Getting access to the “underground” – insights into children’s identities online

Abstract
Increasingly computers in primary schools are being used to support the interactions and learning of students online. Gaining access to online spaces gives students new ways of interacting, not possible in a face-to-face setting. For example, interacting through online environments allows students to interact more informally with each other and with other participants than is generally permitted in the classroom. In this paper we examine the ways students in a grade 5/6 class interacted with each other and the researcher/teacher, using a guest book, email account and a chatroom on a class website and later, using Messenger. The paper examines the informal online interactions of the students and how these interactions impacted on the student and teacher/student interactions in the classroom. Students appropriated online names and used the anonymity of the Internet to their advantage. The study concludes with a set of recommendations for the use of interactive technologies in the primary school classroom.

INTRODUCTION
Young people in industrialised countries are getting access to the Internet at increasing rates. For example, in 2002, 67% of young people aged 5 to 18 used the internet at home, at school or elsewhere in the UK (National Statistics Online, 2004). In the US, during 2002, 65% of children used the Internet at home, school and from other locations. This figure was up from 41% in 2000 (The Corporation for Public Broadcasting, 2002). This level of use is similar in Australia. One recent study reveals that during or outside of school hours, in the 12 months prior to April 2003, 64% of all children between the ages of 5 and 14 had accessed the Internet (Australian Bureau of Statistics, 2003). Increasingly schools are equipping classrooms and dedicated labs with networked computers, and while this is improving young people’s access to the Internet, it is also giving rise to a host of new issues related to school education.

In having access to the Internet, young people are able to interact online with each other and with other participants, making it essential for educators to have an understanding of what these students are doing when they go online. There has been some negative information on the impact of adolescents’ use of the Internet as a communication tool. Currently, debates are raging about the implications of access to chatrooms for young people (see for example www.chatdanger.com). Much of the information is sensationalist and does not provide for a balanced understanding of important issues that arise when young people interact online. For example, these discussions often do not consider the benefits of students’ participation in online interactions, but seem only to highlight the dangers of such interactions. However, the research literature does indicate that there are benefits in such interactions, as discussed below.

One benefit is that learning outside of the classroom can be enhanced. Students are able to interact with each other and with their teachers at any time and in any place. These online interactions with each other and with their teachers are often different to those in a face-to-face setting in the classroom (McNeil, Bernard, Robin, & Miller, 2000). One difference suggested by McNeil et al. is that due to the mediating nature of the Internet, many interactions tend to be more informal than in the classroom. The definition of informal interactions as used in this paper is that they are spontaneous and unplanned. They are interactive, and have the characteristics of informal learning as described by Kraut et al. (1990): “with all the participants in the communication being able to respond to what they perceive to be the current state of affairs, including the communication up until that point and their perception of the other participants’ reactions to it” (Kraut, Fish, Root, & Chaffonte, 1990). Consequently online interactions can be a powerful way of contributing to students’ informal learning. Online informal interactions also have a high degree of social content to help participants create the kind of personal communication that is usually reserved for face-to-face contact (Bloch, 2002). Therefore online interactions are of benefit to students in both allowing freer and more spontaneous interactions to occur and in promoting social interactions.
It can be seen, therefore, that there is a need for research to provide a more balanced and comprehensive understanding of young people's online interactions. In this paper, we discuss such a study. We focus on one aspect of a doctoral study conducted by Darryl, the first author, and supervised by the second author, in which children in an Australian primary school, of ages 10-12, interacted with each other through a class website and later, through email, a chatroom and a peer-to-peer program. In this paper we examine the ways that informal online interactions can impact on the relationships between the students, and with their teacher, and we consider how this impacts on classroom interactions. We also consider the nature of the interactions that the children enjoy, and the insights this allows researchers into children's informal interactions. We argue that as a participant in the online interactions that Darryl was provided with a privileged position in that he was able to gain insights into students' informal interactions. These interactions provided us with information about children's behavior when they go "underground", that is, away from the protocols and rules that govern their school life, and how these underground interactions impact on interactions in the classroom.

