teacher kept the conversation going and interrupted only, if it was necessary.
- I’d like ticher [sic] more speaking, because she is speaking really correct and her opinion about the topic will be interesting too.

The size of the group was cause for concern amongst many of the students, particularly those involved in conferences with four participants as well as the teacher. This was of general concern to teachers too, as is discussed in the section outlining teachers’ findings. Most students were happy with the length of the session which was usually about an hour. This supports the findings of Western Australia students for whom audioconferences are a regular part of the program. As was to be expected few technical problems were reported, because of the simplicity of the technology.
In response to the question about following the teacher’s instructions, the overwhelming majority claimed that they had no problems. This was not always true as an analysis of the Stage 2 audiotapes showed instances of a lack of comprehension of the teacher’s instructions. Maybe it is unrealistic to expect these students to be able to give accurate self-assessments so soon in a new learning situation, or maybe students did not perceive it as a problem if it was resolved.

Question 12 (Is this a good way for distance learners to learn English? Please say why or why not.) elicited a number of student observations. The first comment quoted is particularly positive.

- Yes, for me I allways [sic] shy to speak with English people so, I can’t practice but, with the teleconference I can put my confusion away and talk confidently.
- Yes, because I can talk the people who live very far away, also I do it home and an unsheven [sic] face. (At least two students appreciate the anonymity of the medium)
- Everyone can spoke abut [sic] our experience.
- You can see the result straightaway if the people understood what did you say.

Students were reluctant to comment on question 13 (Were the language learning tasks in this session useful for you?). This may have been due to a lack of understanding of the concept of ‘learning task’. The following comments were the only ones recorded.

- It was interesting to hear how things are in different countries, but didn’t learn new things. (This student had previously praised the opportunities for speaking and listening practice).
- No, because under control is a little difficult to show that I learned. For example, ‘now you interrupt... That’s no easy’.

Responses to the last question about interest in future audioconferences showed the high level of support for these sessions. Students’ comments included the following:

- I’d like to learn english [sic] this way about half hour once a week.
- I wish if there’s a chance to do it every week so we can talk in a different subjects.

In summary this analysis of the student survey evaluating audioconferences, shows the positive impact of audioconferencing technology on the students’ interaction with Distance Learning materials and the IOTY course. The students have identified the value of the medium in motivating and encouraging them, and in providing the peer support that is lacking in regular distance learning provision. Since the technology is relatively cheap and easily accessible by all, students would welcome audioconferencing as a regular component of the Stage 3 course, as would higher level Stage 2 learners.
Audiographics

The final number of students (9) participating in this form of technology was disappointing. It was, however, compensated for by the positive responses of those who did take part. Stage 2 students participated in three audiographic sessions using the *Electronic Classroom* software. Only two of the four New South Wales students who were selected actually attended the sessions at the Burwood Distance Learning Centre where the necessary hardware and software had been installed for the purposes of this research. The two Victorian students used the facilities of the North East Telecentre in Wangaratta. All lessons were delivered from the AMES Distance Learning Centre in Perth.

It was intended to establish multipoint links for all sessions. However, due to technical problems the first link was unsuccessful and the session was conducted in two halves, with delivery to the two sites independently. In spite of successful links in the second and third sessions, no students were present at Burwood and the lessons proceeded with the Wangaratta students only.

A similar number of sessions were organised for Stage 3 students, of whom three were in New South Wales and one in Western Australia. The first session had four participants, three from New South Wales, and one from Western Australia. In the second, there were two students in New South Wales, and none in Western Australia. For the third, there was one student in each state. Delivery in Western Australia was complicated by the fact that the computer and phone had to be shared by the student and teacher.

Sixteen evaluation forms were sent out and 15 were returned, an excellent return rate of 93.7% (87.5% for Stage 2 learners and 100% for Stage 3 learners), which was gratifying. It needs to be noted, however, that the sample groups were small. Of the three separate evaluation forms sent to the participants a total of seven were received from Stage 2 learners, representing the opinions of only three learners. In the case of the Stage 3 learners a total of eight forms were received, representing the opinions of only four learners. Tables 3 and 4 record the survey responses from Stage 2 and Stage 3 students respectively.

**Discussion of responses**

All seven respondents enjoyed the audiographic sessions, citing their motivational value as well as their impact as a new experience. They experienced the usual concerns of students approaching a technological challenge for the first time and it was pleasing to note that all were happy after the sessions.

Students recognised the advantages of audiographics for themselves, and its value in supporting them in their distance learning study. In fact, several thought that the course was too short, one student even repeating his comment, *I would like more times each week to learn English on the computer*. As well as the assistance with oral English, they appreciated the value of the screen in providing opportunities for writing, spelling, and the
immediate feedback that is lacking in regular distance learning provision. It is interesting to note the number of times the word ‘easy’ appears in their comments. The use of the computer makes it easy to concentrate at study and it’s interesting, easy to learn, easy to remember. This is not a description that the researchers had anticipated for this particular form of technology.

Students found few disadvantages with this form of technology, but did comment on the extra demands placed on their concentration. Only two found that there were not enough opportunities for interaction with other students, finding the time (one hour) insufficient, and the need to share computers very restrictive. (There were three students on one computer in NSW.) All were happy, however, with the opportunities for interaction with the teacher.

Table 3: Tabulated responses to student evaluation of audiographics: Stage 2

<table>
<thead>
<tr>
<th>Question</th>
<th>No. of responses (max 7)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Did you enjoy the computer lesson?</td>
<td>Yes: 7</td>
<td>I like enjoy the computer lesson.</td>
</tr>
<tr>
<td></td>
<td>No: 0</td>
<td>I very enjoy the computer lesson.</td>
</tr>
<tr>
<td></td>
<td>Not much: 0</td>
<td></td>
</tr>
<tr>
<td>2. How did you feel before the lesson?</td>
<td>Nervous: 6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Excited: 6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OK: 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Worried: 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Confident:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Something else:</td>
<td></td>
</tr>
<tr>
<td>3. How did you feel after the lesson?</td>
<td>Happy: 6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Disappointed: 0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Relieved: 0</td>
<td></td>
</tr>
<tr>
<td>4. What were two or three good things about using the technology?</td>
<td></td>
<td>Computer, telephone.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Improved spelling, enjoy using computer.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Using computers to talk to other people.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Learning spelling and interacting with the teachers for talking. How to say</td>
</tr>
<tr>
<td></td>
<td></td>
<td>sentence.</td>
</tr>
<tr>
<td>5. Was there anything you didn’t like about using the technology?</td>
<td>Yes: 1</td>
<td>Sometimes the computer doesn’t work.</td>
</tr>
<tr>
<td></td>
<td>No: 6</td>
<td>Just one hour a week not enough to learn and I have somebody help look</td>
</tr>
<tr>
<td></td>
<td></td>
<td>after my daughter.</td>
</tr>
<tr>
<td>6. Were there enough opportunities for you to interact with the other students?</td>
<td>Yes: 4</td>
<td>(There are only 5 responses here because one student thought the</td>
</tr>
<tr>
<td></td>
<td>No: 1</td>
<td>question not applicable in a point to point link.)</td>
</tr>
<tr>
<td>7. Were there enough opportunities for you to interact with the teacher?</td>
<td>Yes: 7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No: 0</td>
<td></td>
</tr>
<tr>
<td>8. Was the group size...</td>
<td>OK: 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Too big: 0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Too small: 3</td>
<td></td>
</tr>
<tr>
<td>9. Was the length of the teleconference...</td>
<td>OK: 0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Too long: 0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Too short: 7</td>
<td></td>
</tr>
<tr>
<td>10. Could you follow the teacher’s instructions?</td>
<td>Yes: 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No: 0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sometimes: 4</td>
<td></td>
</tr>
</tbody>
</table>
Table 4: Tabulated responses to student evaluation of audiographics: Stage 3

<table>
<thead>
<tr>
<th>Question</th>
<th>No. of responses (max 8)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Did you enjoy the computer lesson?</td>
<td>Yes: 8</td>
<td>It motivates students to study. Yes, I did. Because I never have the computer lesson like that.</td>
</tr>
<tr>
<td></td>
<td>No: 0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Not much: 0</td>
<td></td>
</tr>
<tr>
<td>2. How did you feel before the lesson?</td>
<td>Nervous: 3</td>
<td>I practised computer before but not much. I felt a bit nervous but I want to try new things.</td>
</tr>
<tr>
<td></td>
<td>Excited: 0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OK: 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Worried: 0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Confident: 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Something else: 0</td>
<td></td>
</tr>
<tr>
<td>3. How did you feel after the lesson?</td>
<td>Happy: 8</td>
<td>Making study interesting. Easy to concentrate at study increasing efficiency of study, I was using these tools symbols to draw picture. Interesting, easy to learn, easy to remember. Conversation between students. Also good for listening and writing.</td>
</tr>
<tr>
<td></td>
<td>Disappointed: 0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Relieved: 0</td>
<td></td>
</tr>
<tr>
<td>4. What were two or three good things about using the technology?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Was there anything you didn’t like about using the technology?</td>
<td>Yes: 0</td>
<td>No. Only I must pay more concentration than that in the class. If each student has 1 computer it will be better.</td>
</tr>
<tr>
<td></td>
<td>No: 7</td>
<td></td>
</tr>
<tr>
<td>6. Were there enough opportunities for you to interact with the other students?</td>
<td>Yes: 7</td>
<td>Three students used one computer, and the lesson just lasted about one hour. The chance for practice is not enough.</td>
</tr>
<tr>
<td></td>
<td>No: 1</td>
<td></td>
</tr>
<tr>
<td>7. Were there enough opportunities for you to interact with the teacher?</td>
<td>Yes: 8</td>
<td>This was the first lesson. We didn’t know much about the tools. The teacher explained a lot and we asked questions too.</td>
</tr>
<tr>
<td></td>
<td>No: 0</td>
<td></td>
</tr>
</tbody>
</table>
Opinions differed on ideal group size, although both students and researchers were in agreement on two points: a total group across the states of two students was too small, while three students at the same site were too many. The fact that more than half of them rated the one-hour session too short is an indication of their appreciation of the medium as a learning tool. The teacher’s instructions were generally seen as clear, but not always (four students replied ‘sometimes’). It is possible that this can be attributed to students’ poor computer skills. The problem was compounded by the fact that in order to participate in audiographic sessions most students were required to learn another new language, that of computing.

Students tended to interpret the question relating to technical problems personally. They assumed it referred to how they performed on the technology, and attributed problems to their inexperience. It was interesting that no one mentioned the fact that due to technical problems, the multipoint link between the three states could not be established. In spite of several successful multipoint links in preparation for these sessions, at least half an hour was wasted on the first day on an unsuccessful link. Nor was there any reference to the delays caused by an inadequate phone system at one of the sites.

