This paper reports on the continuance of sustainable learning outcomes from a project (2001-2002) which created a Virtual Workplace (VW) for preservice teacher education and in-service professional development. Through the use of videoconferencing and web-based technologies, the project created a ‘virtual workplace’ for both synchronous and asynchronous interaction between classroom teachers, preservice (student) teachers and staff of Queensland University of Technology’s (QUT) Kelvin Grove Campus. Basically, preservice teachers watch via videoconference in the large lecture theatres, live lessons being taught from school classrooms, interact with the teachers before and after the lessons, and participate in discussions in tutorials and on-line on specific teaching/learning topics. This is still a particularly innovative approach providing QUT preservice teachers with classroom observation and an alternative practice teaching experience of classrooms. In turn, the university teachers and the partner teachers and their schools benefit by extending their knowledge and use of the technical facilities for curriculum delivery and participating in professional development programs.

The paper presents how the teaching/learning experience of the medium of videoconference has also shown that it can influence the development of university and teacher pedagogies and teacher identities in both experienced and neophyte teachers.

Introduction

Videoconferencing (technology) = tool for learning?
Videoconferencing (the medium is the message) = stand alone pedagogy?
Videoconferencing + discussion and chat rooms (VW) = more tools for learning?
Videoconferencing etc + conversations + storying (the message + the massage)= pedagogy?

This paper questions the potential of videoconferencing, which connects first year preservice (student) teachers with a classroom teacher teaching, as a stand alone medium for enriching learning and engaging professional thinking. It draws on the findings of The Virtual Workplace, a two-year project (2001-2002), funded by a QUT Teaching and Learning Development Large Grant. The author has sustained the use of the videoconferencing and web-based technologies, to allow for both synchronous and asynchronous interaction between classroom teachers, preservice (student) teachers and university lecturers, for the purpose of precipitating transitions in both preservice and in-service teacher learning and development of identities.

This paper recounts the ways in which there was a planned impact on first year preservice teachers and their identities. This is developed here under the themes of guided observation, student/teacher interactions, the meaning making through conversations and storying with regard to demonstrated pedagogy. All of these themes were directly associated with preparation of preservice teachers for practice teaching.

The Past

Initially the main aim of the project with which this paper is concerned was to enhance pedagogical practice in preservice teacher learning in the undergraduate units, particularly
relating to teacher/student interactions, classroom and behaviour management, and practice teaching. As an individual facilitator of learning within this project I participated in a full year of investigations (which are related below) before I came to the realisation of the best way to tap the rich learning source that the Virtual Workplace provided.

The Technology Literature
Higher education institutions are investing heavily in applying digital technologies for the delivery of educational services and administration (Cullimore, 1999). The emphasis is particularly in the delivery of instruction to on-campus as well as off-campus learners (Gibson & Gibson, 1995). Research is very much required to determine the pedagogical values of these technologies and to provide models and methods (Falk & Carlson, 1994; Wharton, 1994) for technology use and staff development.

Examples of Videoconferencing Projects
The term videoconferencing is actually applied to an increasingly wide range of situations from live video lecturing to large audiences, to a point-to-point, individual-to-individual desktop PC chat. At its simplest, videoconferencing entails the digital transmission of video and audio signals simultaneously between two or more physically separate locations. The preceding analogue technology was commonly termed Interactive Television (ITV) (Gibson & Gibson, 1995). Along with the standard video and audio, modern videoconferencing technology allows participants to share text, graphical, and other information resources. Gibson & Gibson (1995) categorised the use of this technology in education in two types: Type A involves the transmission of a 'live telecast' to students removed from the main site of instruction. Usually these transmissions are from a university, college or school and incorporate a variety of subject matter presented to students studying at different levels. Type B programs involve transmissions from classrooms for the benefit of pre-service teachers observing teaching behaviours and routines.

In 1995, Gibson & Gibson reported that whilst evidence of Type A projects in both the USA and Australia was plentiful, evidence of Type B programs was less so. Gibson & Gibson (1995) outlined two earlier examples of Type B cases. In a study by Merkley & Hoy (1985), video technology was used to allow pre-service teachers to view teaching techniques and classroom interaction without attending the class in person. Lessons were broadcast live from a selected elementary school classroom to an observation centre. In a similar study in 1993, Merkley & Jacobi evaluated three different types of teacher observation processes. The study found that the preservice teachers who observed via ITV became more perceptive of the subtleties of teaching behaviours than the students observing via other modes.

