Canadian Journal of Educational Administration and Policy, Issue #81, September 3, 2008.

ARE YOU LISTENING TO ME?

SPACE, CONTEXT AND PERSPECTIVE

IN THE REGULATION OF MP3 PLAYERS AND CELL PHONES

IN SECONDARY SCHOOL

Julie Domitrek and Rebecca Raby
Brock University

Recently, there has been much media coverage about cell phone and personal music player usage in schools, including in the Toronto and Whitton regions. However, there is little literature on how students and teachers view rules on the use of such electronic devices. Using data gathered from focus groups with students in Toronto and Whitton and interviews with teachers and administrators from Whitton, we present the viewpoints from these stakeholders on the usage of cell phones and personal music players. We frame this preliminary discussion around six themes: the importance of context; public/private space and cyberbullying; safety; regulation and enforcement; and tension between integrated and peripheral users of digital technology. We conclude that the role of such electronic devices in school is understood quite differently between administrators, teachers and students, that music players and cell phones are not equivalent and that movements towards top-down 'blanket' rules limit input from most stakeholders.

Introduction

In March 2006, the Niagara Catholic District School Board instituted a board-wide ban of cell phones and mp3 players in classes (Beech, 2006; Scott, 2006). A year later, there were many high-profile reports of the Toronto District School Board (TDSB) banning the use of cell phones anywhere in or on school property (CityNews, 2007). The Dufferin-Peel Catholic School Board has a similar cell phone ban on school property (Brown, 2007). There have also been

reports of bans or strict regulations on cell phones and mp3 players in other Canadian schools, in Ottawa, Gatineau and Montreal, for instance, and in the United States (CityNews, 2007; CBC News, 2006a).

This paper grows out of a larger on-going project investigating secondary student and teacher response to school rules in Toronto and "Whitton" (a pseudonym for a region in Southern Ontario). While conducting focus groups with young people and interviews with teachers and administrators about school rules, we noted significant debate surrounding the regulation of electronic devices, more specifically cell phones and personal music players[1], in the classroom and at school in general. In this paper, we thus present viewpoints expressed by various stakeholders in schools – students, teachers and administrators – on the usage of cell phones and mp3 players and debates arising from the implementation of policies governing their use in schools. While viewpoints sometimes overlap, administrators, teachers and students tended to approach the question of such personal electronic devices in schools in different ways, although it was administrators who were most involved in the development of school policy on them.

Electronic devices, such as cell phones and mp3 players, are becoming increasingly ubiquitous in Canadian society. A Statistics Canada survey on residential telephone services found that 66.8% of households in Canada have cell phones, with Ontario having the second highest proportion of household ownership at 70.1% (Statistics Canada, 2007). Insofar as youth are concerned, 46% of students in the eleventh grade in Canada own a cell phone (Canada's

[1] "Personal music players" is a term that would include any device that is listened to using headphones which would include portable radios, cassette tape-playing Walkmans, compact disc-playing Discmans, mini-disc players or mp3 players. Today the most prevalent of these used in North American society is the mp3 player, which we refer to here. The most well-known and popular of these is Apple's iPod, which many individuals use interchangeably with "mp3 player" even though it is a brand name. Until recently some school codes also specifically referred to the brand name 'Walkman'.

Office of Consumer Affairs, 2006). With the age of acquisition of cell phones getting younger, often with companies even explicitly designing and marketing phones to primary school children, their presence in schools will undoubtedly increase. Similarly, a report by the Canadian Radio-television and Telecommunications Commission in 2006 found that approximately 60% of youths aged 12-19 own personal music players. Consequently, school personnel have had to decide how to respond to youth using these new technologies on school property.