<table>
<thead>
<tr>
<th>Question</th>
<th>No. of responses (max 8)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>8. Was the group size...</td>
<td>OK: 7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Too big: 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Too small: 0</td>
<td></td>
</tr>
<tr>
<td>9. Was the length of the teleconference...</td>
<td>OK: 6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Too long: 0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Too short: 2</td>
<td></td>
</tr>
<tr>
<td>10. Could you follow the teacher’s instructions?</td>
<td>Yes: 8</td>
<td>Use the tools and type letters.</td>
</tr>
<tr>
<td></td>
<td>No: 0</td>
<td>We aren’t familiar with the software.</td>
</tr>
<tr>
<td></td>
<td>Sometimes: 0</td>
<td>(The teachers helped me.)</td>
</tr>
<tr>
<td>11. Were there any technical problems? If yes, what? Who helped you?</td>
<td>Yes: 2</td>
<td>It is good because... by using the technology we achieve in our goals.</td>
</tr>
<tr>
<td></td>
<td>No: 6</td>
<td>Interesting, activity, with a lot fun.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Because we can practise English more and keep interested in study. It is good for communication.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yes, I really learn more English than that in the English class.</td>
</tr>
<tr>
<td>12. Is this a good way for distance learners to learn English? Please say why or why not.</td>
<td>Yes: 7</td>
<td>I didn’t have because it’s an entrance lesson. I didn’t know what the language learning tasks were.</td>
</tr>
<tr>
<td></td>
<td>No: 0</td>
<td></td>
</tr>
<tr>
<td>13. Were the language learning tasks in this session useful for you?</td>
<td>Yes: 7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No: 0</td>
<td></td>
</tr>
<tr>
<td>14. Any other comments? Suggestions for learning activities? Recommendations?</td>
<td>Yes: 3</td>
<td>If offering one microphone which is connected to the telephone to each student it will be better.</td>
</tr>
<tr>
<td></td>
<td>No: 0</td>
<td></td>
</tr>
<tr>
<td>15. Would you choose to participate again?</td>
<td>Yes: 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No: 0</td>
<td></td>
</tr>
</tbody>
</table>
While responses to question 12 (Is this a good way to learn English?) were similar to those of question 4 (the advantages of the medium), it is interesting to see that two students commented on the 'active' nature of the sessions. One student even found it more beneficial than attending class.

Question 13 about the usefulness of the language learning tasks brought a positive response in most cases but little further comment. One student had a problem identifying the tasks as language learning tasks, obviously not recognising that learning to use the tools was in itself a language learning process. It is strange that one student made a negative response to the question about usefulness and followed it with a positive comment: Today, We can learning how can writing a letter.

There were few surprises in response to the final request for further comments or suggestions. The student who requested a microphone for each student obviously felt uncomfortable about being so far away from the hands free phone which was shared by both students. This is a valid criticism of a system that requires two (or more) students to share a computer and phone.

**Videoconferencing**

Two videoconferences were planned for Stage 2 students, with delivery from Perth, to three participants in New South Wales and another two in Victoria. Timetabling problems prevented a third session. The facilities used were the videoconferencing rooms at the University Centre, Sydney, Charles Sturt University, Albury and TAFE Media Network in Perth.

While the first session was planned for five students, three in New South Wales and two in Victoria, only two attended at each site. There were only three at the second session, one of the original two in Sydney and the same two students in Albury, a husband and wife. There were also three observers present, one in each state. Withdrawals were due to work commitments in one case, and in the others some rather lame excuses were offered.

Three videoconferences were planned for Stage 3 students, with delivery from Perth to four students in Sydney and four students in Albany, Western Australia. The latter students attended the videoconferencing rooms of the Open Learning Centre of the TAFE college in Albany. Four Albany students and three from New South Wales attended the first session but only two from each centre were present at the second session. Unfortunately, due to torrential rain in Sydney and complications in Albany, the third session had to be cancelled when only one student appeared. Observers were also present at the three sites.

Eighteen evaluation forms were sent out and nine were returned. This return rate of 50% (43% for Stage 2 learners and 55% for Stage 3 learners) was acceptable, but researchers had hoped for a higher rate. Of the evaluation forms sent to all Stage 2 participants, a total of only three out
of a possible seven were received, with two of these from the same person. Two students, a husband and wife, sent in no responses. In the case of the Stage 3 participants, only six out of a possible 11 forms were returned. Researchers noted that Stage 3 students consistently have a somewhat higher rate of return. This could be expected, since the more advanced the student, the easier he or she finds it to complete the form.

Tables 5 and 6 record responses from Stage 2 and Stage 3 respectively.

**Discussion of responses**

All respondents enjoyed their videoconferences. Their feelings about videoconferences both before and after the sessions were understandable with some apprehension before, and happiness or relief afterwards. One expressed concern about the theme (Getting to Know Your Skills) and understandable anxiety about the fact that their group had been told erroneously just prior to the session that it had been cancelled. Unfortunately, he did not add further comment to his response of feeling ‘confused’ after the session.

Students identified the major advantages of videoconferencing from a Distance Learner’s perspective: the ability to see the teacher and other students; visual aids including videos; opportunities for speaking, listening and communicating with other learners at a distance; the support of other learners in the small group or class situation. It was rather surprising to read that one student could not identify any advantages of videoconferencing. Possibly the apprehension associated with the session for that student outweighed all other considerations.

The question about disadvantages of the technology brought mixed responses. Only one student commented here on the inherent problem of the Picture Tel system, that is, the lack of synchronisation of picture and sound, although this may also be the meaning behind the comment from another student *Sometimes it was misrepresenting*. One of the Stage 2 students wrote that a system was needed to indicate when a speaker had finished speaking to express her frustration over the uncertainty of turn-taking caused by the sound-picture delay.
Table 5: Tabulated responses to student evaluation of videoconferencing: Stage 2

<table>
<thead>
<tr>
<th>Question</th>
<th>No. of responses (max 3)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Did you enjoy the videoconferencing?</td>
<td>Yes: 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No: 0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Not much: 0</td>
<td></td>
</tr>
<tr>
<td>2. How did you feel before the videoconferencing?</td>
<td>Nervous: 1</td>
<td>This student changed from worried to OK for the second session.</td>
</tr>
<tr>
<td></td>
<td>Excited: 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OK: 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Worried: 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Confident: 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Something else: 1</td>
<td></td>
</tr>
<tr>
<td>3. How did you feel after the videoconferencing?</td>
<td>Happy: 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Disappointed: 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Relieved: 2</td>
<td></td>
</tr>
<tr>
<td>4. What were two or three good things about using the technology?</td>
<td></td>
<td>Able to see other students. Could use visual aids. Small group.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The other student said she didn’t know.</td>
</tr>
<tr>
<td>5. Was there anything you didn’t like about using the technology?</td>
<td>Yes: 2</td>
<td>Delays due to the technology affected communication.</td>
</tr>
<tr>
<td></td>
<td>No: 1</td>
<td>A system is needed to indicate when a speaker has finished speaking.</td>
</tr>
<tr>
<td>6. Were there enough opportunities for you to interact with the other students?</td>
<td>Yes: 2</td>
<td>1 student expected more conversation with other students. She also asked for written aids for students.</td>
</tr>
<tr>
<td></td>
<td>No: 1</td>
<td></td>
</tr>
<tr>
<td>7. Were there enough opportunities for you to interact with the teacher?</td>
<td>Yes: 3</td>
<td>Teacher should correct our mistakes a bit more often.</td>
</tr>
<tr>
<td></td>
<td>No:</td>
<td></td>
</tr>
<tr>
<td>8. Was the group size...</td>
<td>OK: 2</td>
<td>This student was the only participant at this site.</td>
</tr>
<tr>
<td></td>
<td>Too big: 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Too small: 1</td>
<td></td>
</tr>
<tr>
<td>9. Was the length of the teleconference...</td>
<td>OK: 1</td>
<td>This student found the first session OK but the second too short!</td>
</tr>
<tr>
<td></td>
<td>Too long: 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Too short: 2</td>
<td></td>
</tr>
<tr>
<td>10. Could you follow the teacher’s instructions?</td>
<td>Yes: 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No: 0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sometimes: 0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No: 0</td>
<td></td>
</tr>
<tr>
<td>12. Is this a good way for distance learners to learn English?</td>
<td>Yes: 3</td>
<td>Full interpersonal contact with teacher and students.</td>
</tr>
<tr>
<td></td>
<td>No: 0</td>
<td>But expensive.</td>
</tr>
<tr>
<td>13. Were the language learning tasks in this session useful for you?</td>
<td>Yes: 2</td>
<td>No comments offered here.</td>
</tr>
<tr>
<td></td>
<td>No: 1</td>
<td></td>
</tr>
<tr>
<td>14. Any other comments? Suggestions for learning activities? Recommendations?</td>
<td></td>
<td>Good idea. Longer sessions (1.5 hours) would give more student discussion.</td>
</tr>
<tr>
<td>15. Would you choose to participate in a videoconference again?</td>
<td>Yes: 1</td>
<td></td>
</tr>
<tr>
<td>Question</td>
<td>No. of responses (max 6)</td>
<td>Comments</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>--------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>1. Did you enjoy the videoconferencing?</td>
<td>Yes: 6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No: 0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Not much: 0</td>
<td></td>
</tr>
<tr>
<td>2. How did you feel <strong>before</strong> the videoconferencing?</td>
<td>Nervous: 1</td>
<td>Student worried because of the theme and the fact he had been told (erroneously) that the session had been cancelled at the last minute.</td>
</tr>
<tr>
<td></td>
<td>Excited:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OK: 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Worried: 1</td>
<td></td>
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<tr>
<td></td>
<td>Confident: 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Something else: 1</td>
<td></td>
</tr>
<tr>
<td>3. How did you feel <strong>after</strong> the videoconferencing?</td>
<td>Happy: 2</td>
<td>I didn’t feel something special.</td>
</tr>
<tr>
<td></td>
<td>Disappointed:</td>
<td>I found my English improved.</td>
</tr>
<tr>
<td></td>
<td>Relieved: 1</td>
<td>Confused.</td>
</tr>
<tr>
<td></td>
<td>Something else: 4</td>
<td>OK</td>
</tr>
<tr>
<td>4. What were two or three good things about using the technology?</td>
<td>Can see the teacher.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Can learn from other students.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Can watch video and practise speaking.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>New way of communication, getting to know a new technology helps students improve English.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Breaks down the long distance between students and teacher.</td>
<td></td>
</tr>
<tr>
<td>5. Was there anything you didn’t like about using the technology?</td>
<td>Yes: 2</td>
<td>Sometimes it was misrepresenting.</td>
</tr>
<tr>
<td></td>
<td>No: 4</td>
<td>No opportunities to ask many questions.</td>
</tr>
<tr>
<td>6. Were there enough opportunities for you to interact with the other students?</td>
<td>Yes: 2</td>
<td>The time we been given in the class not enough. All No responses refer to the first session, all Yes to the second.</td>
</tr>
<tr>
<td></td>
<td>No: 4</td>
<td></td>
</tr>
<tr>
<td>7. Were there enough opportunities for you to interact with the teacher?</td>
<td>Yes: 1</td>
<td>Teacher was in hurry.</td>
</tr>
<tr>
<td></td>
<td>No: 4</td>
<td>We have to wait our turn to start. Say something, if the teacher want to.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Always running out of time: too much time on introductions.</td>
</tr>
<tr>
<td>8. Was the group size...</td>
<td>OK: 5</td>
<td>It was interesting to note that no one commented on the impact of the group size on the lack of opportunities for student-student or student-teacher interaction.</td>
</tr>
<tr>
<td></td>
<td>Too big: 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Too small: 1</td>
<td></td>
</tr>
<tr>
<td>9. Was the length of the teleconference...</td>
<td>OK: 4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Too long: 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Too short: 2</td>
<td></td>
</tr>
<tr>
<td>10. Could you follow the teacher’s instructions?</td>
<td>Yes: 4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No: 0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sometimes: 2</td>
<td></td>
</tr>
<tr>
<td>11. Were there any technical problems? If yes, what? Who helped you?</td>
<td>Yes: 2</td>
<td>Both respondents in Albany commented that the sound was not clear, and there was no one to help them. 1 Sydney respondent complained about picture distortion during the first session only.</td>
</tr>
<tr>
<td></td>
<td>No: 3</td>
<td></td>
</tr>
<tr>
<td>12. Is this a good way for distance learners to learn English? Please say why or why not.</td>
<td>Yes: 4</td>
<td>It’s like a class, it helps students to communicate with each other. Students can meet each other and have opportunities to learn something new. It’s different. We can learn from watching video, listening to other students and answering teacher’s questions.</td>
</tr>
<tr>
<td></td>
<td>No: 0</td>
<td></td>
</tr>
<tr>
<td>13. Were the language learning tasks in this session useful for you?</td>
<td>Yes: 5</td>
<td>Yes, but not so interesting (1st session). The second session was more interesting. There are many more pleasant themes than the factory ones.</td>
</tr>
<tr>
<td></td>
<td>No: 1</td>
<td></td>
</tr>
</tbody>
</table>
Stage 3 students were very definite about the lack of opportunities for student to student interaction, and as a result of this feedback, modifications were made to the presentation of the second videoconference. These changes allowed for more interaction between students as their second evaluations show. This question gave an opportunity to a very articulate student to make the following comment: *There were not any! But please be aware of quite different social, cultural, educational etc. backgrounds. Don’t underestimate all these aspects. Students need to have more in common — not only learning English.*

As opinion was divided over the opportunities for student to teacher interaction, following sessions were structured to provide extra time for this. The comment recorded by a Stage 2 student, *Teacher should [sic] correct our mistakes a bit more often,* reflects her personal interpretation of teacher interaction, and possibly her expectations of the teacher’s role.