Gibson & Gibson (1995), reported on the University of Southern Queensland’s (USQ) Windows Into Classrooms project which aimed “to make teacher education for rural teaching as meaningful and relevant as possible” (p.218) by using interactive television (ITV) to relay live broadcasts of teaching from small, multi-graded, rural schools into university lecture halls. In his evaluation of new communication technologies to support the partnership between teacher education institutions and schools in teacher training, Cullimore (1999) discusses a videoconferencing project between the University of Brighton and teacher-training mentors at four partner schools. The project involved multipoint video conferencing between the university staff and the mentors.

Gibbons & Hillard (1999) report on Leeds University’s Virtual Science Park, which uses integrated Computer Mediated Communication (CMC) including videoconferencing to enable learning in and about the workplace.
Advantages of Videoconferencing

The USQ project revealed that through their participation in the videoconferencing with rural/remote schools, preservice teachers were more thoroughly prepared for rural teaching experiences, displayed competence in effective multigrade teaching skills, and exhibited control during involvement in decision-making and problem solving aspects of teacher behaviour. These preservice teachers reported that the four most significant benefits were: (1) the unification of 'theory' with 'practice' (90%); (2) gaining valuable insights into teaching in rural, multigrade classrooms (90%); (3) the unobtrusive nature of the observation process and (4) the opportunity for immediate feedback during the interactive discussions with teachers (Gibson & Gibson, 1995, p.222-224). The classroom teachers saw the process as a highly effective method by which preservice teachers might view and learn about rural, multigrade teaching. They also identified significant benefits for their own professional development such as gaining knowledge about the new technology and encouraging reflection on one's own teaching (p.223, p.225).

The potential of this technology to enable a rapprochement between theory and practice is also supported by several writers (Feletti, 1993; Le Baron & Bragge, 1994; Gibson & Gibson, 1995; Cullimore, 1999; Graham & Thornley, 2000). Gibbons & Hillard (1999) reported that a clear benefit of Leeds University’s Workplace Based Learning is “the exciting prospect of fusing thinking and doing or, put differently, breaking down the barrier between theory and practice”. The University of Otago tries to get its Bachelor of Teaching students to “theorise their practice and practise their theory” by using fax, audio-conference and email, to create a dialogue between preservice teachers and children and their teachers in classrooms (Graham & Thornley, 2000, p.235).

Other studies have revealed that the use of interactive television for preservice teachers to observe classrooms led to an improvement in preservice teachers’ observation skills (Gibson & Gibson, 1995; McDevitt, 1994; Merkley & Hoy, 1985; Merkley & Jacobi, 1993). There is evidence that this form of observation is more effective than traditional in-person classroom observations, that this promotes an element of quality control among the early field experiences of preservice teachers (McDevitt, 1994), and that the knowledge of teaching behaviour for those preservice teachers who observed via the ITV was significantly higher than two other groups using different types of teacher observation (Merkley & Jacobi, 1993). Cullimore (1999) posits that technologies such as video conferencing and web-based tools need to be researched and engaged in fulfilling ‘unmet needs’ in the teacher training partnerships.

Disadvantages and Limitations

The technology has fairly high establishment cost (Cullimore, 1999; Gibson & Gibson, 1995) and some running costs, which often preclude their use by cash-strapped education institutions. However through innovation and competition most of those costs have been lowering. The technology is quite sensitive to both human and technical malfunctions (Cullimore, 1999; Gibson & Gibson, 1995). Technical knowledge and support is critical at start-up and to ensure successful continuing usage (Cullimore, 1999; Gibson & Gibson, 1995). The advantage of immediacy that a synchronous medium like video conferencing offers comes with the ‘constraint’ of not allowing time for reflection (Cullimore, 1999). Coventry (1996) warned that it is most important not to underestimate the power of the Hawthorne effect when video conferencing is novel to students and staff.

The spectre of ‘big brother’ always looms about when considering the potential of such technology. Some argue that such network technologies may make it easier for central authorities to rationalise and control the practices, content and evaluation of education (Apple, 1997; Kerr, 1996). Teachers may find themselves working in an environment in which all of their actions and
decisions are much more open to scrutiny and analysis from outside. Others believe that network benefits as access to off-location expert may well lead to loss of local expertise (Hargreaves, 1997).