THE RESEARCH ON INFORMAL INTERACTIONS

There have been some studies conducted focusing on the informal nature of participants' online interactions, but these have been mainly conducted with adults. For example, one study conducted by Contreras-Castillo, Pavela, Perez-Fragoso, and Santamaria-del-Angel (2004) examined the interactions of 43 students from two different Mexican universities in four online courses, three undergraduate and one graduate. The authors developed a software system they called The CENTERS (Collaborative E INformal INTERAction System) to support the interactions of the students. The analysis of data indicates that the participants thought that the informal interaction opportunities provided by the system allowed them to "establish better social relationships with their instructor and classmates" (ibid).

In another study conducted at a tertiary level Bloch (2002), examines the social aspect of student/teacher interactions via email. This study focuses on students in second language (L2) writing classes at the Ohio State University. Here the author argues that due to the types of language resources available online, the social interactions are different from those possible in a face-to-face setting. In this study, the mediational affects of the Internet on interactions contributed towards informal interactions that were more social in nature.

There have been some small studies conducted examining the interactions of primary school students and their teachers online. In one five year study, students from two primary schools, one middle school and two high schools were the participants in a qualitative study, which examined the impact of Internet use on relationships between teachers and students (Schofield & Davidson 2003). While much of the study focuses on teacher/student interactions around the computer while students worked in the classroom, there is some reference to interactions between teachers and students through the Internet. The results of the study indicate that students came to know their teachers better via internet-related interactions. Some of the teachers revealed more personal information that they would otherwise have done in a class situation.

Another study examines the chatroom interactions of rural elementary school students in the United States of America (McCreary, Ehric & Lisanti 2001). This study focuses on several classes. The authors comment on the way students use aliases and write comments online. The anonymity of the Internet allows the students to take risks in these comments that they would not normally take in a face-to-face setting. The authors also comment on changes to relationships with teachers online. Here they describe the loss of teachers' traditional ways of maintaining authority, such as voice and eye contact. We discuss similar findings in this study.

In examining emerging research on the use of Internet by children, Livingstone (2003) found that the Internet was a tool that allowed for both serious and frivolous online communication. She suggests that there is a further need for research into this type of Internet use by children. This finding is reflected in a number of other studies (Lenhart, Raine, & Lewis, 2001; Livingstone & Bober 2003).

In this paper, we examine the online interactions of a group of year 5/6 students in an Australian primary school, both with each other, and with the first author, Darryl, who worked as teacher-researcher with them. Darryl interacted with the students through the class website as well as through email and Messenger out of school. The results of this paper are part of a larger study, which looked at access issues associated with Internet communication in primary schools. The larger study is described below.

THE STUDY

The study was conducted during 2001 and 2002 in two different primary schools in Sydney, Australia. The theoretical framework for the research is located within a sociocultural discourse. Proponents of this approach argue that learning is primarily a social process mediated through interactions using tools (Vygotsky, 1978; Wertsch, 1999). Two constructs from sociocultural theory that are significant for this paper are mediation and appropriation. Their significance is discussed below.
One of the most important concepts of sociocultural theory is that learning is mediated (Lantolf, 2000). Humans do not directly act on the physical world, but rather use tools as a way of indirectly mediating actions in the world. The types of mediating tools that Vygotsky refers to fall into two categories, which include physical tools, such as pens, and semiotic tools, such as language. The construct of mediation is used in this paper to help classify the type of online language used in the interactions where participants need or want to overcome the absence of cues normally associated with face-to-face interactions. One example of this discussed in the paper is the constant changing of names, which would not ordinarily occur in a face-to-face situation.

In considering learning as a social process and the impact of using the Internet in such learning, the concept of appropriation is significant. This term explains how the ideas, language use and objects students use are influenced by people and tools around them (Leon’t’ev, 1981). Here the concept of appropriation is applied to examine influences evident in interactions, for example, in the choice of names children select for themselves. Of interest here also is how these ideas appropriated online are then appropriated in the classroom. Thus, it can be seen that the constructs of mediation and appropriation are developed in this study through the framework they provide for discussion of the data.

In the study, qualitative methodology was used, drawing on aspects of ethnography, case study methods and grounded theory. Data were collected through a variety of methods including observations, field notes, interviews, discussions with teachers, and by recording online interactions.