The question of group size brought no extra comment. Most students (78%) were happy about it, while the rest found it too small. It was interesting to note that no one commented on the impact of group size on the lack of opportunities for student to student, or student to teacher interaction. A larger group (there were seven in the first Stage 3 session) limits active participation rates.

Opinion about the one-hour length of each session was divided with approximately half of the group being happy about it, and the other half finding it too short. The student who found the first session OK but the second too short was obviously enjoying the experience! Students generally thought that the teacher’s instructions were always easy to follow, but there was no further explanation added by those who said *sometimes.*

Most students were happy with the technology, with a few criticisms being levelled at the clarity of sound and picture during the first session only. Technical support is not generally available once the initial link has been made and is not normally required. It was interesting to note that no one mentioned the 15 minute delayed start due to the difficulties of gaining entry to the Sydney studio for the second session. Strictly speaking, it may

<table>
<thead>
<tr>
<th>Question</th>
<th>No. of responses (max 6)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>15. Would you choose to participate again?</td>
<td></td>
<td>No one was able to respond to this question as the last videoconference was cancelled at the last minute due to torrential rain in Sydney (no one could get to the studio) and only 1 student was present in Albany. (I had a health problem, and another child care problems).</td>
</tr>
</tbody>
</table>
not be a technical problem but a problem over which the students had no control. One of the students did mention it under ‘Any other comments?’ His words were *the in-house organisation in Sydney is always a bit pain* [sic].

In general, students were high in their praise of videoconferencing as a way for distance learners to learn English with responses similar to those for question 4 (the advantages of videoconferencing). One student did suggest it was too expensive, and another considered that it should be used only as a supplementary program and only after comprehensive basic lessons. This writer was not aware of the fact that the project was investigating videoconferencing as a means of enhancing the course and not as an alternative delivery mechanism. It is interesting to note that student opinion concurs with the researchers’ opinion.

All but one of the students found that the language learning tasks were useful, the only negative comments relating to what the above student considered to be the uninteresting theme of the ‘factory’. He was also the one who drew attention to the disparate backgrounds of the participants.

The request for final comments, suggestions or recommendations for future videoconferences brought some useful comments, especially the Stage 3 request for more discussion topics to open the sessions up for more student to student interaction. Some comments, however, were difficult to interpret. For example, the suggestion to put more on students may mean giving students more responsibility for the conduct of the session, by such things as asking a student to chair the sessions. While this would be possible for the higher level students, it would be inappropriate for Stage 2 learners who expect a lot of teacher direction. Alternatively, the comment could mean that the student felt that the camera should be directed to students more, thus giving them more opportunity to speak. Or it could mean exposing more students to the technology.

Students also asked for more preparation time at home, or for the teacher to send more materials. This was inappropriate in the present investigation, since the sessions were based on the ideas and topics of Stages 2 and 3 IOTY, and related to topics that students had covered or would cover. Therefore, they were intended as opportunities for further practice of the skills and language of the section of the course that they are currently studying, rather than as presentation of new material or concepts. But perhaps the higher level students saw opportunities for more than this practice.

Although only one student formally responded to the question, ‘Would you choose to participate in a videoconference again?’ general comments from students on the phone indicated that all enjoyed the experience, felt that they had gained a lot, and would welcome the opportunity to participate again.
Observers’ comments

Distance Learning lecturers in Perth and Sydney took on the role of observers for most of the audiographic and videoconference sessions. Where there were no lecturers available, the site managers for the videoconference centre (Albury) and telecentre (Wangaratta) were asked for their observations. A summary of their comments on the New Technology Project Evaluation Form (Observers) follows. The survey form is included in Appendix 4.

Audiographics

Three audiographic sessions for Stage 2 learners in Sydney (two participants) and Wangaratta, Victoria (two) were delivered from Perth. Five evaluation forms were received from the observers in Sydney (two), Perth and Wangaratta; three forms for the first session, two for the second and none for the third. The low number of returns is due to the non-appearance of students in Sydney for the second and third sessions. For the three Stage 3 sessions (three New South Wales students and one Western Australian student), a total of eight evaluations were returned. The summary that follows is a combination of the observers’ comments over all evaluations for both Stages.

Observers found that, initially, quite a lot of support was needed by the students to carry out the lesson tasks. It was fortunate that help was available in Sydney, as students had trouble with the names of tools of the Electronic Classroom program, as well as in carrying out basic mouse skills. Most had only one brief session to introduce them to the program. It was suggested that for low level students (one student was not even aware of what capital letters were) the language of computer instruction may be too difficult. Subsequent lessons proved this wrong. All students developed more confidence and skills, were generally able to follow instructions, and were becoming quite independent by the end of the three sessions.

When asked about the students’ reaction to the technology, early observations were that they seemed comfortable with it, surprisingly comfortable in one case, were willing to try all the tools, and were not overawed or nervous. It is interesting to note that instructors constantly anticipate problems with student acceptance of the technology, a concern which frequently proves to be unwarranted. Only one student was reluctant to use the keyboard at the beginning, but later participated well. Following sessions showed the value of familiarity with the computer, especially in the case of the husband and wife in Wangaratta who spent many hours practising during the two-week break between sessions, and who appeared enthusiastic and pleased with their progress. The only reservation was the lack of room around the computer as the students had to either lean over each other or move in order to use the keyboard or the hands-free phone.

Unfortunately for the Stage 2 students, there were technical problems at the beginning of the first session when attempts to make the multipoint link were unsuccessful owing to incompatible modems. In spite of trouble
shooting by the experienced site manager at Wangaratta the link could not be established and had to be abandoned. Instead, two separate links were made with each site, with the sessions lasting about 50 minutes each. No cross-site interaction was possible, and even interaction between the two students at Wangaratta was difficult because of an inadequate phone system which required them to pass the phone to each other when they wanted to speak. By the third session, however, these phone difficulties had been overcome.

Other problems reported in this section related more to the teacher’s use of the computer. (At times students were unaware of what she was doing with the cursor, but this was remedied using the facility known as track mouse.) Observers of Stage 3 sessions commented on how well the technology operated for all sessions. The link was established easily, remote lesson notes opened instantaneously and when screens were being sent, there was no sense of waiting because the time was well used in discussion. The phone system operated well, and if students had trouble hearing at times, the fault lay with the shy student who often spoke too softly.

Comments on the level of student to student interaction for Stage 2 learners had to be limited to interaction that took place within the group, as no multipoint link took place. All observers mentioned how well learners helped each other, often pooling resources and offering mutual support. If communication stopped at times, it was because students were concentrating so hard on the language, and on following instructions that they did not hear the frequent requests to provide feedback. Wangaratta students, however, did make use of opportunities for social interaction with the observer in Perth, so there was some across-site communication.

As the New South Wales Stage 3 students had not met each other, they were a little shy about interacting at the beginning. However, it was reported that by the end of the first session they were making suggestions, initiating comments or asking each other for help. Two observers suggested that increased interaction may have taken place earlier if there had not been a teacher present to demonstrate, comment and give help. Observers reported similar patterns of interaction in the second session.

The last session, with one student in both Sydney and Perth, gave the opportunity for more across-site interaction in which both students were able to discuss the problem, suggest alternatives and arrive at a collaborative solution. By the end of the sessions, students had developed confidence in using the facility, had explored its interactional possibilities, enjoyed the experience and were keen to participate in further sessions at a later date.

All observers were happy with the level of involvement in the sessions, with such answers as students were engrossed and extremely involved. Reference was also made to the different amounts of active participation depending on different personality types. The earlier failure to give feed-
back due to students concentrating on carrying out instructions was resolved, and by the last session, one observer noted that students were responding quickly and accurately to questions.

In the opinion of the observers, the system offers many advantages for distance learners as the following list compiled from their comments indicates:

- high levels of interest, motivation and interaction within the group
- high level of personal involvement across a range of tasks
- opportunities to meet other DL students who can provide peer support
- chance to learn new skills (use of computer)
- students in control over their own learning
- opportunities for immediate feedback
- less self-consciousness than there sometimes is in a classroom group
- student attention focused on the same thing at the same time
- opportunities for the communicative activities that class students enjoy
- hands-on technology; the ‘active’ nature of the method
- the association of images and concepts with oral language and text
- opportunities for one-to-one, remedial work
- opportunities for writing tasks
- feeling among students of participating in a nationwide network
- a good practising and teaching situation

The comment was made that multipointing was not necessary for interaction; enough opportunities existed between teacher and students at one site. In fact, the advantages of hands-on work for fewer students probably outweigh the benefits of a larger number of participants.

The following were identified as the main disadvantages of audiographics:

- technology problems
- the amount of training and practice required to feel comfortable with the tools
- need for students to give frequent feedback
- the small number of students who can be catered for at one time
- problems of audibility if students are not near the phone
- students having to change seats to gain access to the keyboard
- problems of comprehensibility of students with pronunciation problems
- students with slow typing skills
- problems of DL students having to attend a centre at a prescribed time.
For one observer, the greatest drawback was the fact that students had to leave home to participate in the sessions. She suggested that they needed the technology in their own homes.

In spite of these constraints, all observers would recommend audiographics as a means of enhancing a DL program. They saw it as a means of presenting something new or practising previously learnt material and an interesting way of giving extra dimensions to a DL course.

One of the survey questions focused on the suitability of the lesson material for the medium. Responses included excellent; great; very stimulating; encouraged success; it challenged and reassured the students; opportunities existed to interact with each other; be creative and respond spontaneously in an unpredictable situation; motivated the students to keep practising in their own time; lots of discussion possible due to the variety of graphics used; the lesson was well orchestrated and conducted. However one respondent did comment that users need to be more proficient with this technology in order to make maximum use of its facilities.