**Borrowed insights - Initial raison d’etre**

From this background of literature, the VW project initially sought to combine the relationship of several needs and issues embedded in professional teacher education at this university:

- The teacher education units involving the practicum are core units for all preservice teachers and typically involve very large cohorts (approx. 400 students);
- In each of these traditional units students attended one lecture and a two hour tutorial with a lead lecturer (facilitator of learning);
- There are contextual features of practical experience not accessible to every preservice teacher (eg., indigenous students, and rural, remote, international and middle schools);
- The cost of the practicum component of teacher education is very high;
- The organisation of observation and practical experience is very labour intensive;
- There are inequities in the nature and quality of the practical experience;
- There is a need to demonstrate that theory is embedded in practice and that the partnering of universities and the workplaces should foster the examination of the nature of assumptions about current practices.

From these beginnings we worked from these bases, but each facilitator of learning within the VW space was encouraged to respond to the needs of their particular cohort and to shape and frame pedagogy to realise the learning outcomes through the devised technology and process.

**Technology and Process**

Using videoconferencing technology over ISDN (Integrated Services Digital Network) phone lines and QUT’s IP (Internet Protocol) network, two-way audio and video communication links have been established between the participating schools and QUT. These allow for live lessons to be transmitted from the school classrooms to large lecture theatres at the Kelvin Grove campus. The model for the VW sessions was developed in consultation with the teachers who participated in the POC stage. Furthermore, the model was developed to best facilitate the types of learning outcomes that were planned for the preservice teachers within their subjects. The model included three components. Firstly, the teacher partner delivered a 10-15 minute pre-lesson presentation by the teacher partner covering matters such as the general context of the school, class students, classroom processes (as aligned with the subject itself) and the curriculum. This was followed by a 30-45 minute live lesson from the classroom. There was no direct discussion with the teacher or students during the lesson. After the lesson, there was a 15-20 minute post-lesson question and answer session between the teacher partner, the preservice teachers and the QUT facilitator. Throughout the session, the preservice teachers use a worksheet to take notes on their observations, their comments and possible questions for the teachers. These are also the basis for discussions in the tutorials after the session. The tutorials investigated the VW experience in terms of how to develop teacher thinking through the expert facilitation by the subject tutors. The videoconferencing session was preceded by preparation between the QUT facilitator, the teacher partner, and the project’s organisational and technical staff. Similarly, the lecturers, tutors and preservice teachers discussed the program in the previous week’s lecture and after the initial videoconference often prepare questions for the teacher. These sessions are also videotaped, under strict contract conditions, for subsequent use in tutorials and for evaluation of the project. A variation of the model involved a follow-up session with no teaching observation but just the teacher reflecting on the teaching and answering questions from the preservice teachers on the
previous session. This made the covert teacher thinking, overt. The teacher also evaluated the planned learning that occurred. The principal of the school or Head of Department also joined in this VW session and relates the activity and planning of the teacher to the school planning and expectations. So the preservice teachers see and believe in the professionalism and "intentionality" of teachers’ practice. It was intended that they also observe the spontaneity of the living classroom.

It is important to note that the teachers who were and are actively involved in the VW experience were volunteers and also were trusted, experienced members of the school who are supported by their school leadership groups. A project website was developed and it links with the web resources of the online teaching websites of the participating QUT subjects. Use of web resources and email has allowed for a continuing conversation between the preservice teachers, the subject staff and the partner-teachers.

**Contexts and cohorts**

During the first year, my VW consisted of the ‘links’ which were made for preservice teachers in the Classroom Management Professional Practice unit. The students engaged with three schools with different contextual features, two within greater Brisbane and one rural school, which was multigrade. This was to provide them with a variety of teachers teaching in a variety of contexts, modelling (content-wise) effective classroom management.

The large cohorts of 400 first year preservice teachers were drawn from Bachelor of Education students (primary) and they emerged as a particular interest group because of their expressed fear/anxiety of going out to practice in the third week of semester. This “transitional” factor focussed my interest in their responses to the mediums being used and subsequently I began to organise my own tutorials (4x 24 students) into conversation groups and storying/narrating their own stories sessions. The data and subsequent findings singled them out as demonstrating very particularised needs because of their "neophyte" nature.

