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# Students talking about home-school communication: Can technology support this process?

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*This paper explores the use of technology to support communication about student learning and classroom experiences between home and school contexts. An examination of literature addressing home-school partnerships along with current thinking about the integration of this with Learning Technologies is presented. Research centred on the use of a mobile telephone as a tool to facilitate this process will be discussed. The power this 'new' technology brings to the students is discussed with reference to subsequent constraints. However, it is argued that students overwhelmingly perceive this tool as a valuable resource in stimulating and encouraging dialogue between the contexts and also a purposeful and meaningful classroom technology resource.*

## Home-School partnership: what are the expectations?

Investigation of the literature clearly shows that the importance of partnerships between the home and school contexts has been emphasised for some time (e.g. Ashton & Cairney, 2001). The importance of parents/guardians and teachers working together to support student learning has been acknowledged and is generally accepted by both contexts. However, the traditional arrangements for communication, such as the parent-teacher interview, do not seem to adequately cater for the needs of key stakeholders. It appears that communication from the classroom to the home is often still infrequent and minimal. In this age of access to information 'anytime-anywhere', it is appropriate to explore alternate ways to facilitate dialogue between the contexts. This paper reports on student use of a mobile telephone to facilitate communication between the classroom and home.

Communication between the home and school contexts is often linked with the concepts of 'assessment' and 'reporting'. This process typically involves the teacher communicating to the parents/guardians the student's progress towards learning outcomes. In these situations, the 'power' is with the teacher. Criticisms of such communication include that this form of reporting is distanced from classroom experience and is often fabricated through reporting devices such as the written school report and learning portfolios. The current expectations of

assessment and reporting within our schools which draw upon an outcome based approach is seen to further prevent clear and meaningful communication between the home and school contexts. Etlis (2003) reported that in evaluations conducted by the NSW Department of Education and Training, it was found that outcomes based assessment and the reporting of this, was considered by many teachers to be time consuming, challenging and demanding. In addition, parents were reported to find communication that stems from this format is not frequent enough and often confusing for many who are often unable to decipher the language and information being reported on their child. Instead, parents seem to want and need information about a range of different aspects of the child's achievement outlining both strengths and weaknesses, work samples that clearly indicate the ability of the child, helping them to create an overall picture of how their child is achieving via various information sources (Cuttance & Stokes, 2000). Thus it appears that there is a need to make these information sources more varied, frequent and timely.

In recent times, students have increasingly been involved in learning partnerships with their teachers. The literature cites examples where students are involved in setting learning goals for themselves drawing upon what they know and identifying focus areas. For example, research conducted by the National Foundation for the Improvement of Education (2000) found that students were more motivated in learning when they are able to indicate their own needs and direction through discussion and negotiation. The combination of student self-assessment and teacher assessment creates a sense of partnership in the learning environment (Victorian Department of Education, 2002). While this teacher-student partnership is important, it is vital that parents are included too so that all the key stakeholders have a clear idea of the direction of student learning and work together to reach these goals.

Communication has been consistently identified as being fundamental to establishing such partnerships. The issue of communication as an integral language feature to link the home and school contexts has been explored in recent studies (e.g. Cairney & Ruge, 1998). It is important that all key stakeholders have the opportunity to be involved and actively participate in student learning goals. The nature of who has 'power' in the classroom is changing. Traditionally, it has been the teacher who has made these decisions. However, the inclusion of both parents and students in this process has been encouraged. Research has shown that parental involvement in academic achievement is a critical factor in promoting better student performance. Sharing results with parents or enabling continual access to student progress can assist in improving student performance as children learn best when there is open and on-going communication between he school and home environments (Roeber, 2003).

In recent times the use of technology, such as the Internet, has been identified with the potential to significantly impact upon the communication between these stakeholders. An evaluation conducted by the Department of Education (Etlis, 2003) found that schools, which had progressed the furthest, or most effectively with communication between home and school contexts were those that had employed Learning Technology tools to some extent for both recording and reporting on student assessment. Email contact between teachers and parents has become increasingly common. However, the pressure for information 'anytime-anywhere' has resulted in the consistent search for faster means to convey a range of information to a range of portable technologies.