When asked for any further comments observers took the opportunity to express individual thoughts, emphasise the students' enjoyment of the sessions or add their own suggestions for future use. Some of their quotes drew attention to advantages not previously considered:

- Wendy was quick to see her own errors and was able to correct them without help.
- This is a 'gentle' medium for drawing attention to errors.
- There was valuable insight into the students' thinking processes as they both verbalised while they were planning and typing in text.
- There was lots of interaction and obvious enjoyment by the students.

Observers had obviously given quite a bit of thought to making suggestions for the future use of audiographics as the following list indicates:

- a 'chat' session beforehand for the students to get to know each other.
- spelling activities to help overcome the problems of audibility and poor enunciation
- more question/answer type activities to promote interaction
- the need to ensure very early that students realise the importance of feedback — loud and often
- a technical person to be available at the beginning of every session to deal with any glitches
- its possible use to include provision for high-oracy, low-literacy students
- DL students be offered a term of audiographics, with plenty of time to practise with the technology
- DL offices buy an extended licence for Electronic Classroom so that students can borrow it for use on their own Macintosh computers
• DL offices buy a bank of computers for loan to students (as has been done by other state distance education departments)

• teachers to develop a pool of screens appropriate to different units of IOTY and exchange these with other states

One observer suggested a longitudinal study to examine the best use of this technology in the DL field, to investigate whether it could be best used for input, for practice, or for assessment. Further experience with the facility may suggest even more possibilities.

**Videoconferences**

Two multipoint sessions for Stage 2 learners in Sydney (two learners) and Albury (two learners) were delivered from Perth. One observer form was received from each of the eastern states centres following each session while the two from Western Australia were based on observations made during the first half-hour only of each session. Similarly, two multipoint sessions for Stage 3 learners in Sydney (four learners) and Albany (four learners) were delivered from Perth. A total of four forms were received, two from Sydney and two from Perth. No observers were present in Albany.

Observers reported that after initial technical assistance in explaining the operation of the key pad, little technical help was required. However, students did need help in carrying out the learning tasks, with Stage 2 students requiring much support. During the first session, the couple in Albury received help from an accompanying relative in the form of translating and suggesting replies, while in their second session, the teacher spent much time on repetition and checking comprehension in the absence of the relative. In contrast, the Sydney Stage 2 students were more independent. The sole Sydney participant in the second session did refer to her teacher, but it was felt that she may not have needed this support if her fellow student had attended.

Some Stage 3 students needed instructions to be repeated several times, but in general, with adequate lesson preparation time (the late arrival of pre-lesson materials caused problems for some students), they needed little extra support.

Not unexpectedly most of the students admitted to observers that they were nervous before the first session, especially the lower level students, but as time went on they relaxed and appeared more comfortable with the medium. Observers noted that students said that the experience was very interesting and the technology was excellent.

Observers’ comments on the operation of the technology, however, were varied, ranging from no problems to quite a detailed list of problems. These related in the main to the normal time/picture delay that is a feature of the Picture Tel system. The site manager at Albury even commented on the unusual delay which was up to about five seconds. One observer was annoyed by the lack of clarity of the picture resulting in the absence of nuances of facial expression. For this reason, he questioned the value of
video clips being shown during the session. He stressed the need for close-up views of all speakers, to overcome any confusion about who is speaking. The time delay was difficult to adjust to and frequent comments were made about the need for the teacher to allow for extra long pauses before expecting a student response. Students reported to one observer, however, that the picture delay was much improved during the second session. Another observer commented that the result of the time/picture delay was that the session was very teacher-controlled and that students were unsure when they should speak. This situation results in the need for a system so that students can put their hand up.

These problems were addressed during the second session for each group with attention being paid to the following: pausing longer for responses; encouraging students to indicate when they had finished talking; reducing reliance on video clips; re-organising the camera operations in one studio; nominating the next speaker very clearly; and ensuring instructions were clear. The second session at each level seemed to proceed more easily.

Responses varied as to how well the students interacted with each other. At Stage 2 level, an observer noted the two Sydney students became so involved in their discussion they forgot there was a teacher on the monitor. There was very little communication between the Albury students who preferred to write rather than talk. Interaction across the two groups was very difficult and almost non-existent. All Stage 3 learners were described as being friendly, relaxed and interacting well within their groups. Due to comments after the first session about the lack of opportunities for interaction across the groups because of the nature of the lesson, the plans for the second (and possible third) session were modified. As a result, an observer was able to write that during the latter half of this session students were interacting well.

Observers found that students seemed fully involved in the lesson, were watching the monitor all the time and obviously concentrating very hard. One observer commented that the Albury couple seemed to be thinking that they were being tested, or were on trial in some way. Maybe they were just overawed by the whole experience. Opinions on Stage 3 students' involvement in the lessons were cautious, with students being described as paying close attention and being cooperative but mainly passive in the first session. The size of the group placed restrictions on the amount of individual comment possible. There were seven students in this group, which was obviously too many. The second session was much more manageable with four participants. One student appeared tense and uncomfortable with the (teacher) observer present in the second session. Most involvement occurred during this session when the students were asked to take on the role of chairperson in turn, which proved to be a successful strategy. It was interesting to note that students needed a lot of teacher assistance to play the role initially, but once it had been modelled by the first few students, the later students performed proficiently with little additional help.

Observers listed a number of advantages of delivering materials and learning activities through videoconferencing. These included the following:
• variety of stimuli: colour photos, video excerpts, prepared notes
• face to face involvement
• motivating value of a different medium
• new learning experience for the student
• addition of body language to distance learning communication
• opportunity for immediate feedback
• opportunity for learner-centred and interactive activities
• ‘real-time’ activities and communication
• opportunity to discuss/agree/disagree/re-shape ideas/clarify
• opportunities for students/teachers to get to know one another
• group work
• value of the medium in ‘train the teacher’ programs

There was general agreement over the disadvantages of supporting distance learners through this medium. The following constraints were recorded:

• the high cost of hiring/using the facility
• difficulty in getting to the venue
• travel time
• inflexibility of the booking arrangements
• delayed sound/picture distortion is hard to adjust to
• the formality required restricts use of normal conversational strategies
• difficulty in distributing attention evenly across groups
• relying on students to attend sessions
• difficulty in minimising teacher mediation: students expect teacher direction
• strict time frame discourages spontaneity

Observers were cautious about recommending this method of delivery as a way of enhancing a distance learning program. Reservations concerned the problems already raised. One respondent wrote: *Not as a regular part of delivery, under current conditions. Coordinating bookings, student and teacher travel constraints and poor quality reception do not justify the novelty value.* The main constraint was cost. Expenses for four session were in excess of $2,000. Suggestions were to restrict its use to advanced level students, investigate alternative cheaper videoconferencing equipment, and limit it to a point to point videoconference, as multi-pointing using a bridge compounds the picture/sound delay problem. One site manager would not recommend this method for language learning *which depends so much on timing, rhythm and nuance*, adding that the time delays make language learning a particularly difficult exercise. He thought that the lesson material and teaching was excellent. However, this technology is not appropriate.
Both positive and negative views were expressed about the suitability of the lesson material for the medium. Among the positive comments were the following: the material explored the advantages of the medium and stimulated ideas as to how it could do even better; very good. It was a discussion all the students could comment on from their own experience; the presentation of new material was successful with the document camera being used for visuals as well as a substitute whiteboard; a great variety of stimulus material was used very effectively. The negative comments express reservations about the appropriateness of some of the lesson material: reading names and prices was not 100% clear; video segments were too long; students appeared constrained in their responses; the students role was mainly passive.

A request for further comments brought a variety of responses with praise for the teachers, advice on alternative technology, and suggestions for group activities to promote more interaction. One observer found that students needed to be given direction two or three times on how an activity would follow through. Another stressed the need for the teacher to be constantly aware of the sound/picture delay and allow time for students to receive, process and form an answer. It is so difficult to wait for this, but it causes confusion otherwise. Maybe the following comment from a teacher was the most satisfying. The teacher performance was excellent. Can I join your class? This warm fuzzy was very welcome to the recipient, as this medium is often quite a stressful one for a teacher to use, especially in the early stages of experience.

Teacher observations of audioconferences

As there were no observers present in the audioconferences, the four teachers involved were asked to assess their own sessions by completing the Telephone Assessment Form (Teachers), which is included in Appendix 5. The survey questions examined a number of issues including teacher and student roles, planning for maximum student interaction, selection of appropriate tasks, modifications for future lessons, student reaction and technical problems. Of the 19 forms returned, eight related to Stage 2 sessions and 11 to Stage 3.

Teachers considered their main role to be that of a facilitator or chairperson who coordinated the session, provided learning tasks relevant to the skills and strategies of the current section of the course and encouraged student to student interaction with a minimum of teacher input. At times they acted as a friend and helper, assisting during communication breakdowns, participating in the conversation and providing the necessary motivation to keep students contributing to the interaction. Pre-lesson preparation included sending materials well in advance of the lesson, while post-lesson tasks involved assessment of their own presentation as well as monitoring student performance.

The student’s role was described as being a willing participant in the interaction, giving information, asking and answering questions and
generally practising the conversational skills and language of the unit of IOTY currently being studied. They were expected to be prepared to take risks in communicating and to force themselves if necessary to be active rather than passive members of the group. Careful preparation by the student was essential, as was the need for optimal conditions at home so that students were not distracted by any interruptions.

Teachers planned for maximum student interaction in a number of ways. These included choosing learning tasks which met the following criteria: (i) they were based on topics of which the students would have first-hand experience and that were relevant to the IOTY course materials; (ii) they could be supported by authentic stimulus materials available to students well in advance of the lesson; and (iii) they encouraged student to student interaction, for example, through pairwork. Making students aware of the necessary protocol, especially the need for frequent self-identification, demonstrating the conversational strategies expected at each level and providing a supportive environment in which students felt relaxed, all helped to build confidence and make students aware that their contributions were appreciated. Resisting the temptation to jump in during any embarrassing silences was difficult for most teachers but proved to be an effective strategy in forcing students to take the initiative. Further support was given by encouraging them to comment on the difficulties of audioconferencing and their feelings about the experience. Unfortunately, owing to the large distances separating learners, it was not so easy to promote the establishment of student support networks but for a group of students in close proximity this would be an ideal way to extend the student to student interaction that audioconferencing can encourage.

When asked to comment on the interaction (Was it teacher or student directed?) teachers unanimously claimed that Stage 2 sessions needed to be heavily teacher-directed, especially when there were three or more participants. The need for teacher intervention was reduced dramatically for a group of two students as there was no doubt about turn-taking, feedback was expected and asking for clarification was no longer embarrassing. Students at this level expected the teacher to organise questions and were capable of asking only very simple ones. One teacher commented that most students did well to follow the conversation, probably spent an excessive amount of time listening, and even appeared mesmerised by the opportunity to listen to others. This may have been due to the fact that it was the first teleconference for three of the four participants.

In contrast, teachers identified a shift in the direction of the Stage 3 sessions with some being described as student-directed, and others as mainly teacher-directed or only at the beginning. Some students still relied on the teacher to respond to each offering and did not take up the opportunities to respond directly to each other. Reasons quoted for lack of student initiative at this level were: (i) culturally-bound students feeling uncomfortable about interrupting and preferring the teacher to nominate the speaker; (ii) students having problems with another’s accent and needing teacher clarification before being able to respond. However, this response was not the norm, and some students showed evidence of
excellent conversational strategies. Student feedback was common, and often there were extended periods without any teacher intervention. One teacher noted that once a student took the floor, the students tended to interact more freely. As has been mentioned before, it was also noticed that group size had a significant impact on the nature of the interaction. A smaller group encouraged more interaction, whereas a larger group tended to prohibit it.