**Teachers – University and Classroom presenters**

Even though it is beyond the realm of this paper to tell the story of the development of university and classroom teachers through this work – their input is critical to the development of the VW. Initially the teachers were simply asked to present a lesson that they were to deliver on the day of the videoconference. It became immediately obvious that classroom teachers would need support and guidance. To fulfil the new role they too had to make the transition from teacher to presenter. This took more than planning – it also meant for side by side sharing of the process of teaching and how to response to the question time. The transition for teachers to a different role was one, which we wished to further develop their identities as professional practitioners.

It became evident that the main aim in establishing the VW was for presenting classroom teachers and university teachers to analyse the critical nature of that medium and reshape their pedagogies to produce greater learning.

**Project Evaluation**

We used a range of range of processes and measures to document and evaluate the outcomes of the project in terms of the objectives. These included:

- QUT first year preservice teachers’ responses to the Virtual Workplace processes and ‘quality of learning experiences’ through questionnaires and tutorial group activities.
Videotapes of all sessions for analysis.
- School Teacher and Principal interviews and questionnaires.
- Project diary and project academic and technical staff journals.
- Teachers’ reflections on the videotapes of their sessions (‘second order’ reflections).
- QUT Staff and external observers’ (including members of the Reference Group) responses to the Virtual Workplace processes through questionnaires.
- Assessment of effectiveness of PD schools concept as indicated by Principals and the PD Facilitators.

In this paper we are concentrating on the first of these as their tutorial sessions began to show how clearly the VW could be used to not only give them an idea of what was out there but also a forum for examining their pre-practice identities and what within those identities would indicate the most effective follow up to the videoconferencing sessions.

**Problematising the issue of enhancement of practice and pedagogy through videoconferencing:**
As I conducted the video conferencing sessions, I began to ask myself these questions, which always occur as I begin a transition into another way of teaching:
- What have been the prior experiences of teaching in these students?
- How much “teacher thinking” is present in these students at the moment?
- How much do the students understand and grow to know about classroom management while they watch the sessions?
- What language would they use to talk about classroom management?
- Who would these students identify with at the moment? A student teacher or a student of teaching or something else?
- From the students’ perspectives of pre-practice “student” - what are they really learning about professional practice.
- How could the VW generate a pre-teaching experience that would provoke an easier transition from student of teaching to student teacher?.
- If we are using this medium to create a space which will develop student identities as students of teaching how do we do this?

These questions led me to apply the pedagogy embedded in conversations and storying (telling their own narratives) to work through and find the answers to these questions. In analysing the above questions I also became clear that this unit I was teaching would be focussed on the students themselves and how they would see themselves as students of teaching. The first encounter in the journey of transition to a different place of thinking was to “know oneself” (Britzman,1994;Borich,1999) and to be aware of themselves and their identities at this pre-teacher stage.

**The Teachology Literature**
The questions above need to be highlighted by relevant literature to show how each of these facets of “becoming a teacher” intermesh.

**Identity**
To start with the main outcome, I have adopted the assertion of Danielwicz who believes “identity is our understanding of who we are and who we think other people are” (2001,100). Identity too is not a fixed entity- it expands and contracts, flexes and fixes depending on our contexts, the roles and responsibilities we have at that particular time, or if we are by ourselves or within a group. This raises another question about how identities are formed in the presence of a classroom supervisor, a presenter, a lecturer or other significant person, especially if that person
creates tensions for the neophyte or learner? Could videoconferencing supply that distance for thought? Is placing a student in a classroom the best way to observe practice? Of preservice teachers, Danielwicz also states, "becoming a teacher involves a construction of a person’s identity..this involves transformation of their identities over time."(2001,9.) This also gives credence to the fact that an identity does not form overnight (McEwan,1995). Professional beliefs, which form the basis of identity about themselves (in relation to the larger world of teachers), will need exposure to many experiences in order to form different ways of thinking and acting about teaching and practice.

Teacher Thinking

If we have students learning from videoconferencing or a Virtual Workplace, the question of prior knowledge and “What are they learning?” comes to the fore.

In categorising knowledge, where do we place the knowledge that presents itself in the Virtual Workplace sessions. Do the two categories that Fenstermacher (1994) set up – TK-P: teachers’ practical knowledge and TK-F: teachers’ formal knowledge- show how knowledge is acquired in a Virtual Workplace. If it is attributed to the university experience then it must add a new dimension to the formal experience. The VW should supply a source for construction of new knowledge about teaching.