Research on the use of such electronic devices is a limited but growing field. Research on cell phones can be grouped into several main areas and mostly focuses on their use by teens and young adults (usually university undergraduates) largely in Asian and European countries and the United States. First, the cell phone has quickly developed into a fashion accessory, where "the mobile phone [is] not only a tool to 'talk' but also as a means to communicate symbolically about oneself"(Katz & Sugiyama, 2006, p. 324). Katz and Sugiyama found that Japanese and American youths that were heavier cell phone users adopted cell phones earlier in life, were typically more fashion conscious, and thus changed cell phones more frequently than more casual cell phone users. As such, to many, one's style of phone communicates something about the identity and image its user is trying to project (Lobet-Maris, 2003). Secondly, researchers have studied how young people use cell phones for social purposes, managing friendships and parents in an attempt navigate social activities and their independence (Green, 2003). In fact, having a cell phone can be instrumental to maintaining the social status of a teenager (Srivastava, 2005). Thirdly, researchers studying why young people begin carrying cell phones have found that many do so for reasons of safety and security. Girls in particular are encouraged by parents to carry cell phones when going out and also say they feel safer with the

option to immediately call for help (Campbell, 2006a)[2]. Interestingly, one study noted that young people from lower socioeconomic backgrounds were more likely to own a cell phone, which may indicate perceptions of relative safety in their neighbourhoods (Pain *et al.*, 2005) and/or could be the result of cell phones being less expensive to own than landlines, particularly with the option of using "pay-as-you-go" services. Finally, researchers have studied the developing social etiquette of public cell phone use. Cell users generally excuse themselves to retreat to a more private area and silence ringers to avoid disturbing others (Koskinen & Repo, 2006). Also, while cell phone owners are perhaps more accountable because of their reachability, they are more able than others to be late or cancel appointments (Srivastava, 2005). One of the only studies on cell phones in classrooms found that there was generally a negative attitude towards them in college classrooms by both students and professors, particularly as they were considered a possible resource for cheating, although younger participants were more tolerant of ringing during class (Campbell, 2006b). While academic articles on school cell phone use are limited, the news media have frequently featured stories on this topic, including the use of cell phones' video-taking abilities to record at-school events, particularly fights (CityNews, 2006; McGinnis, 2007; CBC News, 2006).

Studies on ownership and usage of mp3 players and other personal music devices are also limited. One study of college students who kept journals about their Walkman usage for two weeks found that they used the device for various purposes including mood elevation during monotonous tasks or to avoid doing them altogether, for stimulation and emotional energy, or to avoid others in social situations (Chen, 1998). More broadly, some studies have addressed the effect of music on individuals performing a variety of cognitive and physical tasks, with

[2] Parents can also use cell phones as surveillance tools by calling their children and asking their location or even by tracking them with global-positioning devices (Green, 2001).

conflicting results. Listening to various kinds of music on personal music devices has been found to increase productivity and mood among employees, primarily when listeners perform more simple tasks (Oldham *et al.*, 1995). Another study found that background music disrupted the fluency of word processing, however, though it did not affect those with musical training as adversely as others (Ransdell & Gilroy, 2001). Other studies found that introverts were more distracted by music during cognitive tests (such as memorization, reading comprehension and coding) than extroverts (Furnham & Bradley, 1997; Furnham *et al.*, 1999). Music was also shown to aid in the performance and the perception of 'flow' for three netball players, who said that self-selected music aided them in controlling the emotions and awareness that influenced their shooting performance (Pates *et al.*, 2003). Music tempo has also been shown to affect simulated driving speed and traffic violations, with faster tempos leading to faster speeds and more violations (Brodsky, 2002).

Specific studies involving students and music are also sparse. Hallam *et al.* (2002) found that calming classical music led to better performance for primary school students on math and memory tasks but arousing, aggressive classical music disrupted it (Hallam *et al.*, 2002). Furthermore, soothing classical background music improved behaviour and math performance in primary school children with special needs (Hallam & Price, 1998). Research by Pool *et al.* (2003) indicated that background music or music videos in foreign languages did not affect high school students' homework but televised soap operas playing in the background did. It appears that the type of music, the presence of familiar vocals, whether it is selected by the individual, its tempo, as well as the type of task being completed and personality traits of the listening individual are all variables that contribute to music helping or hindering task performance.

Methodology

Over the summers of 2004-2006, we conducted eighteen focus groups with diverse groups of young people who attend secondary schools across two different geographical areas: the Whitton region and the City of Toronto. We located most groups primarily through approaching organizations, though some were also set up via word-of-mouth (See Appendix A for general descriptions of focus groups). By recruiting and conducting focus groups outside of school environments, we avoided negotiations with school boards and pre-screening of students by individual schools. We also felt that this strategy would encourage students to speak more freely about school rules. We chose to conduct focus groups so that participants would be with their peers and we might therefore best access the public talk through which young people may make and negotiate their viewpoints around school rules. These focus groups ranged in size from three to fourteen participants, refreshments were provided and each participant received an honorarium of $10. Groups were tape-recorded, but also transcribed on-site to facilitate later, more thorough transcription from the tape-recordings. We asked participants what they knew and thought of the rules and their enforcement, what they would change, how they appealed unfair accusations, and whether they had ever participated in creating their school rules.