Communication between the classroom and the home has the capability to be enhanced through the inclusion of a range of Learning Technologies within the classroom. The use of such technologies enables communication between the home and school contexts to be more frequent and accessible. This has the potential to create a situation in which parents are able to access information about their children in a variety of mediums that can be accessed and retrieved when convenient to them. Subsequently this may assist the development of a continuous dialogue between home and school. As asserted by Foucault (1980) it is with frequently used and preferred actions and discourses that power is generated amongst key stakeholders. Parents/guardians need to be given regular classroom updates to inform them of their child's classroom learning experiences to empower their understanding of their child's learning. It is this challenge that inspired the research reported herein.

## Technology: exploring the possibilities for home-school communication

Forms of technology such as computers and digital cameras have become a key component of many classrooms and homes. While there has been an ongoing debate about advantages and disadvantages of children's use of such technology both at home and at school, student access to technology has become a reality. Proficiency and confidence in the various technology mediums has come to represent social power. As asserted by Foucault:

> people do not 'have' power implicitly; rather, power is a technique or action which individuals can engage in. Power is not possessed; it is exercised. And where there is power, there is always also resistance. (1998, pp. 27–28)

Power, in this sense, has the potential to be dispersed through the network of relationships, which make up society. The struggle for power may be unequal, but for Foucault, a critical component of such power is the freedom since power can only be said to create an effect if the object of power has the ability to resist. There is an expectation within society

that the power of technology does insist that it is used, however people still have the power to resist.

It can be argued that communication avenues that have been opened through digital networks have the potential to link students, teachers and parents with a wide range of learning opportunities. Such networks are considered to be an avenue where the communication barriers that are present between the home and the school could be broken down. Parents, who might not normally participate in school activities, have the potential to be drawn into the learning process by the new modes of interaction (National Foundation for the Improvement of Education, 2000). However, the possibility of inequality in access to appropriate technology must be acknowledged.

The New London Group's (1996) landmark work on multiliteracies challenged the notion of 'text' and associated language features. Foucault argues that different situations require different forms of discourse. He states: 'discourse can be both an instrument and an effect of power, but also a hindrance, a stumbling-block, a point of resistance and a starting point for an opposing strategy' (Foucault, 1980, p. 220). It can be surmised that Learning Technologies have the potential to assist in making it easier for parents, teachers and even students to communicate regularly. If this is the case, it can be proposed then that Learning Technologies have the potential to involve, encourage interaction and response from those parents who may have previously felt disconnected from schools. The National Foundation for the Improvement of Education (2000) identified that email communications between the school and home should be a regular part of the educational process. In recent times, access to either email or mobile telephone technology has become increasingly more available in both work and home situations. The adoption of tools to facilitate this process in the classroom seems not only plausible but also timely. The incorporation of such technologies has significant implications for the process of communication between teachers, students and parents.

The highly competitive and changing world that now confronts students has increased the demand for schools to develop competent citizens, capable of flexible thinking and independent learning (Principles for Assessment and Reporting in NSW Government Schools, 2004). Stokes (2002) identifies that this flexible thinking and independent learning can be fostered through the integrated use of a wide range of multiple literacies, including computer literacy, visual literacy and media literacy. Many students demonstrate increasing comfort and aptitude with many Learning Technology mediums, and many use such mediums for regular communication purposes (e.g. email, SMS text messages). Therefore, it seems appropriate that such mediums be integrated into the communication patterns from the classroom to the home. Understanding and applying these literacies is becoming increasingly

necessary to meet the challenges of today's society. In addition, it is vital that students understand technology mediums and have a language to discuss their use of these (Unsworth, 2002).

With the emergence of new literacies recent classification of these has extended to incorporate 'technoliteracies'. These are the result of the 'affordances of computer-based and networked technologies for information and communication' (Unsworth, 2002, p. 67). This 'digital datasphere' (Unswoth, 2002, p. 67) is characterised by email, chatrooms, hypertext links and search capabilities. These have heightened the need to alert students to skills of discrimination and analysis amongst information becomes increasingly important (Luke, 2000; Unsworth, 2002). The challenge for classroom teachers is how to incorporate these within meaningful classroom experiences.