Pertinent to working with first year cohorts of preservice teachers in the workplace learning arena, Morine-Dershimer (1990) identified four stages in teacher thinking and argued that novices and expert teachers think differently. She gave evidence that teachers who organise professional knowledge into sets of coherent and integrated schema were best able to solve the many dilemmas of teaching and learning. The use of videoconference indicates strongly that, if first year teachers belong to the novice stage, then using videoconference in conjunction with involvement in professional discourse will be a preferred option to using it as a stand alone medium. The famous adage “the medium is the message” holds true for the expert level as the experienced teachers know classrooms and understand in many ways. The expert however can contribute to professional conversations with teachers. Sharing of this knowledge is an important feature of professional growth and debate. In sharing knowledge “the Language of Practice “ is built and learning is enriched from the experiences and interactions with others.

If we then name “teacher thinking” as an accessory in conjunction with teacher identity then is behooves us to show how the development of teacher thinking can be generated in relation to the Virtual Workplace. Can the Virtual Workplace gain a place in helping students of teaching learn about practice?

Conversation and Storying

In order to work to raise the level of teacher thinking and hoping to discern the development of student identities, for me it was a natural process to encourage conversation which then became storying with the students so as to access their knowledge and their meaning making of events.

Just as Applebee's (1996) notion of curriculum as conversation is one approach that informs the issue of developing a curriculum that addresses the theory and practice dichotomy, then for me storying – a process used in accessing how we think in narratives, addresses the seamless web of theory and practice – in other words- experience (Clandinin & Connelly,1996,2000; McEwan,1995). In giving voice through narrative people make sense of their world and others.
When those voices are recorded, the narrative threads that run through each story make identity more transparent.

Storying became the pedagogy that resided within narrative - a way of knowing and a methodology. Students could be linked into the classrooms to experience what the teacher was doing and to ask why, but linking the participants to their knowledge bases requires more skill in the process of teaching. This process required the establishment of a communication culture and the desire to advance understanding. In order to gain the stories we started conversations about our past lives and roles, our thoughts and our beliefs. This was mainly to build trust, acceptance and a positive environment of respect for one another’s points of view. This also pre-empted the stories of how and what they perceived during the Virtual Workplace sessions, what was important about classroom management and what teachers do.

Methodology

Narrative methodology (Conle,1999,2001) became an additional part of the methodology with the Virtual Workplace project in addition to the other methods listed. Data in the form of stories analysed for the threads which revealed the stories of their tensions, successes, debates on issues of ways of teaching and working with children, showed within most individuals complex ways of travelling from student of teaching to student teacher – a new identity (Connelly & Clandinin,1999.)

The process of storying opened up the field of inquiry and research through the stories that the 4 chosen students related (* Appendix A) helped them to access the knowledge that they needed and the language of practice- at this point- classroom management.

The four students were chosen from the 4 different groups in which I worked. These were my immediate thoughts as I saw them for the first time within their groups.

A. Kristian – mature- a leader in this group.
B. Laura – obviously a school leaver- bravado hid her lack of confidence in eventually having to front children in a classroom.
C. Daniel- very young adult. Seemed to need confidence building.
D. Sharma – overconfident- not conscious of her effect on others.

Other data for this paper were obtained from an evaluative questionnaire. The questionnaire consisted of five rating questions and three open-ended questions completed by first year preservice teachers who participated in the five videoconference sessions held in the first six months of the project. The five rating questions asked respondents to rate, on a scale from 1-Poor to 5- Excellent, the overall learning experience, the value of the pre-class and the post-class discourse, and how well could they see and hear what was going on in the classroom. The open-ended questions sought comments about what they liked and disliked about this form of classroom observation and ways that this learning experience could be improved.

In the narrative enquiry, the first year preservice teachers’ stories from week 1 – 10 were recorded and in some cases drew for substance from the conversation of the group and became private debates which further clarified their values and belief positions. eg., which instances within the videoconference that you believe were positive processes of pedagogy”. "Why did you choose these? " Often the groups responses were drawn form a story and then an issue posed as a focus for the professional conversation (eg., teacher enthusiasm - how does it effect the classroom psycho-social environment?)
Findings & Analysis

Value Of The Learning Experience through the Questionnaire

Generally, first year preservice teachers found the overall learning experience to be between good and excellent with a mean rating of 4.1. Of the 633 respondents, 78% found it to be either good (48%) or excellent (30%).