Letters were sent to all principals and vice principals in the region, who in turn contacted the researchers if anyone on their staff had an interest in being interviewed. Interviews were typically conducted during teachers' free periods at their schools, and were tape recorded. (Two teachers requested that they not be recorded and notes were taken by hand in these cases). In all, we interviewed sixteen teachers and five administrators from twelve different schools across the Whitton Region. All individual and school names used here are pseudonyms.

Focus group and interview transcripts were first reviewed for data relating to electronics by searching for particular words (cell phone, mp3, ipod, etc.) via word processing software. These identified transcript segments were then coded independently twice, by hand, by each researcher: for each researcher, the first pass involved a thorough generation of emergent, descriptive codes, the second a move towards more abstract codes. Both researchers then met to identify the most dominant emergent themes across both sets of codes. These themes are presented here. While discussions of student use of personal electronic devices arose frequently in our study, they were not the primary focus on this research. Consequently, our findings must be considered preliminary.

Findings and Discussion

As part of our data gathering about school rules, we asked students to place cards with common rules on them into piles of 'good' rules they agreed with, 'bad' rules they disagreed with and 'debated' rules where it usually depended on the circumstances of that rule[3]. One of the rules which frequently generated (often heated) discussion and debate was "no Walkmans, pagers or cell phones". No student focus groups in Toronto or Whitton thought such a rule was 'good'. Two Whitton and two Toronto groups thought such a rule was 'bad' whereas four Whitton groups and seven Toronto groups put it in the middle, 'debated rule' pile. This serves as a telling snapshot of how contested this rule – and its meaning – is among students. The struggle with this rule and its enforcement was also apparent while conducting interviews with Whitton teachers and administrators. Generally, teachers were split about whether or not there was a place for cell phones and mp3 players in school, depending on context, while administrators

[3] All focus groups participated in this except for the first three Whitton focus groups. For a more detailed analysis of the overall project, including the results of this activity, see Raby, R., & Domitrek, J. (2007).

more consistently felt that such devices were distractions from learning and/or safety liabilities. These patterns framed our themes: How students (and some teachers) foreground context, space, place and time in their position on the regulation of electronics; public/private spaces and cyberbullying; safety; regulation and enforcement of electronics usage; and the tension between integrated and peripheral users of technology. We conclude by discussing the regulation of personal electronic devices in the context of distinct stakeholder positions and limited input from most stakeholders in the creation of high school rules.

Context: Compartmentalizing Time and Space in School

According to Childress (2004), teenagers tend to have a different conceptualization of space compared to adults, since they do not "own" property and therefore "space" as adults do. Consequently, they appropriate public spaces, much to the chagrin of some adults who seek to control how such spaces are used by young people. This is perhaps a reason why teenagers have taken to the Internet to create "virtual spaces" for themselves, free of adult control, where they can create and maintain social lives from decentralized locations. They also try to shape spaces for themselves in school.

In our research, students' understanding of space and time differed significantly from that of adults in the school, particularly administrators. The latter tended to view the school as a singular institution, whereas students commonly viewed it as divided by time and space, and often used this logic in understanding, navigating and arguing about rules addressing cell phones and mp3 players. Hallways, cafeterias and outside areas were seen as distinct, non-classroom spaces for them to spend their free time during breaks. This distinction was brought up frequently by students in our focus groups, though perhaps not as heatedly as in this exchange:

> I: No cell phones. Why is that a "stupid rule"?
> Lindsey: That's a good rule. (Everybody talking)
> Mark: No it's not. You're working, what the hell you need a cell phone for? (Everybody talking)
> Amy: If you're in class turn it off, but if you are in the hallway… (Everybody talking)
> I: Sorry? Too many people talking at once (Everyone laughs)
> Lindsey: Cell phones don't work in hallways.
> Mark: Well why would you need it anyways, you're working! (Yells) You're doing your work, you're learning! (Everybody talking)
> Amy: You're learning in a classroom. (Everybody talking)
> Jamie: Trust me, I got my cell phone on me when I am at school still. (Everybody talking)
> Steven: But what about lunch when you are outside? (Everybody talking)
> Amy: Yeah you're at lunch and you're outside [but] my teachers say "turn it off." (Whitton focus group 2)

While many students agreed that electronic items in classrooms might well undermine their education, they frequently stated that the use of devices in areas that were *not* the classroom made sense, since students would be in these areas during lunch, spare periods and before or after school. Some teachers agreed with this assessment:

> Gemini: Do I think it's … at lunchtime [is it] really, really bad to have an mp3 player on? No, I don't. I think that sometimes it's a bit of a release for kids that are pretty uptight when they're in class and need 40 minutes to sort of unwind between classes while eating their lunch. Fine within the cafeteria. (Teacher)

Such periods were considered to be free time, and many students felt that they should be able to use this time as they saw fit, including using cell phones and listening to music.

Even within the environment of the classroom, students (and some teachers) often divided class time itself between "instructional" time where a lesson is being delivered by a teacher and "seatwork", characterized as individual work at a desk, specifically when considering personal music devices. Many students felt that it was acceptable to listen to music during this type of activity, as articulated during Whitton focus group 8:

> Fernando: The teacher's talking and then he assigns like three pages of work. It's busy work. You're copying out of the book. You can listen to music while you're copying out of the book.
> Sammy: Yeah 'cause a lot, like, others prefer studying with music. It helps the person start studying. If it's getting distracting he's gonna take it off.
> Fernando: I can tell ya, it makes it a lot easier.
> I: What makes it easier?
> Fernando: Having music makes school a lot easier to go to.
> Latino Heat: Well not in [the] middle of class, like, […] But when you're not doing anything in class it's ok. (Whitton focus group 8)

During non-instructional class time, listening to music is seen as beneficial by helping students maintain focus on their individual (and sometimes relatively boring) tasks and reducing social distractions between students. In fact, some teachers also used listening to music as a strategy to keep students on task. Several teachers felt that there were times when music increased student focus, particularly in cases of students with behavioural disorders.

> Joe: Um anyway, for students that have ADHD, having, having an iPod is probably a good idea, because that masks out all of the subconscious background noises that their brain normally would be trying to, you know, trying to do something with, right?
> I: Right.
> Joe: Whereas if they're wearing a headphone, headphones... Now all of a sudden they have one distraction instead of twenty. //So for an ADHD student, that's a good thing. And a lot of administrators don't appreciate that. (Teacher)

> Mike: Yeah. Well there's certain kids – that's when you get into like vocational kids, special needs kids, that they function when they've got a task to do and they can wear, they can wear like an iPod or listen to music while they're doing their work at a desk quietly, sometimes that's a good thing. (Teacher)

These teachers felt that listening to music particularly benefited students with some form of attention deficit disorder or for "school-to-work" students who were on a vocational schooling path – students they said were already at risk for dropping out. Letting them listen to music seemed a reasonable and productive concession during student seatwork. Conversely, listening to music would not be acceptable during group-work or lesson-based activities. Yet such

distinctions between particular spaces and times are not addressed when rules frame the school as a homogenous space.

School spaces are controlled by adults, and while students understand and value some of this control, they also have particular needs or wants concerning electronic usage which they frame through contextualizing the school space. For students, the school and classroom spaces can perhaps be construed as "hybrid spaces", particularly as mobile technologies, such as cell phones with internet capabilities, blur physical and digital spaces (de Souza e Silva, 2006). This means that wherever a person is physically located, they are also simultaneously part of their (online) social community (de Souza e Silva, 2006). For teenagers, the usage of cell phones to set up schedules and appointments with parents and friends reflects a generational shift: many of today's teens in North America have grown up with instant connectivity with others via cell phones, texts and emails. However, they also do not wholly dismiss what is going on in their current physical environment such as the classroom. Even though teachers and administrators seem suspicious of students' skill in being able to determine when personal technology usage is inappropriate, some 'inappropriate' usage by students may be the result of frustration at not being able to have *any* 'appropriate' time to use such technologies when schools have blanket rules.