A question about the relative amounts of instructional and non-instructional teacher intervention brought surprisingly similar responses from teachers dealing with both Stages 2 and 3. Despite the claim of less teacher direction with stage 3 students, there were similar estimates ranging from minimal to a lot of instructional intervention for both stages. This could be attributed to different interpretations of the two terms. For example, a polite request for a response could be interpreted as an instruction, or as a non-instructional form of encouragement. Teachers of both groups identified quite a lot of non-instructional language with Stage 3 learners. In elaborating on the type of intervention, teachers saw themselves as listeners (for example, using grunting as a form of feedback) and as motivators (for example, encouraging comment in the absence of any response.) Only one claimed the use of very little non-instructional language, as it was not required. For a more accurate assessment of the relative amounts of these two types of intervention an analysis of all audioconferences would be necessary, which was not attempted in the present study because of time constraints. It would be a fruitful source of future research, however.

One of the survey questions examined teachers’ opinions on the possible change in the amount and the nature of teacher intervention when compared with the same tasks in a classroom setting. While four claimed there was no difference, if compared to group work in a class situation, the others, who found there was a difference, identified a number of reasons for their responses. Amongst those given were: (i) the need for the teacher to direct turn-taking due to the lack of visual cues; (ii) the extra time spent on clarification and feedback; (iii) lack of group cohesion as students do not know one another; (iv) lack of communication through body language; (v) the need for the teacher to be always available to assist students; (vi) the role of the teacher as leader of the conversation and filler of gaps... long pauses are more unnerving when you can’t see the others. Maybe they have hung up!; and (vii) the unwillingness of students to interrupt to indicate a desire to speak. These differences suggest that teachers new to audioconferencing need to be fully aware of the differences in presentation between the two settings.

As was to be expected, a question about the suitability of the tasks to allow for minimum teacher input and maximum student interaction brought differing responses for the two stages. Stage 3 tasks were generally considered appropriate, while some of the Stage 2 tasks were identified as unsuitable. Maybe it is unrealistic to expect much student to student interaction at this level. In response to this question, one teacher commented that students without experience showed no initiative or willingness to risk uninvited responses thus increasing the need for teacher
input. Maybe there is a need to teach students how to interact. For example, X, ask/tell Y about Z.

When asked to state the reasons that influenced their choice of tasks, teachers offered a wide range of responses, most of which have already been discussed. The following list is a brief summary of their aims: (i) to maximise student to student interaction through sharing experiences; (ii) to extend the topics of the book currently being studied to revise or reinforce the skills learned; (iii) to give students the opportunity to demonstrate new skills in a supportive climate; and (iv) to help establish and extend peer support networks.

Opinion was divided over the question about modifying lesson plans before presenting the lesson again. The majority of Stage 3 teachers were happy with their plans, but Stage 2 teachers intended to make alterations. One Stage 3 teacher suggested making a controversial statement that would encourage debate using a human interest story related to the debate topic as stimulus. Modifications to Stage 2 lessons included restricting the sessions to two students per half hour, limiting the content to allow for a more realistic time frame, and asking lower level students to write out their questions in advance.

Teachers welcomed the opportunity to make suggestions about strategies for increasing student interaction. The following is a summary list of their comments:

- reduce the number of participants to two or three
- discuss with students their roles and responsibilities prior to lesson
- teach interaction as a genre
- after two sessions, appoint a student as chairperson
- ask students to suggest tasks
- plan for groups of different nationality backgrounds/similar education or interests
- encourage pair work to elicit normal conversational strategies
- provide more personal information on group members (with permission)
- try to remain silent. Allow time for students to assist others in need
- make photos of all participants available to group members before first audioconference
- try to form groups of comparable listening and speaking levels
- minimise teacher talk by making monosyllabic responses

Teachers’ observations on how students reacted to their audioconference experiences agreed with students’ own comments. Positive comments included very enthusiastic, genuinely interested in each others’ experiences, want to be included in future sessions, keen to get a copy of the taped conference, and very well, I couldn’t get a word in and didn’t want to! Audioconferencing was definitely the most popular form of technology trialed.
Any technology problems experienced during the audioconferences were minor and caused little disruption to the sessions. Noisy babies were the main distraction. Parents need to be aware of their responsibility to organise for alternative child care arrangements during these sessions.

**Analysis of recorded tapes**

While the student surveys were used to examine the impact of the three technologies on student interaction with materials and courses, and to obtain qualitative data on student reactions, the recordings of the audio and videoconferences proved valuable in analysing teacher interaction with students and materials. Unfortunately, it was not possible to record the audiographic sessions, and therefore a thorough analysis for these interactions could not be made.

As an analysis of tapes collected for the previous report on new technology and curriculum design (Anderton and Nicholson 1993) indicated that students demanded a great deal of direction from the teacher, it was the intention of the researchers to take a less dominant role if possible in these sessions. For this reason and to maintain the interactive focus, appropriate teaching strategies were needed to ensure greater involvement and participation by the students. While it would have been interesting to analyse student input during the sessions, it was considered more appropriate to examine the nature of the teacher intervention and its effect on student performance.

**Audioconferences**

The researchers analysed three of the 17 recorded audioconferences. An analysis of all 17 would have been useful, but time constraints did not permit this, and since a preview showed a similarity of teacher intervention patterns with students within each stage, the three analysed were felt to be a reasonably representative sample of the whole set. Of the three sessions analysed, one session involved four Stage 2 learners, and the other two sessions involved three Stage 3 learners. As these were the second sessions for all three groups, the learners had had some time to become comfortable with the technology.

As was to be expected, the teacher had a more dominant role with Stage 2 learners whose lack of conversational strategies needed more assistance in overcoming the restrictions of the lack of visual cues. A higher percentage of the teacher’s time was spent on: (i) clarification to ensure that students understood what was being said; (ii) requesting feedback; and (iii) offering assistance where needed. The formality of regular self-identification was difficult for some, but others felt comfortable about it. Some tried the strategy of saying thanks to signal the end of their contribution, but others found these conversational extras too unnatural. Possibly further familiarisation with the technology may make the students feel more comfortable with the system.
An analysis of the percentages of teacher-talk and student-talk may have indicated the success (or otherwise) of the modified strategies to increase student input, but again time constraints made this impossible. However, final comments by teachers comparing student input over the two sessions indicate that students were more willing to participate, had more to offer and in many cases were genuinely interested in a third session. It was quite common, with Stage 3 learners especially, for students to continue talking for up to five minutes without any intervention from the teacher.

Two clearly-defined areas of teacher language emerged from the analysis: instructional and non-instructional intervention. Instructional relates to the teacher’s role as chairperson/facilitator who explains the protocol to be followed, nominates speakers and gives the necessary instructions for the smooth running of the session. Non-instructional intervention includes encouraging and motivating learners, chatting with them and filling the social role of friend, listener and adviser. It was most common for instructional language to feature mainly at the beginning and end of the sessions when directions had to be given, while non-instructional language occurred throughout.

The following extracts provide examples of the language used by teachers in meeting these roles in an audioconference. (S indicates student, T the teacher.)

**Role:** Teacher as instructor

**Function:** Explaining what he or she expects of the students

(Extracts 1-2).

**Extract 1**

T: **When someone is speaking you are welcome to interrupt. If you want to interrupt, you can say ‘Excuse me, this is G.... I don’t understand what you mean! Can you say that again please?’**

**Extract 2**

T: **I want you to try to encourage the person who is speaking by saying ‘Uh huh’ or ‘Really?’ because we want to know that you’re listening to us because we can’t see if you are shaking your head.**

**Role:** Teacher as instructor/helper.

**Function:** Helping students express themselves or understand others

(Extracts 3-7).

**Extract 3 (Stage 2 students)**

S1 **It’s very different in my country.**

T **P and O, remember this is your chance to practise. OK? Joining (OK) into S’s conversation and asking questions... OK?**

S2 **OK**

(Pause)

S1 **I continue?**
T I’ll be quiet and O and P must ask you questions or talk to you… OK?
S2 OK.
(Pause)
T (Laughs)
S2 Hello? (Pause). Excuse me?
S1 Yeah?
T Is that P speaking?
S2 Yeah, yeah. It’s P
T OK, S, P is talking to you.
(Pause)
T S? (Yeah?) So P is talking to you.
S1 OK.
T You must answer her, you must say something so she knows.
S1 OK. OK.
S2 Excuse me? (Yeah?) I am P How you say ‘bout bargaining and discounting in your country?
(Later)
T Now S, you could ask O and P a question about the bargaining or the sales.
S1 OK. P, um, can you say, the selling and the bargaining in your country?

Extract 4
A Russian student couldn’t understand a Vietnamese who was attempting to say ‘sales tax’.

T I’ll help her O He says ‘sales tax’.
S1 Ah, yeah. (laughs) No we haven’t any … (unintelligible) in Russia.
T No, no I don’t think you understand. S is saying ‘sales tax’. You know… T.A.X. Tax?
S1 Tax.
T Tax… the money that goes to the government.
S1 Yeah… oh yeah, tax! I thought first letter was ‘p’.

Extract 5
After some confusion over a question, the teacher intervened.

T That was a good question. The question that G is asking is… she said ‘At work you can only speak a little because you are very busy and you are working in the kitchen.’ She said then ‘Do you practise your English with people in the street?’ and that means with people not at work, with people at the bus stop (etc)... That’s what she means.
Extract 6
Teacher realise that a student needs help.

T  Excuse me. It's ... here. Does everyone understand 'servant'?
S  No, no.
T  G, can you just explain 'servant'?
S  (G explains).

Extract 7
A student had problems explaining the role of a doctor in treating the patient.

T  T: I understand what you are saying. I just probably, if I was speaking, I'd say, 'some doctors don't relate well to their patients'.
S  Yeah... what do you use?
T  Don't relate well.

Role:  Teacher as equal participant
Function:  Acting as an interested questioner
(Extract 8)

Extract 8
T  Excuse me... This is... I'm so interested in this I have to ask. Where on your hand do you apply pressure?

Role:  Teacher as encourager/motivator
Function:  Affirming what is said, praising, providing positive feedback
(Extracts 9-10)

Extract 9
T  I think that's a good idea. I do that too. That's a clever idea of yours G to put the notice on the fridge.

Extract 10
T  Well that was a very good conversation, much much better than last time... (Yeah)... Yeah, you're all much better at um asking questions and coming into the middle of the conversation and asking again... and it's much better too. Do you think so too?

Role:  Teacher as friend and listener
Function:  Acting as friend and equal
(Extracts 11-12)

Extract 11
The teacher jokes with the students after one student, a cheesemaker, commented that he had never been to the doctor in Australia.
S2 You are a very healthy person.
T It’s all that cheese you eat, isn’t it, F?
   (General Laughter)
S1 Probably is!

Extract 12
The teacher engages in chit-chat with the students to put them at ease at
the beginning of the session. She greets them first.
T Nice talking to you all again... It’s great! Are you having a busy day M?
S Yeah, I had to take my child to the swimming lesson this morning
   (Yeah) and then after that, home learning and doing all the household
work.
T And there’s always lots of that isn’t there?
S Yeah. (Both laugh).

Unfortunately, it was too lengthy to record in full an extract when a teacher
related from her own experience a story similar to one the student had told.
This conveyed her sympathy and understanding of the feelings of the
student, so that all felt at ease and were very anxious to contribute to the
conversation that followed.