First year preservice teachers valued the pre-class presentation even higher, with 86% of the 615 finding it Good (55%) or Excellent (31%), contributing to a mean rating of 4.1. The question and answer session after the class observation was the item with the highest excellent rating (36.2%) and the highest mean of 4.2. Of the 563 responses, 84.2% found the post-class section to be either Good (48%) or Excellent (36.2%).

Vision and Audio Quality

The ability to see what was going on in the classroom rated lowest of the 5 items with a mean rating of 3.4, mode of 3-Okay and the lowest combined ‘excellent or good’ rating of 43%. In fact more respondents, 44.2% of the 597, rated this item as 3-Okay compared to the combined 43% who found it as either 4-Good (34.5%) or 5-Excellent (8.5%).

The ability to hear what was going on in the classroom rated second lowest of the 5 items with a mean rating of 3.6 and mode of 4-Good. Of the 590 responses, 57.5% of still rated the item as Good (40.7%) or Excellent (16.8%).

Likes, Dislikes and Improvements

Preservice teachers commented that they most liked the ‘authenticity’ of what they observed because of its ‘live’ and ‘unrehearsed’ nature (“It was real and unedited unlike most videos”, “real life”). The non-obtrusive nature of this form of observation (“Less disturbance for class”; “fly on the wall”) was well appreciated as was the ease (“I could observe without all the pressure and nerves about being in a class”) and increased ability to observe (“see more then when there!”; “feel as though there!”; “observe without interruptions”). Many respondents referred directly or indirectly to the valuable opportunity to link theory to practice (“theory in practice”; “practical rather than theory”; “backs up theory”). Respondents also appreciated the opportunity to interact with the partner teacher and to see the teacher’s specific strategy to classroom management and implementing the lesson.

Unsurprisingly, the most common suggestions for improvements were about improving the technology, so that they could better see and hear the children during the class observation section. Respondents proposed that the technology should be “less obtrusive” so as to reduce its effect on the children’s behaviour. Other proposals related to making the observation session more interesting either by changes to length, structure and content of lesson, ability to interact with students and teacher during lesson or by choosing classes with more ‘interesting’ A common suggestion was that the sessions be timed to occur before the practicum as a primer.

Value of the VW session through the group conversations

While the technology was used to link the workplace environment to the university, the group conversation was organised to link the VW experience to ways of thinking about teaching. A culture for conversation was firstly developed and for first year preservice teachers this set the scene for future professional learning as it links people through constructing knowledge. The dialogue in a "pedagogical communicative relation" (Burbules, 1993) provided new understandings of all participants. In a group conversation it was not possible to measure how the
first years’ views of practice changed through using the VW in conjunction with the group conversation. However, the data from the group conversations, shows how the complexity of the conversations within the groups becomes more focussed on learning management. Four different students were chosen to share their narratives, which were read, and the narrative threads drawn from them to illuminate the thread of identity development, before entering schools. These threads were – the level of confidence they had in approaching, talking with, negotiating planning, with the teacher, classroom organisation (how would they arrange their environment), how they would work with groups of children, how they would set up the roles and responsibilities for the children in their class, whether teacher centred teaching strategies would work better than learner centred ones.

Finally, from the different foci examined in the groups has come one repeated conclusion - the VW supported them before they ventured out into the Practice session. It served as a window into their chosen profession, to be initiated into the language and expectations of the workplace, to be able to observe and feel "comfortable about children's behaviour", and to be respected and valued as a fellow learner. For instance, first year students talked about the window into the classroom in terms of -

“See it as it is! Especially valuable considering we are entering a classroom very early in our course.”

“It was real! I was able to experience a real working environment that didn’t seem staged or false. It was an excellent exercise & I hope we see more of it.”

“It was a ‘real life’ experience of a class before our prac. This gives us an idea about what to expect - I have been really worried”

“This gives students about to embark on their first teaching experience an insight into real classroom situations, practices & management styles.”

“Great to see real life introduction to the semester”

" When I saw I understood better than anyone describing it to me.”

These statements acclaim the surface learning that the medium afforded. When they focussed on these statements as a group and asked why they felt this way the deeper learning conversations started.