The concept of "hybrid space" can be expanded to refer to the overlap of not only physical and cyber spaces, but also of physical and "head space". For many of us, listening to music during various parts of our day (getting ready for work/school, driving, etc.) is a normal activity. The "silence" created by natural surroundings can thus be "experienced negatively, as something to be filled in" (Bull, 2001, p. 190). Chen's (1998) study of college students' Walkman use illustrates their need to sometimes "isolate" themselves from the outside social

environment in order to get ready for, augment or complete a task. "Even though the use of Walkmans cannot transform, in a real sense, the physical environment that the listeners are in, it enables the listeners to create an enjoyable, or, at least a tolerable environment […] to engage in activities which would otherwise be difficult to accomplish due to a noisy surrounding" (Chen, 1998, p. 269). Our focus group participants suggested that this is something that many teenagers would also like to do at certain times or places in the school, though they are often banned from doing so by adults, who frequently frame such a ban as being in students' best interest. Interestingly, in our study, teachers who allowed students to listen to music during non-instructional time noted they had few problems with their students knowing when to "disconnect themselves" and lauded the capacity for some students to be able to focus and produce great work while "plugged in".

Of course, some students may become distracted by music, including sounds emanating from others' devices. While the use of mp3 players during seatwork is seen by most students and some teachers as acceptable, it is only considered acceptable as long as it does not disrupt other students' learning.

> Greg: But I wouldn't want nobody else to have to hear it.
> Ron: Music distracts you so much, it's like right in your head.
> Ash: Yeah, but no, not like blaring music. If you're like sitting there and you're just doing a small assignment or something and you just want to hear a little bit of music so you can concentrate more/
> Greg: What if somebody else's music is bothering you though, or somebody's pager goes off when you're trying to do your work and someone's trying to concentrate […]
> (Toronto Focus Group 9)

This "second hand noise" is seen as a distracting encroachment on the other individuals' working "head space" and personal concentration levels, particularly if the genre of music does not

conform to their personal tastes. This issue of music volumes distracting others was raised by some administrators.

> Chicago: […]we've got some kids who listen to their iPods so loud I can hear them ten or fifteen feet away, which means the notion that somehow it's a private… interaction between the person and the iPod? Yes for about 80% of it but that 20% that bleeds out means that someone else will have to listen to it really whether they want to or not, if they're sitting down writing or reading um, and that may be not fair.
> (Administrator)

Likewise, cell phones ringing during classroom lessons are disruptive. Students considered a cell phone ringing in class to be a significant *faux-pas*, often resulting in admonishment and consequent embarrassment, as one teacher noted:

> Laurel: Well cell phones the same thing. You know they're not supposed to be on and… it's funny 'cause [in] my classroom once in a while one will go off and I'll just go ["the look"] and they'll go [gasp] and everybody will just give the look to that kid like "how could you let that happen in her class?!" [laughs]
> (Teacher)

While a ringing phone is a common disruption in everyday life, it implies that an immediate reaction (answering) is required. In a classroom setting, where time – particularly attention-kept instructional time – is limited, a ringing cell phone can be significantly frustrating for students and the teacher. Even worse is someone actually *answering* the phone. While many students are aware of cell phone etiquette and follow it, teacher and administrator comments suggest that others require guidelines. Students' understanding of how to responsibly use such devices seems vital if personal electronics are to be allowed in schools.

Some teachers allowed students to listen to music during seatwork. Others recognized that students use (and even have a right to use) these devices during non-classroom time, and thus tolerated students' possession of these devices, if turned off and out of sight in their class. Administrators were less tolerant, as we will address later in this paper.

