Can Big Brother watch? The challenges of Interactive Video teaching.

Lucie Zundans and Natasha Wright
School of Teacher Education
Charles Sturt University

Abstract

The authors of this paper present their perspectives on the effectiveness of interactive video teaching (IVT) as an educational tool. This method has been used to teach science and technology and educational psychology at Charles Sturt University, Bathurst. New technological advancements constantly challenge academics in their quest to provide quality educational programs. This is particularly overwhelming for early career academics still adapting to the higher education environment. The School of Teacher Education has been using interactive video teaching for the past few years to deliver subjects to the Dubbo campus with varying success. This hybrid mode of delivery presents many challenges. Due to the practical elements embedded in the subjects taught, the instructors felt it necessary to implement alternative teaching and assessment strategies. Other challenges included the reliability of the system, interaction capabilities and the development of human relations.

The Interactive Video-Teaching (IVT) method used is "...a live two-way video and audio telecommunications connection between, in this instance, two sites (point-to-point) which allows 'real-time' teaching/learning interaction between lecturer and students." (CELT (n.d.)) This hybrid mode of content delivery creates a new arena of educational practice which is particularly daunting for new academics who are still grappling with subject content and adapting to the higher education environment. McKinney (2002b) cites the significance of "Research into IVT as an educational medium indicates that sessions are more intense than the normal lecture period (DEET 1993). This would suggest the need for a variety of presentation techniques to be employed during an IVT session to prevent students losing attentiveness and becoming less involved in their learning activity" (Parker 1984 cited in McKinney 2002 p. 13).

The instructor has limited control over the technologies at the remote site including lens span. The IVT camera at the remote site is controlled by the Dubbo students rather than by the instructor at Bathurst. This lack of control inhibits the view of the students sitting on the fringe of the classroom. Students therefore have the freedom to walk out of the classroom without the instructor knowing. A student even left the classroom on one occasion to check her email. Instructors are left to monitor the classroom, using deceptive means such as, detecting student's reflections on a nearby whiteboard while they are beyond camera range. Many students had the freedom to engage in the tutorial or sit uninvolved. This technology requires students to be very self directed learners and highly motivated.

> *A critical eye often circulated the faces of the students in sight trying to decipher whether those out of view were instigating anything inappropriate. The expressions on those students at the centre of the classroom were relied upon. They became the mirror that was looked into when monitoring the students on the fringe.*

Interestingly, the voices of those students who sat beyond the main view of the camera were easily detected through the placement of microphones around the circumference of the classroom. In our opinion, the lecturer needs control over the classroom camera for a number of reasons; classroom management, better interaction

When placed in the classroom instructors can focus on one student and disregard the other. Non-verbal signals such as attending to and maintaining eye contact with one student easily silences the interrupting peer. During face-to-face sessions the discussion proceeds more like a conversation rather than each student delivering a speech for five minutes. However, these simple non-

McKinney (2002b p. 12) warns "The usual set of verbal and non-verbal cues evident in local face-to-face communication are not so apparent in educational delivery through videoteaching. IVT present an additional communication and interaction challenge …" Not experiencing the subtleties of human communication, the sly comments, laughing eyes or troubled gaze prohibited our ability to relate to the students on a more personal level. It was even difficult to share their joke. Therefore, we could not become familiarized with their personalities and they not with ours. The usual ease with which we could read our audience and respond to their nonverbal behaviour was no longer part of our interpersonal repertoire. These subtle social cues impeded by technology communication caused us to alter our teaching styles and personality on many occasions. Pauline Jones (2002 p.21) reiterates this problem "In a face-to-face tutorial when the students are working over materials around a task, you can sense the way they are going, you can intervene much more delicately or strategically. But in an IVT session, it's more difficult to do that."

Students became very receptive after the initial face-to-face meeting and classroom control became much easier. Over the duration of the semester we made three visits in person to Dubbo. When we were physically with the students we had full awareness of their non-verbal behaviour and adapted ours accordingly. This helped the students recognise how similar our experiences were. There was also a lot of pressure on the instructor to try and learn all the student's names during the initial meeting. By learning their names classroom management became easier and control over student participation simpler. The relationship development was a longer process then normally expected. However, at the final meeting one of the students suggested that; "You're young with no commitments. Why don't you move permanently to Dubbo and take our tutorials all the time?" This unexpected question was met with a chorus from the rest of the newfound two-dimensional friends.

IVT limited the types of activities provided for students as the programs which had been designed were very interactive. The subject content required a lot of group work activities. We often demonstrated to students the best approaches to use with primary aged students. However monitoring group work interactions during the lesson was very difficult. The instructor could not always hear individual groups unless a handheld microphone was used. We tended not to use the microphone and just provided feedback to individual groups as they reported their answers at the end of the tutorial. To not do any group work during tutorial sessions denies these students access to experiencing the teaching strategies we espouse. However, Dengate (2002 p. 7 cited in Wilson) preferred to "…. not provide group work within the IVT sessions as it is difficult to build up closeness and to pick up the inter-human communication cues that exist in group work." Alternatively, tutors desire to control the interactions might drive students into a world of passivity.

activities. Thus the students are learning through correct examples. Therefore, the teaching philosophy that we preach to students could not be demonstrated. Essentially the perspective of 'do what I say not what I do' was being endorsed.

Consequently, the outside science investigation was changed along with many other tutorial activities throughout the semester. A week before the science task, students were asked to bring in some samples of small creatures. If they forgot to collect the materials the whole activity would have been ruined. Equipment concerns were always present. The instructor needed to plan well ahead and consider what equipment would be needed for the following weeks. If the same materials were being used at Bathurst, we had to rely on Dubbo students to bring their own resources. Obviously equity issues had to be considered, ensuring that there were no additional expenses to the Dubbo students. We had to be creative at times and make do with things that most people could find at home.

The instructor had to be very organised and ensure that all the readings, materials and complimentary written notes were prepared and sent to Dubbo well befor

The hybrid mode gave students a lot of control over their own learning. Students were required to demonstrate many classroom teacher skills with varying levels of success. This demanded a lot from them, particularly if they were first year students still adapting to this mode of learning. Often students were left to follow the lesson notes or our explanations when giving a demonstration to their peers. During these times they were responsible for the teaching. We were able to sit back and observe their ability to fulfill this role. Students became peer tutors, group managers and collaborative partners. They were responsible for behaviour management, giving instructions, discerning meaning from written mediums and critiquing others'

References

CELT – Centre for Enhancing Learning and Teaching (n.d.) *Interactive video teaching* Charles Sturt University, Bathurst

DEET, 1993, *Videoconferencing in higher education in Australia*, Occasional Papers Series, AGPS, Canberra.

Flinders University of South Australia (n.d.) *Lecturing for the first time* Staff development and training unit, Flinders University, South Australia.

Gill, L 2002, *Tips for IVT session presenters: an educational perspective.* CELT, Bathurst.

McKinney, S 2002a*, Interactive video teaching forum* CELT Dubbo.

McKinney, S 2002b, *Interactive videoteaching: a guide for educators*, Charles Sturt University, Dubbo.

Tuovinen, J. E 2002, *What IVT research tells us* unpublished paper presented at Charles Sturt University, Bathurst.

Wilson, G (ed) 2002, *The Dubbo experience: case studies of educational delivery* Charles Sturt University, Bathurst.