Discussion

Pedagogy

In all the sessions, these preservice teachers responded that they very much appreciated the learning experience, and in particular they valued the interactive sessions with the teachers before and after the class observation, once they had learned the “language “ of the classroom management. 80% or more participants viewed these aspects to be good or excellent. The comments about the benefits of the sessions very much reflect the findings of Gibson & Gibson (1995). They appreciated the ‘authenticity’, which came from the live, unedited, unrehearsed reality of the observation and the opportunity, which this allow for them to link theory to practice. The unobtrusive nature of the observation process is seen as significant benefit by participants on both projects, as is the value to interact with the teachers. Views that the technology allows for better observations and improved observation skills support findings in the literature (McDevitt, 1994; Merkley & Hoy, 1985; Merkley & Jacobi, 1993, Gibson & Gibson 1995).
The learning opportunities gained by showing rare or remote class circumstances to preservice teachers are demonstrated benefits of this technology (Gibson & Gibbons, 1995). Demands for better preparation including availability of material as the class teacher’s lesson plan and observation guides, is not dissimilar to requests on the USQ project (Gibson & Gibson 1995) for material as the physical plan of the room and class and class or student profiles. Implementing the proposals in regards to pre-session preparations and selecting the class may well reduce the well-appreciated ‘authenticity’ and ‘unobtrusive’ characteristics. Once the students acknowledged the group conversations and storytelling were viable ways to learn and that they were facilitated in a successful way, the students endorsed this way of getting to know in their subject as – “painless”, “challenging” and a “fascinating” process that they would use in the future.

Using the email and discussions and posting support material on the subject websites ensure that the conversation between the preservice teachers, the partner teacher and the lecturer continue beyond the videoconferencing event.

**Technology**

The responses to both the rating and open-ended questions show that preservice teachers view the quality of vision and sound in the classroom observation as lacking. Most of their suggestions are about improving the technology so that they will be better able to see and hear the children during classroom observation. Meeting demands for greater interactivity during the lesson observation as well as better images and sound would not only demand greater technological resources but may indeed place a significant challenge on the perceived characteristics of authenticity and unobtrusiveness. Hiding the camera would of course lead to ethical concerns about the ‘big brother’ potential. Possible, improvements include using camera lenses, which would allow for a wider and full view of the room.

Both Cullimore (1999) and Gibson & Gibson (1995) emphasise the criticality of technical support and training for the usage to start and develop and for benefits to flow. Inevitably breakdowns do happen wether through technical faults or human error. It is not always clear which one it is!

When the inevitable breakdowns occur, the lecture can proceed by using the videotape of a previous session. There is of course the loss of the ‘live’ and possibly the well-appreciated authenticity factor. Understanding and measuring the value placed by first year preservice teachers on live observation as compared to a videotaped lesson is one of the research activities being considered for the second year.

**Organisation**

There are basic organisational challenges, which flow from the fact that this project was collaboration and a trial. The differences between university and school calendar and timetables provide scheduling constraints. With these busy schedules and the increasing reality of limited premises, it is not always easy to get access to lecture halls and school classrooms for one hour before the link to allow for setting up and testing. This can lead to a higher rate of technical failure and human error.

Engaging potential pedagogical and technological improvements would obviously place demands on project stakeholders and resources. For example, increasing the preparation before the session by providing the teacher’s lesson plan will very likely be a heavy demand from our busy teacher partners. Improving the image and sound quality during the class observation section may not only require more equipment but the support and training of by technical staff. The organisational challenge for the second year is to make improvements, which bring better understanding of a better model and to demonstrate this value to others so that the resources required are committed to integrating this in a wider variety of subjects and programs.
Conclusion

The findings support the view that this model can meet the first objective to enhance pedagogical practice and preservice teacher learning in first year teacher education programs. In regards to the second objective, both the ratings and the qualitative responses show that improvements to the technology need to be considered if we are to better evaluate and understand the potential of this technology-supported model as an effective alternative for some in-school observations and/or professional practice in school. There are several possible ‘improvements’ that have been employed in the second year of the project in regards to pedagogy, technology and organisation of the project. Improvements in the activities before and after the session will allow the learning conversation between the preservice teachers, the partner teacher and the lecturer to continue beyond the videoconferencing event and result in a well-integrated collaborative discourse and practice. The follow-up use of the group conversation/storying in tutorials is imperative to encouraging constructive teacher thinking.

The project shows that this use of videoconferencing has great potential in demonstrating to preservice teachers that the theory/practice relationship is one of “embeddedness”. Using the strategy of follow-up storying to engage professional thinking and conversations is critical to making this ‘overt’. The challenge is to demonstrate this value to others in teacher education, so that the human and material resources required are committed to integrating this in a wider variety of subjects and programs.

References


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