INTERACTIONS IN THE CHATROOM

Discussion online began initially through a class website. The website had place for children to display work and interact. Discussion was conducted through a chatroom and a guest book. The interactions in the guest book started to get very informal and the principal of the school became concerned that the type of interactions and the nature of the language being used in the interactions were inappropriate for a guest book run under the auspices of the school. Consequently, both the students and Darryl suggested that the interactions move to a commercial online space MSN Messenger, which uses peer-to-peer software. During the interactions in the guest book, the chatroom and Messenger, there was an interesting change in the way the children interacted, both with Darryl and with each other. Students changed their names often online and this appeared to give them freedom to interact in different ways from their "known" persona. We have termed this change "going underground". Interactions became far more daring and sometimes disreputable, than that which would be apparent in the classroom, and Darryl's authority as the teacher-researcher changed. We shall discuss each of these below.

Playing with names

It became apparent as students interacted, that they enjoyed a freedom, which was not available in face-to-face interactions in the classroom. This was the freedom to play with their online names by changing them frequently, to names that suited their mood or context at the time of interaction. One of the features of the online spaces, through which students interacted synchronously, was that they were able to log on anonymously as the following guest book extract indicates:

14/3/02,
CMON GUYS! CHAT TO ME!
From: NOT GUNNA TELL U
Web Site: NOT GUNNA TELL U
E-mail: NOT GUNNA TELL U

While many of the participants in the guest book tried to keep their identities unknown, the content of their messages sometimes identified the author of that message. Korn was a popular band at the time and John made constant reference to this band. The title of the email, "Korn rocks" gives a clue that the author was John in the following example:

KORN ROCKS!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
From: somewhere u wouldn't know
Web Site: ilovejesus
E-mail: ilovejesus@hotmail.com

Students not only kept their interactions anonymous, they also made up names for themselves (e.g. curly jae). This became a central feature of their chatroom interactions. Participants in the chatroom could change their name instantly by typing in a new name into the name box illustrated in figure 1:

Figure 1: Section of chatroom screen

Pressing the change button meant the chatroom software automatically generated a notice in the message box above, stating the change of name.
The number of times that students changed their names in one session was numerous. The following example is from one part of a total chatroom session. There are 10 name changes listed here, and there were many more throughout the whole session. In the example ‘matty’ was the new name typed into the chatroom name window to replace ‘baby jo’. Each new line indicates a different participant:

baby jo is now known as matty.
robart T is now known as no wo likes hogt.
kimg rich is known as i am the hottest.
KORN RULZ is now known as JOHN.
I'M THE CUTEST is now known as 4.
4 is now known as mel.
matty is now known as matty kields.
levy is known as m r m.
mely is now known as kay's.
matty kields is now known as matty.

(24/5/02)

Through the use of the Internet to mediate interactions, the student's presence was reduced to words and symbols on a screen. This allowed them to take advantage of the reduced physical cues to play around with and change their names. This added to the informality of the interactions.

In an interview a few months later, with the four boys who used the chatroom, Darryl asked them why they changed their names so often.

John: Because it's cool
James: I don't know, I just put my real name.
John: I like changing my name.
Matthew: I put Matty, Mat, Matthew, Rob, Robby and that's all.
Teacher: John, how come you change your name?
John: I see something on TV and I think it's cool and I write it down. You know if you see Bill Clinton on TV so type Bill Clinton and if I'm watching the music channel and snoot dog comes on I type snoot dog, even though I hate him.
Teacher: OK.

John: It's to bog him out really, like snoot doggedy dog.

In the interview John explained how he had appropriated the names that he saw and heard around him to use as online names. He exhibited the sort of playfulness that all the students showed when changing names. Nevertheless, while students changed their own names constantly, depending on the media they were using, they exhibited a need to know the names of the people with whom they were chatting. Not knowing the name of a person left them feeling unsettled. In the following extract Darryl logged on and was automatically given the number 483. His identity was unknown to the other participants. He did not change his name immediately upon signing in and some of the other participants become curious as to his identity as the extract of the chat indicates:

<jG> who 483
<matty> who is 483
<GRINSPoon ROCK> mr m...
<matty> who 483
<matty> is it girl
<matty> jaision who is 483
<ghetto blasted> hi jg
<GRINSPoon ROCK> mr m... sux
<matty> m r m... yu there
<matty> are you girl