## A mobile telephone:
## a tool to encapsulate the 'technoliteracies'?

Much of the literature surrounding the use of mobile telephones in the classroom has a negative slant. Primarily it seems to focus on how to deal with the use of mobile telephones in the classroom, to ban or not to ban, contracts for use, confiscation and the like. This research, aims to explore the use of a mobile phone that incorporates elements of the 'technoliteracies' within a primary school classroom. The research aims to capitalise on the Australian population's increasing access to mobile telephones, the enthusiasm for mobile telephones, and digital technology to attract and motivate students in sharing their classroom experiences with their parents / guardians.

Advances in mobile telephone technology have seen mobile telephones have the potential to allow the user to 'attend to the reality of new and emerging technologies' (Unsworth, 2002, p. 67). The mobile telephone this research employs has capabilities for messaging in all forms, including sending and receiving emails, SMS (short message sending) and MMS (multimedia messaging). Messages can have attachments of picture, sound and video and can have text created via the use of keyboard or handwriting recognition function. Images and messages can be captured in the phone, and emailed to an email address or sent as an MMS to a mobile telephone. As such, the design of mobile telephones with these capabilities is a site for 'the integrative deployment of visual, verbal and acoustic semiotic resources' (Unsworth, 2002, p. 73). The sophisticated multi-media capabilities of mobile telephones, such as the one described within this research, are undeniably changing the 'semiotic domain' (Gee, 2000) of literacy.

The ability to capture images to send home provides parents with an indication of the experiences their child engages with in the classroom. The use of digital photography in the classroom has been reported to be a positive tool. For example, the research conducted by Tillett, Schiller

and Kavanagh (2002) indicated that digital photography has the potential to support both the development of visual literacy skills and print literacy skills. It also provides opportunities for students to develop their communication skills with key stake holders (e.g. parents, teachers and community members) through their choice of visual and print literacies and the way they apply various captions and annotations to help others interpret their images. Stokes (2002) states that technology necessitates the need for visual literacy skills to interpret images as well as generate images for communicating ideas and concepts to make meaning. While positive cases are reported in the literature, it is necessary to consider the implications of potential misuse of digital photography.

The use of digital photography and associated features allows for students to take control of the medium, selecting what they choose to communicate. Such capabilities also bear warning, as digital photography could easily become a form of surveillance where inappropriate images are recorded and distributed. The ethical issues associated with the use of such mediums need to be acknowledged with clear procedures put in place to protect the privacy of individuals. The use of digital photography provides an example of the interrelationship between technology and power.

In contrast, Riddle (2004) reports on positive experiences of the successful integration of the use of the digital camera and associated software in the classroom. Specific reference is made to the meaningful and independent communication that was initiated as the students were eager and excited about taking charge of their own learning. Furthermore, it was found in this case that natural learning communities formed within the students as they collaborated on ideas and for problem solving to interpret visual ideas.

Few reports within the literature are available which address the implementation of mobile telephones in the classroom to support communication between the classroom and parents/guardians. One example found involved Purbeck View School in Swanage Dorset, who developed a digital photography project which aimed to keep parents, students and teachers in regular contact, with parents being regularly emailed pictures of their child's day. In this study, the teacher reported that the photographs make what is accomplished at school more transparent to the parents, and that the photography provides immediate communication, which assists in making the parents feel more involved. In addition to the feeling of inclusion by the parents, the digital images can be used to provide evidence of achievement and personal progress of the students which allow for a greater interpretation than checklists (Williamson, 2001).

The use of a tool such as a mobile telephone that incorporates the 'technoliteracies' offers students control over what they decide is a true example of their classroom learning experiences and how they are

achieving on a daily or weekly basis. Such an approach has the potential to support what parents suggest is necessary to provide authentic communication about their child's learning (Etlis, 2003).