While there may have been other roles played by the teachers, these were
the ones most frequently in evidence during the three audioconferences
examined in detail. As previously mentioned, time constraints prevented
further analysis of the tapes, which could provide insight into the
development of student conversational strategies as they relate to the
demands of communicating without the visual channel. It is an area which
could well be researched further.

Videoconferences
The researchers analysed two of the three recorded videoconferences, the
second session for both the Stage 2 and Stage 3 groups. There were six
people involved in the Stage 2 session, three students (one in Sydney, two
in Albury) a teacher (in Perth) and two observers (in Sydney and Perth),
while the Stage 3 videoconference consisted of two students in Sydney, two
in Albany (WA), a teacher in Perth and observers in Sydney and Perth. The
aim of the analysis, as with audioconferencing, was to examine the
teacher’s role in the session, that is, the nature of the teacher intervention,
and the kinds of interaction as a consequence of those roles.

As previously mentioned, the lower level Stage 2 students needed a great
deal of direction in using the other interactive technologies. It was therefore
no surprise to find that considerable time was spent on teacher instruc-
tional language both in the use of the technology and in the language
learning task, as well as non-instructional language. The examples that
follow in Extracts 13–14 give some indication of the nature and amount of
teacher intervention required for these learners. They needed clear
instruction about the lesson procedure, direct questions, repetition, longer
processing time before answers and a great deal of patience in extracting responses. Student to student interaction was almost impossible.

**Extract 13**

T  H, remember last week how the camera moves from each city or each studio?
S1  Yes, I remember.
T  Well let’s practise moving the camera today. We’ll talk about shopping, OK? Then I would like you to ask either V or R a question about shopping, just a simple question and then V, I want you to ask me a question about shopping. So let’s see how it goes.

(Later)

H  what about you? Are you prepared with your Christmas shopping?
S1  Yes, I prepared my list, list shopping.
T  Good. Your shopping list is ready?
S1  Yes.
T  Have you bought many presents?
S1  Not yet.

(Pause)

T  Would you like to ask V a question now so she has a chance to start talking.

(Pause)

H  Do you like shopping?
T  Are you talking to me or are you talking to V?
H  V. Yes. I ask V.
S2  I listen you.
S1  Do you like shopping?
S2  Yes, I would like shopping.

(Pause)

T  Have you started your Christmas shopping yet. V?
S2  Yes, I would like shopping for Christmas.
T  R? (R gets help from his wife).
S3  Yes I will.

**Extract 14**

T  I’m going to show you a very short, a little bit of a video now. OK? There’s no sound only picture. So I want you to look at the video — it’s very short, only half a minute — and see if you can guess what these people are talking about. OK?
S1  OK.
T  I’m going to play the video now.
(Later)

**T**  *H, did you have any ideas about that video?*

**S1**  *Yes I...*

**S2**  *No, I will think about the picture.*

(Pause)

**T**  *H, did you see the video OK?*

**S1**  *Yes, I saw. I saw... I saw OK.*

**T**  *So what did you think was happening in that piece of video?*

**S1**  *I think so. She wants to... wants to return the pants. (not clear)*

**T**  *Yes. What was she returning? Pants?*

**S1**  *Pants, pants, the pants, jeans.*

**T**  *Jeans, right. V what did you think about that video? Did you agree with H or not?*

**S2**  *The picture... little shop... and I think one person want er want return something some jeans. Oh, I don’t know.*

**T**  *OK.*

**S2**  *I don’t see good... but I think she want return something and shop...*

This was accompanied by lots of hand gestures. The students were intent on copying everything that appeared on the document camera. This held up interaction while they wrote.

Interaction between the students at different sites was almost non-existent, because students had a lot of trouble with the demands of the technology. Students waited to be directed to speak, because they didn’t pick up the necessary cues with facility. A teacher prompt caused the camera to swing back to the teacher, making the pattern of interaction, which would be normal in a classroom, difficult and confusing here. Lines 3 to 9 in Extract 15 provide a good example of this confusion.

**Extract 15**

**T**  *H, you read and tell me why this woman wants to change the jeans.*

(Pause)

**S**  *Really she doesn’t like them.*

**T**  *That’s right.*

**S**  *Doesn’t like them.*

**T**  *The little boy.*

**S**  *Yes, why.*

**T**  *Yeah OK.*

**S**  *It was for him. He...*

(Pause. (Quiet discussion with observer).)

*He doesn’t like them.*
OK. Does the woman want to change the jeans or does she want something else?

She wants something else.

What does she want?

I... (inaudible). She, she, she, she wants er... She wants er money back, money back. She wants money back.

Yes that’s right. Well done. You can say I want my money back or I want a refund.

The Stage 3 videoconference that was analysed showed a great deal less teacher intervention. Extract 16 is a good example of what is possible with more advanced students. While Stage 2 students responded only to direct questions, were limited in their responses, repeated themselves often and waited for teacher direction, most Stage 3 learners were capable of extended responses, of up to two to three minutes at times, were able to signal the end of their turn-taking, and were confident enough to initiate conversation. As more competent speakers they were able to adjust more quickly to the demands of the technology. It is important to note that the discussion quoted in Extract 16 took place across videoconference sites in different states and not in the same studio, and that students were interacting directly with each other through the technology. The more regular speech patterns and the longer utterances of the learners in this extract form a marked contrast to the telegraphic speech patterns of the Stage 2 learners in Extract 13.

Extract 16

I’ll ask G in Sydney if she’s ready to tell us which question she feels strongly about and ask her to pick her question and direct the discussion on it.

I agree with this question because I have big problem with childcare of my baby... That’s why I agree with this sentence. I hope will be change by the government.

G, can you direct the discussion. Ask the other students their opinion.

I’m going to ask H. I think you have children. What do you think about this problem? Will be better for you or no [sic] if your grandmother will have opportunity to come to Australia to help you here?

I like that! I do have a little girl now and... But I haven’t think about to bring them over here and look after my children. Thank you.

But do you think it’s a good idea?

I think that’s a good idea... so I think they should let them come here and not give too much trouble with the paperwork.

M, may I contribute to this discussion?

Yes...
D, what is your opinion about it?

I reckon the main point is that old people, not the children need to be looked after. That’s the main point, and I strongly, not strongly, I agree with the rules, the current rules...

The lack of picture/sound synchronisation that is a feature of the Picture Tel system places special demands on students, especially the less competent ones whose communication skills rely heavily on visual cues. There is no encouragement for some of the conversational strategies that are taught in the Stage 3 course, for example, clarification and feedback, as the voice-activated system causes frequent site changes. The result is a somewhat stilted conversation, often heavily teacher-directed with students playing a rather passive role. This is especially so for students with a lower level of English proficiency.

The Stage 3 experience indicates that this technology can be used successfully by higher level learners provided students do not feel constrained by the formality demanded. It requires a great deal of preparation by teacher and students, the ability and confidence to speak for extended periods, and the acceptance that the session is more like a meeting than the informal atmosphere of the classroom setting. It is limited in its use for the development of the normal everyday interaction that students need and expect in the group learning situation, and for the opportunities to practise the conversational strategies that the IOTY course pursues.

Journal and anecdotal evidence

Further valuable data was recorded throughout the project in teacher journal entries. While much of it related to researcher and teacher concerns (students and observers were not aware of these problems), a significant part of the anecdotal evidence was gathered through discussions with the various project participants.

Issues

The researchers were concerned about the high cost of human and financial resources expended on the project. A great deal of time and energy were spent on dealing with the complications of:

- timetabling students with limited time and access to the technology, child care problems, full-time work commitments and travel problems
- the different time zones across Australia (three hours during the busiest part of the project)
- booking facilities located at other institutions and coping with their last minute cancellations
- technical problems that could have been avoided. For example, use of the half-duplex system (Telecom) could have improved phone reception considerably
- student error such as misunderstanding times, forgetting the session, changing their minds about participating or forgetting to pass on their new phone number to the project team
• the absence of on-site technical support needed for the computer. Frustrating hours were spent studying equipment manuals in attempts to do the necessary troubleshooting
• technical problems associated with multipointing
• technical problems with the latest version of the software
• the researchers doing their computer training in their own time and at their own expense
• grouping unknown students with a wide range of levels (ASLPR 1+ - 4) and interests
• finding operational technology sites in Victoria. Liaison was made difficult by the decentralisation of the DL office
• justifying the high costs (including technology and extensive lesson preparation time) incurred for such a small number of students
• the uncertainty about whether students would appear for sessions

Anecdotal evidence

While the survey data gives an overview of student reactions to the technology, there is little indication of the amount of individual effort that some students were prepared to spend on the project. The following anecdotes illustrate the level of their commitment.

• Xuning from Western Australia, who, on learning that he was the only experienced audioconferencing student in the group, virtually took control of the session, gave great examples of feedback and even made the teacher feel superfluous. (Increased exposure does decrease the need for teacher intervention).
• Lin from New South Wales was so keen to participate in the computer session that she delayed her family’s plane flight to Taiwan by two days.
• Dennis travelled 50 kilometres by train each way to the videoconference rooms in Sydney. He even borrowed a mobile phone on the train to report his dismay at being delayed for a videoconference due to a power failure!
• Hanan, a very shy but keen student in Perth, was unwilling to attend (and probably nervous about) the audiographics sessions as bus complications and a small baby made the three hour event impractical. Her enthusiasm and increased confidence after her first audioconference were remarkable. She had overcome her own barrier, a lack of confidence in herself.
• Wendy and David who, assisted by a very willing centre manager and home-tutor-turned-babysitter, spent many hours practising on the centre’s computer in preparation for the audiographics lessons.

These examples illustrate the recognition by the student of the value of these forms of support and must encourage teachers who are aware of the affective factors that contribute to language learning at a distance.
Conclusions

The data analysis in the preceding chapter suggests that with these forms of technology there exists a huge potential for enhancing delivery and content of the IOTY course. Students, observers and lecturers were all very positive about the outcomes citing increased motivation, enthusiasm and higher levels of interaction to support their claims. The advantages of each technology for alternative methods of presentation have been demonstrated. For example, videoconferencing introduces the element of body language as well as adding a third dimension to picture and illustrations; audioconferencing offers opportunities for group oral interaction; and audiographics provides the possibility of creating and manipulating text and graphics. It has been seen that course content can be extended to include valuable interactive tasks not available in the present print and audio materials, such as written collaborative text construction. The advantages for DL students in the continuing use of these technologies are obvious and suggest that where possible students be offered the chance to experience these new modes of delivery.

The researchers consider its greatest potential for use within the structure of the present IOTY course lies in the development of student support systems. Enhanced student-lecturer rapport after a brief exposure to any form of technology, and developing student to student interaction during the sessions indicate the value of this form of support. Unfortunately the period of the project was too short to see the development of a third and maybe even more significant kind of support. This is the continuing student to student interaction that extends beyond the technology sessions, in which students form their own informal groups or pairs (usually starting with the exchange of phone numbers) for peer support. It is likely that as students get to know each other better over a number of sessions these support networks will develop, the only limitation being the high cost of STD phone calls. This would be in contrast to the findings of Eastmond (1994), that although great rapport develops between paired students over the period of formal (computer) course work, the communication does not continue beyond the on-line contact. If the hurdle of isolation that Harris (1994) identified as a significant factor in the high drop-out rate among distance learners is to be overcome, the peer support and motivation offered by such networks must be encouraged.