GOING UNDERGROUND

When students moved to Messenger, as discussed above, they appeared to feel they had greater freedom to express themselves as they wished. They were, in effect, going “underground” and changing their names to suit the new context, away from authority. The names that students gave themselves online as identifiers when using Messenger were interesting. Some of the names the girls gave themselves are included below and have been numbered:

1. I may be cute I may be sweet but without you I'm incomplete
2. Love is friendship set on fire
3. chill out wat your yelling for lay back its all been done b4 and if you could only let it be u will see how u the way ur
4. U'ALL InTo da oCeAn, U Fall InTo Da C BUT THE BESy why To Fall Is Fall In love With ME
4. LoSeYoUrSelf

These names tended to be from popular songs. The boys also used names that related to music, (the term 'Homebake' refers to a music festival held annually in Sydney). There is also a more aggressive use of language as is evident in their choice of names:

1. Big deal man, I'm at homebah
2. Su's suk suk a duck screw a kangaroo 69 a porcupine man I love that zoo
3. if u hate me ill hate u so get lost other wise i kill u.
4. i use public toilets and i piss on the seat= red hot chillen fellins rok says

Above are more examples of students appropriating names based on influences around them, similar to the way John did in the chatroom. The students appropriated names from their favourite songs or from names of bands or people that they happened to be listening to at the time of the interactions. It can be seen that the boys are not observing the protocols that
operate while in the school environment, of not swearing or avoiding inappropriate language. The freedom that they appeared to be experiencing by using Messenger allowed them to interact as they might if no adult was present. Darryl became almost invisible in these interactions. We discuss the change to his authority in more detail in a following section.

The anonymity that the Internet provided allowed students to create their own online names, which changed often, depending in part on the influences around them. The findings of this study are supported by Livingstone who suggests that "Children gain pleasure using the Internet by experimenting with multiple, fluid, playful identities, which may be irredeemable or frivolous in adult eyes, and which exploit the interactive potential of the technology" (Livingstone, 2001). Students throughout the study often provided no name or would deliberately change their name. As the data illustrate, students would often change their name in the chatroom with almost each new entry. This constant name changing made it very difficult to know who was posting messages and what the messages were about. The way students changed their names and the number of times they changed them suggested a playfulness and lack of restraint.

The content that the students accessed and discussed online also impacted on classroom interactions. The students often visited a number of different web sites for entertainment. One of the students' favourite web sites was called Channel V, which contained music related material. The students would often flick between Channel V and the chat room and discuss the contents of the web site as the following extract indicates. In the chat extract below Jack is telling JG that Korn (a band) is on Channel V, on another web site:

<jack> Korn is on v again
<jg> R U WATCHIN KORN!!!!!

The discussion on Channel V occurred in class a number of times and demonstrates how the ideas that students appropriate online can impact on the classroom conversations. Having knowledge of Channel V and the band Korn (in the role of being a teacher), gave Darryl great insights into the interests and hobbies of the students outside of the classroom. Having this knowledge allowed him to structure lessons with the classroom teacher that incorporated the interests of the students to create a more meaningful learning experience for the students. An important consideration relating to the social interactions that occurred online was the age of the students involved in the study. The study involved students aged between 10 and 13 years old. It is at this age that many children start going through adolescence (Calman & Calman 2001). During this period in students' lives, they are encouraged to behave in new ways. As adolescents spend more time with each other, their contact with adults decreases (Savin-Williams & Berndt 1990). Adolescents begin to question their parents' authority and develop a new sense of autonomy in which they feel the need to be independent (Ellis & Rademaker 1987). The underground serves as a powerful place to exert this autonomy.

Teacher authority

Darryl's status and relationship with the students online changed throughout the main study. The ongoing interactions appeared to lead to a change in his authority as a teacher. Early in the online interactions he changed his name to one more suitable for the online context. Originally he logged on as Mr M... but this seemed too formal in an online environment, where all the students assumed different names. He changed his name to 'the D train' or the 'D'.