### The use of a mobile telephone in a Year 6 classroom

A mobile telephone was located in a Year 6 classroom, available for the students to use whenever they chose. This telephone had capabilities for messaging in all forms, including sending and receiving emails, SMS (short message sending) and MMS (multimedia messaging). Messages could have attachments of picture, sound and video and could be accompanied with a text annotation created via the use of a keyboard attachment for the mobile telephone. Images, video and messages were able to be captured in the phone, and emailed to a parent/guardian's email address or sent as an MMS to a mobile telephone.

This research aimed to investigate whether the use of this telephone in the classroom as a form of communication could strengthen the home-school link, making use of continuous and real time. The students were able to use one or more of the telephone's messaging functions to record and annotate an aspect of their classroom learning to be forwarded to a nominated parent or guardian. The students were responsible for selecting and annotating the example of work to be sent and providing explanation as to why this piece of work was chosen to share with their parent/guardian.

The students were given a general orientation to the phone and some basic instruction about how to use it to take digital photographs and send these in either email or MMS formats. In the interest of ethics and protective behaviours each of the students were assigned a buddy to assist them in taking and sending messages and clear guidelines were put in place by the teacher and researcher to facilitate this process. The students were only able to capture themselves in an image and the image was sent only to their nominated parent or guardian. The telephone was made available for the students to use at all times in the classroom. A log was located beside the mobile telephone for the students to record what they had sent and to whom.



**Figure 1.** Sample from student log

## *How do the students perceive this tool?*

The focus of the research was to investigate intact scenes within the classroom where the phone was located, and as such this research deployed an ethnographic approach (Bogdan and Biklen, 1992, p. 39; Merriam, 1998). The researcher spent one morning per week as an observer-participant in the classroom over two ten-week school terms. The interaction of the students with the mobile telephone was investigated. All data was collected in the classroom in a setting that despite the presence of the researcher, was not overtly manipulated. In addition, semi-structured interviews were conducted with the classroom teacher and parent volunteers.

This article specifically focuses on reporting upon the group focus interviews that were conducted with the students at scheduled times throughout this period. These interviews were conducted with all students, with students divided into small groups of approximately three students while talking to the researcher. All interviews were audio taped and transcribed. Analysis of these transcripts was conducted according to emerging categories and themes that were revealed through a coding process. These categories and themes were then cross-analysed with other data collected such as the student log of activity, researcher field notes and downloaded samples of messages sent home.

Analysis of this data showed that the students overwhelmingly perceived this tool as being a valuable resource in stimulating and encouraging dialogue between the contexts. Analysis of interview transcripts also showed that students thought that using the mobile telephone was also a purposeful classroom technology resource. Figure 2 presents the key themes that emerged from the data.
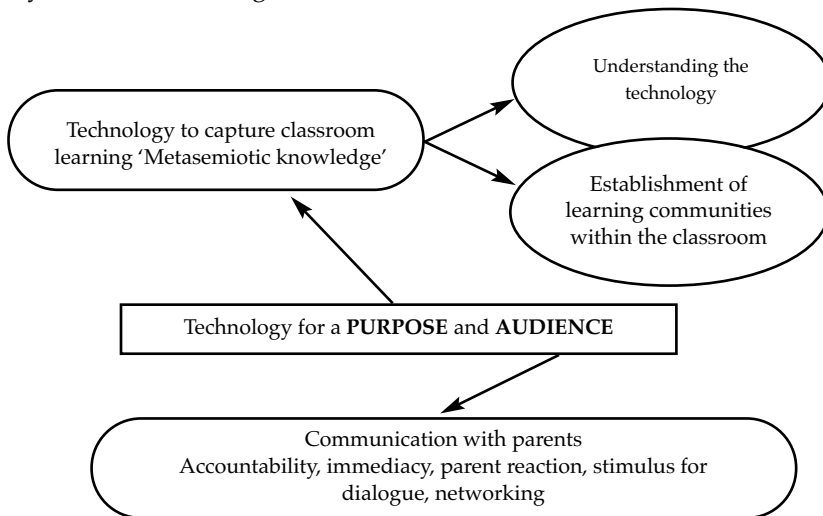


**Figure 2.** Analysis of student data

Each of the student groups articulated the benefits of using this technology tool for a specific purpose for a specific audience. Their further articulation of their use of the tool explored this overall theme further. Each of these will be described further.