There is no doubt that the use of these technologies as an integral part of the delivery of IOTY would provide a greatly improved service. However, the potential for using audiographics and videoconferencing in the regular delivery of the course is limited by a lack of access to the facilities by students who are located far from the nearest technology site and whose timetables may be inflexible. As one project team member observed, flexibility in time is absolutely essential if we want to have students and that is something that Electronic Classroom and Picture Tel can’t really
provide. While audioconferencing is cheap, available to all and relatively easy to organise, the use of audiographics and videoconferencing must be limited to providing an optional extra to those students with access to the facilities, and to those lecturers who are willing to make use of the advantages it offers. These lecturers could be given assistance to trial the technologies, exchange ideas and develop materials for supporting their students, as suggested earlier in this report.

However, the situation changes when considering the potential for use of these technologies in overseas delivery of IOTY, for example to South East Asia. While audioconferencing and audiographics are available to these areas at reasonable cost, the charges involved in good (broadcast) quality videoconferencing are prohibitive. The only alternative would be delivery of a modified course to suit the particular needs of the students (whether they be tertiary-bound in Asian institutions, holiday makers or prospective migrants to Australia) through the one-way video, two-way audio satellite system currently available in Western Australia. In view of delivery and materials production costs as well as those associated with providing for the high levels of interaction required for optimum language learning, overseas delivery using these resources may not be a viable proposition at this stage.

One interesting outcome of the project was information about the impact of technology on task design. A very close relationship exists between the two with each being dependent on the other. The choice of task is determined by the strengths of the available technology, while the choice of technology is dependent on the desired outcomes of the tasks. With the overall aim of maximum student participation in mind, the following procedure for task/technology selection proved useful. A task was suggested, the most appropriate stimulus material selected and finally a choice made of the technology best suited to exploit that material. For example, the appropriate stimulus material for a written task was prepared for presentation by audiographics. If a task required a graphic only, it was mailed to students for use in the following audioconference. When the task depended on body language and visual cues, videoconferencing was preferred. Task selection depends heavily on exploiting the advantages of the particular medium. Lecturers need to be prepared to spend considerable time (estimated conservatively at three times that of class preparation) in modifying existing materials or producing their own.

The project has also demonstrated the impact of technology on students' interaction with other students and with materials. In many situations it is the technology that determines the interaction patterns, and students find they have to adjust their conversational strategies to the medium or to develop alternative strategies. For example, a student in a videoconference may be asked to open the discussion on a chosen topic by giving his opinion. The student must indicate verbally that he has finished speaking and then invite someone else to contribute. These are unnecessary steps in a face to face discussion when body language determines turn-taking. Interacting in a videoconference is a skill in itself, and in mastering this skill, a student is not learning the normal patterns of social conversational interaction, he or she is learning the skill of performing in a formal and
A student in an audioconference, while concentrating on meaning and fluency, needs to adopt the strategies of seeking more clarification or giving much more feedback than in a class group situation. A computer task may involve a considerable amount of negotiating for meaning before an instruction can be carried out successfully. Technology can also suggest new uses for IOTY course materials. For example, a written task can become the basis for a discussion, a reading passage on open questions, the stimulus for group oral practice. Once again technology provides opportunities for materials use not normally available to the distance learning teacher.

The research has highlighted the positive and negative impact that technology can have on teachers' interaction with students. While it was the intention of the researchers to minimise their intervention and take a less dominant role, the demands of the technology made it necessary for some of the sessions to be teacher directed (see Extracts 1–16 for examples). This was particularly evident with students with low level English in audiographic and videoconference sessions. One strategy that lecturers adopted to overcome this problem was to prepare lesson notes in such detail that students were well aware of their roles and well prepared for each session. Sometimes it worked, sometimes it did not, and lecturers need to be aware that they may be more or less involved depending on the level of English of the students and the nature of the technology. Higher level audiographic sessions were particularly successful in promoting maximum student interaction. As the research data suggests, with more exposure to the technology, the students' level of interaction will increase and the lecturer's involvement tail off. There may be other reasons for low student participation such as shyness, lack of confidence or even a cultural expectation that the teacher must play the role of leader rather than that of facilitator. It may be necessary to look carefully at the composition of the student group to allow for maximum student participation.

On the other hand, the impact of technology on teachers' interaction with materials was very encouraging. The possibilities that these forms of technology offer the teacher to exploit the uses of the course material are extensive, especially in the area of audiographics where the only limit is the teacher's creativity.

When discussing the viability of using new technology as a support mechanism for the delivery of IOTY, it is important to consider the following factors that can affect the decision to use the particular form: costs, reliability, lesson preparation time, student access to training, technological support, student access to the technology, and promotion of student-student interaction. The audioconferencing option is cheap, reliable, does not require students to leave their own homes, involves no training or technical support, promotes increased interaction and is greeted enthusiastically by students and lecturers. As such it is very suited to providing enhanced support for DL students.

On the other hand, the use of audiographics could pose problems for students and staff. Considerable training can be required. On-site technological support (essential for audiographics) is not readily available
to AMES staff, and students may have time, travel or child-care problems that prevent them fitting in with the booking arrangements of the technology site. On the positive side, after initial installation costs, the only other charges are two phone calls at STD rates, and any local facility hire charges, usually minimal, by the hiring site. Trialing students gave positive feedback, were very enthusiastic about using the system and lecturers were impressed with the possibilities it provided for student to student interaction. Those students who already have keyboard skills will find it easy to use and for those with computers in their own homes the possibility exists for individual sessions with the teacher when individual problems can be addressed. While project team members had difficulty locating appropriate technology sites in time for the research, an extensive network of centres with Electronic Classroom does exist in Western Australia, Victoria and New South Wales. It is anticipated that many of these could be accessed by DL students who are not restricted in time and place. The use of the IBM software, Smart 2000, an excellent alternative and the preferred choice of telecentres in Western Australia, is spreading and it too may be accessible in other states. For these reasons and subject to the provision of on-site technological support for delivery personnel, the researchers recommend the use of audiographics in supporting DL learners.

Due to the project experience of Picture Tel videoconferencing, the researchers have some reservation about its viability as a regular part of DL provision. The nature of the technology is such that confusion is caused by the lack of sound/picture synchronisation, students are unsure about turn taking and feel uncomfortable about the high level of formality imposed by the system. In view of the high costs associated with delivery and the continuing problem of student access, this form of videoconferencing cannot be recommended for enhancing student support, at this stage. However, with constantly reducing costs and technology developing at an amazing rate, it is reasonable to expect that a reduced-cost broadcast-quality system could become available in the not too distant future.

One of the outcomes of the project has been the collection of data that can be used in the development of training packages for lecturers interested in using these three forms of technology. An audioconference training package could suggest the ideal number of students per group, the types of preparatory lesson notes sent to students and information on the protocol necessary for the smooth running of the session. The use of the computer tools, hints on troubleshooting and screen layout would be covered in an audiographic training package. Videoconference users would need to be warned of the time delay problem and have access to strategies for encouraging student to student interaction.

Another outcome has been the development of materials that have been successfully trialed and modified for use via technology. These materials are presently in note form, but if there is sufficient time and demand, they could be made available to interested parties in the future. Further production of suitable lesson material will depend on the availability of funding.
The publication of this report is intended to make the research available to those teachers involved in the reworking of IOTY, and to other interested parties. Information could also be disseminated either through journal articles or a DL conference, where findings on similar topics could be exchanged by participants involved in DL course design, delivery and research. Little research has been done to date in this area for NESB distance learners, and it is important that investigations of this nature be carried out with larger numbers of students.

Implications for future research

This research has focused on the impact of technology on the provision of materials and support for distance learning ESL students, and in doing so it has raised a number of other research questions. While the report touches briefly on the impact of technology on teacher intervention, it would be interesting to carry out a more detailed examination of the impact of each technology and student proficiency on teacher intervention patterns. A comparison could usefully be made with a control group in a traditional classroom setting. The implications of these findings for the training of DL teachers using new technology are obvious.

Another interesting area to investigate is the impact of technology on student performance. A longitudinal study of DL students receiving technological support and a control group not receiving such support could give insight into the value of such support in enhancing learner language proficiency.

Recommendations

As a result of their findings the researchers make the following recommendations for the wider use of technology in the distance learning program It’s Over to You:

- That AMES extend the use of audioconferencing to make it a regular component of the course for all DL students of an appropriate level. The research suggests that students Stage 2 and above be encouraged to participate.
- That audiographics be offered as an optional extra for suitable level students (Stage 2 and above) who are able to access the facility.
- That DL centres establish links with the appropriate technology centres for training and on-going support of DL students; and that funding be available for any training necessary for students to take part in audiographics sessions.
- That DL lecturers be encouraged to use audiographics by the provision of adequate funding for: (i) the purchase of the appropriate hardware and software; (ii) initial training; (iii) on-site technical support; and (iv)
adequate lesson preparation time. That beginning audiographics lecturers confine themselves to point to point delivery only.

- That state DL departments liaise regularly to discuss matters relating to implementing audioconferencing and audiographics, such as planning suitable tasks, evaluation, sharing of prepared screens and successful strategies for maximising student participation.

- That any teacher guidelines to accompany the re-write of IOTY include suggestions for using audioconferencing and audiographics at appropriate places in the text.

- That AMES providers continue to research developing technologies, especially videoconferencing, to assess the advantages they offer DL students, and to monitor changes in the pricing structure as these systems become more widely used.
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tr>
<td>AMES</td>
<td>Adult Migrant Education Service</td>
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<tr>
<td>ASLPR</td>
<td>Australian Second Language Proficiency Rating</td>
</tr>
<tr>
<td>AMEP</td>
<td>Adult Migrant English Program</td>
</tr>
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<td>DEET</td>
<td>Department of Employment, Education and Training</td>
</tr>
<tr>
<td>DIEA</td>
<td>Department of Immigration and Ethnic Affairs</td>
</tr>
<tr>
<td>DL</td>
<td>Distance Learning</td>
</tr>
<tr>
<td>ESL</td>
<td>English as a Second Language</td>
</tr>
<tr>
<td>Interactive</td>
<td>Two way communication in real time. Sometimes called synchronous interaction. Chief advantage is the opportunity for immediate feedback.</td>
</tr>
<tr>
<td>IOTY</td>
<td>It’s Over to You Distance Learning course</td>
</tr>
<tr>
<td>ISDN</td>
<td>Integrated Services Digital Network. This Telecom system carries digital signals and can be used to deliver voice, image, and data in real time.</td>
</tr>
<tr>
<td>LOTE</td>
<td>Languages other than English</td>
</tr>
<tr>
<td>NCELTR</td>
<td>National Centre for English Language Teaching and Research</td>
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<tr>
<td>NESB</td>
<td>Non-English-speaking background</td>
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<td>OTEN</td>
<td>Open Training and Education Network</td>
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<td>STD</td>
<td>Subscriber Trunk Dialling</td>
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<td>TAFE</td>
<td>Technical and Further Education</td>
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<tr>
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<td>WALINK</td>
<td>WA Learning, Information and Business Network Centres</td>
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<tr>
<td>Telecentre</td>
<td>A community owned and managed resource, networked with numerous other centres to assist rural people to gain access to information, education, training, employment, and business via various forms of technology, including video-conferencing, audiographics, and audioconferencing.</td>
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Kliest, J. 1986. It’s over to you: Distance learning in the AMEP. Prospect, 1,3: 45–54.