Some students started to call him by his first name online: as a student who called herself 'the angel u have been waiting' has illustrated there's a new, informal way of communicating online:

the angel u have been waiting 4 has arrived hold me please me and i will be yours says

who is "the d"

V I ! I says:
the d is Mr M...

the angel u have been waiting 4 has arrived hold me please me and i will be yours says:

ohhh

the angel u have been waiting 4 has arrived hold me please me and i will be yours says:

hi Darryl

the angel u have been waiting 4 has arrived hold me please me and i will be yours says:

lol (laugh out loud)

the angel u have been waiting 4 has arrived hold me please me and i will be yours says:

haha

In the above example the student seems surprised to find Darryl online. This is not surprising considering the dearth of adults online in the class-based chatroom he students used. The above example also illustrates the way that students appropriated names online,
which then impacted in a face-to-face setting in the classroom. The change of name online given to Darryl translated into the classroom where the students sometimes called him ‘the D train’.

Darryl’s authority changed online. Early on in chats, he was able to exert his authority as a teacher to direct the conversation, similar to the way he might have in the classroom. For example, on May 5th, he was able to convince one of the students not to write about another student as shown in the following extract of a chat:

<j.G> mat likes mel
<matty> shutup
<j.G> u cant shut me up
<Mr M...> keep it nice!!!
<matty> oh yere
<j.G> oh ok

As further chats progressed his authority and power online diminished. On July 16th, a chatroom discussion took place with the aim being to organise a time to meet online so that some of the students could discuss the construction of a web page in the classroom with Darryl. It is evident that some of the authority he had earlier in chats was now no longer evident. In the extract Channel V is discussed, which was a music web site that the students logged onto:

<Mr M...> Next week I will tell Rich and John and Matt a different time only we 3 know
<rick> grow up
<rick> wat
<rick> hallo
<Mr M...> so I don’t have to waste my time
<rick> whose there
<John> im going to channel . com cos harn special
rick is now known as mr rulz.
<Mr M...> Goodbye boys
<John> bye
<John> go on GO!!!!!!!!!

The rules for operating in a class or school environment are very different from the rules operating online. Students interact differently with teachers who go ‘underground’. This has implications for the classroom conduct of the students with that teacher. While there is a clear benefit for the teacher in gaining access to the underground, there are also risks inherent in this access. Relationships and hierarchical structures seem to change and become more informal. There is a clear need to teach students to discriminate between the online and classroom environments and the formality and protocols suitable for each.

CONCLUSIONS AND RECOMMENDATIONS

Many insights regarding the informal interactions of the children were gained through studying them underground. The students seem to have fewer inhibitions about their behaviour and language online, than they would have in a face-to-face situation, although it is also possible that such behaviour is similar to that which occurs when no adults are involved. Darryl enjoyed a rare opportunity to observe the students playing with issues of anonymity, power and authority in ways that are difficult to observe elsewhere.

As stated earlier in this paper, in analysing the data a sociocultural framework was used, drawing on concepts of mediation and appropriation. The textual nature of the interactions mediated through the Internet allowed students to change their names and to create a more informal type of environment, which impacted on the interactions and learning environment in the classroom. When communication is mediated by any kind of technological medium including the Internet, the technology and its design affects the type of interactions that take place (Gustafson, Hodgson, & Tickner, 2004), and this was demonstrated in this paper.

The names of Darryl and the participating students changed online, which then impacted on the names changing in the classroom. Some of the names that students used online were appropriated by them from their environments. The music sites that students visited and the ideas they appropriated while visiting these also had an impact on the content of the interactions in the classroom. Having an understanding of the ideas students appropriated online allowed Darryl to design lessons that incorporated the use of the Internet as a communication tool.

These behaviours suggest that teachers should be aware of the capacity of the Web to allow and encourage playfulness, to free interactions from the usual protocols, and to develop interactions in ways that are not easily possible in face-to-face situations. It is also necessary for teachers to develop and support their students’ understandings of the appropriate genres for the particular context. Given that online interactions are becoming more and more prevalent, it is necessary for students to be able to discriminate between the contexts in which certain genres are acceptable and those in which they are not.

Finally, given that the sort of interactions that were observed here, are becoming part of the students’ ways of interacting out of school, safety and courtesy issues need to be discussed and implemented. A partnership between schools and parents in establishing the ground rules would be useful in ensuring appropriate behaviour in various contexts. Just as children are taught how to behave in a playground, they need to be taught how to behave in a chatroom. Ignoring children’s interactions is dangerous, both educationally and socially.
REFERENCES


org/pdfs/PIP_Teens_Report.pdf [12/03/04]