**Technology for a purpose**
The students knew that the mobile telephone was available for them to communicate their classroom learning experiences to their parents. As such, the use of this tool built upon their 'metasemiotic knowledge' that is 'understanding the systematic nature of the digital rhetorical resources that are available to make meanings and having the metalanguage to describe them' (Unsworth, 2002, p. 67). As the students spoke with the researcher about their use of the mobile telephone it became increasingly evident that the students understood this technology medium and also had the language to articulate what it was that they did with it.

*Understanding the technology*
In all student discussions about the mobile telephone they made clear reference to the capabilities of this form of technology. They spoke about the functions within the telephone such as the ability to video short periods of time, take digital photographs, compose text annotations, create voice tags and the ability to save drawings with the 'jotter' function. The students also spoke of the navigational features of the mobile telephone and in the group interviews consistently reminded each other of where each of these features could be found. The students understood the features of the technology and used the language of the technology to describe these. Justin stated, 'I think it's a good way to communicate to our parents because it's easy to use and as soon as you get the hang of it anyone can do it and anyone can communicate to their parents'.

Many of the students also reported that this was a technology that many of their parents understood. Within this class all the students had an email address or a mobile telephone number they could send their messages to. Ellie reported that her parents were impressed with this form of communication as she states, 'they [her parents] were impressed with two things, firstly my work … and also because we had the technology to do that kind of stuff during school time'.

*Classroom learning communities*
While the researcher conducted initial demonstrations with the students about how to use the mobile telephone, the student use of this technology quickly surpassed the knowledge of both the teacher and researcher. In fact, the students consistently discovered 'new' functions on the telephone. As the students experimented with the mobile telephone they were able to share their knowledge not only with the teacher and

researcher, but also with their peers in the classroom. Riley commented, 'It's good to know that we can show other people …the things we know about the phone and we can teach them so they know so they can teach more people … so then we can all use the phone together'.

The students were all given an assigned 'buddy' to help manage the use of the telephone in the classroom. It was anticipated that this partnership would enable students to include themselves in the images sent home and to also support the recall of how to use the technology. These relationships supported the process and all students were able to be involved. However, within the classroom a group of 'experts' emerged amongst the students. These 'experts' supported not only their 'buddy', but other students in the classroom as well. Anna describes the relationship she had with her 'buddy':

> …my buddy is actually the one who had a turn at everything … I can always get her and she can show me how to do everything … it's much easier than to take photos on your own … it's probably easier to do it with a buddy, it works well.

**Technology for an audience**
The students were aware that the messages they composed were to be sent to their nominated parent/guardian. As such, they knew who the recipient of their messages would be, which appeared to influence their selection of what they captured and sent. As the students spoke with the researcher about their use of the mobile telephone it became increasingly evident that there were key considerations that impacted upon the messages that the students sent with this tool.

*Accountability*
Each of the students demonstrated an acute awareness that their parents wanted to know what they did in the time that they spent at school. The students acknowledged that the time they spent at school is a substantial part of the day, and in fact the week, and as such the students recognised that their parents had a right to know what they did during this time. Emily articulates how the use of the mobile telephone supports this 'accountability' with her comment:

> it's a big way to be able to get your parents at school because like you're not seeing them for six hours a day, five days a week and so it's nice for them to know what you are doing; so it's nice to tell them what you are doing in the thirty hours of the week that you are not seeing them … they like to know we are actually learning something and doing something worthwhile.

This was a common theme that many of the students addressed. Sarah described that using the mobile telephone to communicate with parents means that 'our mums or dads could see what we're up to, we're working hard and what we're doing'. Lily agreed that the mobile tele-

phone can support this as 'parents can see what we're doing in school'. Likewise, Zac reported, 'they want to know what you're learning at school and what kind of things you are learning about'. Furthermore, Zac stated that using the mobile telephone supported this process as 'they [parents] can see what we are doing at school … then they [parents] are informed'.