Sikhanyiso, D.N. 1989. The role of a distance education developer. In M. Parer (ed.). *Development design and distance education: A project initiated at the 13th World Congress of the International Council for Distance Education*. 2nd ed. Victoria: Centre for Distance Learning, Gippsland Institute, Monash University College: 181–188.


# Appendix 1

## Client profiles

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<th>Client</th>
<th>Sex</th>
<th>State</th>
<th>Time in Australia</th>
<th>Years Edu (a)</th>
<th>First Language</th>
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<th>Stage of IOTY (c)</th>
<th>Technology (d), (e), (f)</th>
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**Abbreviations**

(a) Years of education in home country  
(b) Speaking, Listening, Reading and Writing levels on the Australian Second Language Proficiency Ratings (ASLPR) scale  
(c) It’s Over To You (course)  
(d) a.c. = audioconference; e.g. = audiographics; f) v.c. = videoconference
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<th>Sex</th>
<th>State</th>
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<td>2</td>
<td>a.c.</td>
</tr>
<tr>
<td>41</td>
<td>F</td>
<td>NSW</td>
<td>2 1/2 yrs</td>
<td>15</td>
<td>Arabic</td>
<td>3</td>
<td>2</td>
<td>a.c.</td>
</tr>
<tr>
<td>42</td>
<td>F</td>
<td>NSW</td>
<td>2 yrs</td>
<td>15</td>
<td>Chinese</td>
<td>2+</td>
<td></td>
<td>a.c.</td>
</tr>
<tr>
<td>43</td>
<td>M</td>
<td>NSW</td>
<td>5 yrs</td>
<td>12</td>
<td>Japanese</td>
<td>3+</td>
<td>3</td>
<td>a.c.</td>
</tr>
<tr>
<td>44</td>
<td>F</td>
<td>NSW</td>
<td>6 yrs</td>
<td>12</td>
<td>Malaysian</td>
<td>3+</td>
<td>3</td>
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</tr>
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<td>NSW</td>
<td>3 yrs</td>
<td>17</td>
<td></td>
<td>2</td>
<td>3</td>
<td>v.c.</td>
</tr>
<tr>
<td>46</td>
<td>F</td>
<td>NSW</td>
<td>2 1/2 yrs</td>
<td>16</td>
<td>Japanese</td>
<td>3</td>
<td>3</td>
<td>a.c.</td>
</tr>
<tr>
<td>47</td>
<td>F</td>
<td>NSW</td>
<td>3 1/2 yrs</td>
<td>10</td>
<td>Chinese</td>
<td>2+</td>
<td>3</td>
<td>a.c.</td>
</tr>
<tr>
<td>48</td>
<td>F</td>
<td>NSW</td>
<td>3 yrs</td>
<td>18</td>
<td>Czech</td>
<td>4+</td>
<td>3</td>
<td>v.c.</td>
</tr>
<tr>
<td>49</td>
<td>M</td>
<td>NSW</td>
<td>3 yrs</td>
<td>18</td>
<td>Czech</td>
<td>4+</td>
<td>3</td>
<td>v.c.</td>
</tr>
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<td></td>
<td></td>
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<td>v.c.</td>
</tr>
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<td>NSW</td>
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<td>12</td>
<td>Cantonese</td>
<td>4+</td>
<td>3</td>
<td>a.c.</td>
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**Abbreviations**

(a) Years of education in home country  
(b) Speaking, Listening, Reading and Writing levels on the Australian Second Language Proficiency Ratings (ASLPR) scale  
(c) It’s Over To You (course)  
(d) a.c. = audioconference; (e) a.g. = audiographics; (f) v.c. = videoconference
## Appendix 2

### Task design grid

<table>
<thead>
<tr>
<th>TASK</th>
<th>AIM – Skills or competency development OR Information awareness raising</th>
<th>Skills or competency focus</th>
<th>Type of text</th>
<th>Delivery mode Technology</th>
<th>Ways of evaluating the task-predicted outcomes</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix 3(a)

New technology project
student evaluation form

Name (Optional) ........................................ Date of lesson ........................................

We are very interested in your opinion about using technology to support students learning English at a distance. Could you please complete this survey as soon as possible after the lesson and return it to us.

1. Did you enjoy the teleconference? _________________________

2. How did you feel **before** the audioconference? Please circle:
   - Nervous
   - Excited
   - OK
   - Worried
   - Confident

   Something else? Please explain: _________________________

3. How did you feel **after** the audioconference? Please circle:
   - Happy
   - Disappointed
   - Relieved

   Something else? Please explain: _________________________

4. What were two or three good things about using the technology? _________________________

5. Was there anything you didn’t like about using the technology? _________________________

6. Were there enough opportunities for you to interact with the other students?

   Please circle: Yes  No

   Comments: _______________________________________

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7. Were there enough opportunities for you to interact with the teacher?

   Please circle: Yes  No

   Comments: ________________________________________________

8. Was the group size: OK  Too big  Too small? Please circle.

9. Was the length of the audioconference: OK  Too long  Too short  Please circle.

10. Could you follow the teacher’s instructions?  Yes  No  Sometimes

    Please circle.

11. Were there any technical problems?  Yes  No  Please circle.

    If yes, what was the problem? ________________________________

    Who helped you? ________________________________

12. Is this a good way for distance learners to learn English? Please say why or why not.

    ________________________________________________

    ________________________________________________

13. Were the language learning tasks in this session useful for you?  Yes  No

    Comments: ________________________________________________

    ________________________________________________


    ________________________________________________

    ________________________________________________

15. Would you choose to participate in audioconferences again?  Yes  No

    Thank you for your help.
Appendix 3(b)

New technology project
student evaluation form

Name (Optional) ........................................ Date of lesson ........................................

We are very interested in your opinion about using technology to support students learning English at a distance. Could you please complete this survey after each lesson and return the completed forms to us as soon as possible after your last lesson in the Freepost envelope provided.

1. Did you enjoy the computer lesson? ________________________________

2. How did you feel before the computer lesson? Please circle:
   Nervous  Excited  OK  Worried  Confident

   Something else? Please explain: ________________________________

3. How did you feel after the computer lesson? Please circle:
   Happy  Disappointed  Relieved

   Something else? Please explain: ________________________________

4. What were two or three good things about using the technology? ____________

5. Was there anything you didn't like about using the technology? ____________

6. Were there enough opportunities for you to interact with the other students?

   Please circle:  Yes  No

   Comments: ________________________________

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7. Were there enough opportunities for you to interact with the teacher?
   Please circle: Yes  No
   Comments: __________________________________________________________
               __________________________________________________________

8. Was the group size: OK  Too big  Too small? Please circle.

9. Was the length of the computer lesson? OK  Too long  Too short Please circle.

10. Could you follow the teacher’s instructions? Yes  No  Sometimes
    Please circle.

11. Were there any technical problems? Yes  No  Please circle.
    If yes, what was the problem? _______________________________________
    Who helped you? _________________________________________________

12. Is this a good way for distance learners to learn English? Please say why or why not.
    _______________________________________________________________
    _______________________________________________________________

13. Were the language learning tasks in this session useful for you? Yes  No
    Comments: _______________________________________________________
    _______________________________________________________________

    _______________________________________________________________
    _______________________________________________________________

15. Would you choose to participate in computer lessons again? Yes  No

   Thank you for your help.
Appendix 3(c)

New technology project student evaluation form

Name (Optional) ........................................... Date of lesson ...........................................

We are very interested in your opinion about using technology to support students learning English at a distance. Could you please complete this survey after each lesson and return the completed forms to us as soon as possible after your last lesson in the Freepost envelope provided.

1. Did you enjoy the videoconference? _____________________________

2. How did you feel before the videoconference? Please circle:

   Nervous   Excited   OK   Worried   Confident

   Something else? Please explain: _____________________________

3. How did you feel after the videoconference? Please circle:

   Happy   Disappointed   Relieved

   Something else? Please explain: _____________________________

4. What were two or three good things about using the technology? ______________

5. Was there anything you didn't like about using the technology? ______________

6. Were there enough opportunities for you to interact with the other students?

   Please circle: Yes   No

   Comments: ________________________________________________
7. Were there enough opportunities for you to interact with the teacher?

Please circle:  Yes  No

Comments: ________________________________________________________________

8. Was the group size:  OK  Too big  Too small?  Please circle.

9. Was the length of the videoconference:  OK  Too long  Too short  Please circle.

10. Could you follow the teacher’s instructions?  Yes  No  Sometimes

Please circle.

11. Were there any technical problems?  Yes  No  Please circle.

If yes, what was the problem? ________________________________________________

Who helped you? __________________________________________________________

12. Is this a good way for distance learners to learn English? Please say why or why not.

__________________________________________________________________________

13. Were the language learning tasks in this session useful for you?  Yes  No

Comments: ________________________________________________________________


__________________________________________________________________________

__________________________________________________________________________

15. Would you choose to participate in videoconferences again?  Yes  No

Thank you for your help.
Appendix 4

New technology project evaluation form (observers)

Name (optional) ..................................... Date of lesson ..............................................
Technology ............................................ Number of participants .................................

1. How much support did the students need to carry out the tasks? What help?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

2. Can you comment on the students’ reaction to the technology either individually or as a group. Did they seem comfortable?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

3. Can you comment on the technology. Were there any problems? How were they solved?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

4. How well did the students interact with each other? Within the group? Across the technology?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
5. Did the students seem fully involved in the lesson?


6. What do you see as the main advantages of delivering materials and learning activities this way?


7. What do you see as the main disadvantages?


8. Would you recommend this method of delivery as a way of enhancing a distance learning program?


9. How suitable did you think the lesson material was for the medium?


10. Any further comments?


Thank you for your help
## Appendix 5
### Telephone assessment form (teachers)

<table>
<thead>
<tr>
<th>Name .................................................................</th>
<th>Date of lesson ........................................</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of participants ........................................</td>
<td>Length of session ...................................</td>
</tr>
<tr>
<td>Stage of participants .........................................</td>
<td></td>
</tr>
</tbody>
</table>

1. What do you consider the teacher’s role to be in a teleconference?

2. What is the student’s role in a teleconference?

3. How did you plan for maximum student interaction?

4. Comment on the interaction. Was it mainly teacher or student directed?

5. How much of the teacher intervention was instructional? Non-instructional (teacher as friend, listener, motivator, encourager)?

6. Does a telephone conference change the nature/amount of teacher intervention when compared with the same tasks in a classroom setting? 

   How? ............................................................................

   Why? ............................................................................

---

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7. Were the tasks appropriate at this level, to allow for minimum teacher input?

________________________________________________________________________

________________________________________________________________________

8. What influenced your selection of tasks?

________________________________________________________________________

________________________________________________________________________

9. Would you modify any of this ‘lesson’ plan before using it again? Yes ( ) No ( )
   If yes, how? __________________________________________________________

________________________________________________________________________

Why? __________________________________________________________

10. Have you any further suggestions on strategies for increasing student interaction?

________________________________________________________________________

________________________________________________________________________

11. How did students react to the teleconference experience?

________________________________________________________________________

________________________________________________________________________

12. Did you have any problems with the technology? If yes, what impact did it have on
    the situation?

________________________________________________________________________

________________________________________________________________________

13. Were there any disruptions? Please describe what happened and your response.

________________________________________________________________________

________________________________________________________________________

14. How would you prevent their reoccurrence in a future teleconference?

________________________________________________________________________

________________________________________________________________________

Thank you for your help