*Immediacy*
Having the mobile telephone in the classroom provided the students with frequent opportunities to share experiences with their parents as they happened in the classroom. Max described the process as 'we just grab it [the mobile telephone] and take a few photos'.

Joshua described how when doing activities in the classroom '… you get anxious to tell them [parents] about the experience'. He reported that the using the mobile telephone provided him with an immediate way to share his experiences. He said, '… it's a good way to tell them straight away what's happening'.

*Parent reaction*
The students described the reaction of their parents to messages sent to them from the mobile telephone based in the classroom. In doing this, students described their parents as feeling 'happy', 'interested', 'included', 'impressed', 'surprised', 'curious', 'delighted' and 'informed'.

Jacob shared that his mother '… thought it was one of the best ideas of … showing parents how the children are doing school work'. His mother was able to receive the messages while at work. Such a comment supports the increasing availability many parents have to email in their workplaces. Not all parents had the same availability and Matthew reported how he helped his mother access messages he sent from school to her home email account in the evenings.

*Stimulus for dialogue*
'What did you do today at school?' is a question these students, like many others, are asked by their parents each day. The answer they frequently provide is 'nothing'. Discussing the use of the mobile telephone with the students identified that students often feel that their parents wouldn't understand what had happened in the classroom just from a verbal description to answer this typical daily question. Georgia spoke of her communication with her mother after school and said, 'I don't really talk to her that much about it … it's kind of hard to go and explain'. She further states that by using the mobile telephone it provided her with a way to '… show [me] doing it and what we're doing'. Similarly, Mitchell addressed this point with his comment, '…instead of us just telling them they can actually see it'.

*Networking*

Two students within this class identified examples of how using this tool enabled them to share their classroom learning experiences within a broader context. Andrew spoke of his father who is frequently away from Australia for work. The use of the mobile telephone enabled him to send his father some images and annotations from classroom experiences while overseas. Amanda spoke of how her mother forwarded the emails she had received from Amanda to extended family.

## Meeting the communication challenge

This paper has shared comments from students who have used a mobile telephone in the classroom to share their classroom learning experiences with their nominated parent/guardian. The research provides an example where the students have been given considerable 'power' in the classroom as they make selections about what classroom learning experiences they will share with their parents. Analysis of the data collected from the students reveals many of the positive features associated with using this form of technology in the classroom. While these features are clearly grounded within the data collected from the students, data collected from parents and the classroom teacher did reveal some constraints of this initiative.

The management of the tool within the classroom was an issue of concern for the teacher. In particular the availability of the tool and the equity of its use amongst the students were consistently identified as constraints for the use of the mobile telephone in the classroom. The logistics of sharing one telephone amongst thirty students was a consistent challenge. Analysis of the student logs reveals that not all the students used the tool consistently. There were five students in the class who used the tool daily during the trial period. The other students used the tool on average 3.5 times throughout the two terms.

The parents of the students were divided about the usefulness and appropriateness of the use of a mobile telephone in the classroom as a tool to facilitate home-school communication. While many parents reiterated those positive features identified by the students, such as the immediacy of the information and being able to see their child 'in action', concern was raised about the cost of the tool and their own technological issues that inhibited them from being able to receive and respond to messages.

The focus of this paper was to specifically report on research centred on the students' use of a mobile telephone as a tool to facilitate communication between their classroom and their homes. The students overwhelmingly perceived this tool as being a valuable resource in stimulating and encouraging dialogue between the contexts and also a purposeful and meaningful classroom technology resource. Whilst the focus of this research has been on the student use of a mobile telephone,

it can be surmised that employment of Learning Technologies that encapsulate the 'technoliteracies' have the potential to facilitate and support authentic and meaningful communication between school and home contexts.

## Acknowledgement

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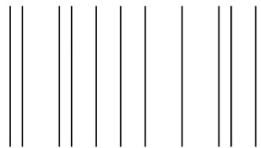
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