Public/Private Spaces and Cyberbullying

The problem of cyberbullying further complicates the use of electronic devices in schools. While this issue did not come up during student focus groups, it was raised during several staff interviews as a further complication of school space and consequently seemed an important theme to touch on here. As we have explored, students and some teachers emphasize the heterogeneity of school time and space, a heterogeneity which also complicates distinctions between public and private. Schools are publicly funded institutions that all students have a right to attend. However, considerable energy is expended enforcing rules that differentiate the school "from the street", particularly in terms of dress codes. Commonly, only 'known' persons and signed-in visitors are allowed on school property, a precaution to maintain student safety. Halls are increasingly being monitored with the use of security cameras. While wash and locker rooms may be the most private spaces on school campuses, classrooms are more private than hallways. Cameras do not adorn their walls and their activities are usually the purview of a single adult teacher. However, classrooms are not contained spaces and students can report what has occurred there to other individuals, be they friends, parents or administrators. With the advent of cellular and Internet technologies, this relationship between public and private spaces in schools is further complicated. As we have seen, electronic devices may help students to carve out some private and social time within school. At the same time, however, electronic devices threaten others through potentially making private spaces more public, an issue raised in support of bans.

In the past year or so, in Ontario and much more broadly, there has been increasing awareness of cyberbullying, where persons use technologies to send individuals threatening or disrespectful messages or to post such messages publicly to an internet website. Keith and

Martin (2005) argue that cyberbullying is particularly insidious since it is often inescapable due to the instant-access technology of the internet and telecommunications. Since cell phones often have multiple capabilities other than simple phone calling and now often have text-messaging and internet access, the possibilities for cyberbullying increase. For instance, one study found that texting is the most common from of cyberbullying (Raskauskas & Stolz, 2007). The multifunctionality of phones also often includes still and/or video cameras which has resulted in a new concern. Camera phones have been used by students to record incidents on school campuses, such as fights, with these then posted to video-networking websites such as YouTube. One teacher explained that he had been filmed while he broke up a fight between students and that someone had posted it on line. There have also been reports of school fights being deliberately set up and recorded (CityNews, 2006). Teachers have also been targets of cyberbullying. Videos have been posted of teachers who have been provoked in classrooms to the point of angrily erupting, a tactic which is similar to the 'happy slapping' phenomenon in the United Kingdom where people are slapped or hit in the face while their reaction is filmed (Green, 2006). Another teacher recounted a story about being cyberbullied but could not pursue the case for lack of evidence. Addressing cyberbullying is difficult. How do you police material posted outside of the school, even though it may seriously affect the individuals within the school? Such incidents have prompted amendments to Ontario's *Education Act*, adding suspensions or expulsions for cyberbullying offences, a move lauded by the Ontario Teachers' Federation (CBC News, 2007). This further expands the 'field' of school boundaries and the jurisdiction of administrators to police students' behaviour and comportment, further complicating the idea of school as a distinct, unified place[4].

[4]In fact, the news media has recently reported on school officials policing social-networking websites (e.g. Facebook) for non-cyberbullying-related behaviour, such as under-age drinking and issuing school-related

Safety

Beyond the specifics of cyberbullying, general safety issues arose frequently within our research, both to justify regulation of electronics use *and* to justify leniency. In the first instance, both cell phones and music players were seen to undermine safety in terms of theft and also when students cannot hear warnings:

> Brian: If there was an emergency or something or if somebody is coming up to them to play a prank where they would normally hear them coming up [then]… it's a health and safety issue. (Administrator)

> Jack Black: But she was a perfect [example of a] kid that every day would come in late and I'd have to talk to her and she's down the hall "[yelling girl's name]!" You know? And [she] just keeps on walking 'cause she can't hear. The announcements are on, she's not hearing it. You know the national anthem's on, she's walking – and it's like you can't, you can't communicate. […] That's crazy! Like there could have been somebody in that end of the hall that was like an intruder in the school and you're shout- she can't hear ya. (Administrator)

As noted in the introduction however, one of the reasons many people, particularly teenagers, own a cell phone is because they feel safer and more secure if they carry one. It can be the case as well that parents feel more safe and secure if their children carry them. For example, parents can use cell phones in order to "monit[or] the teenager's state, whereabouts and activities… when they are in places hitherto inaccessible" (Green, 2006, p. 38). Green points out that students often state the importance of communication with parents as a primary reason they carry cell phones and "cite parental (and their own) concerns over 'emergencies' and 'safety' as central reasons for carrying and using [them]" (p. 38). Both students and teachers commented in our research on parental support for cell phones for just these reasons. However, some teachers were dubious about "emergency" calls:

---

reprimands as a result (such as being suspended from sports teams). http://www.startribune.com/local/west/13549646.html

> Laura: [pause] I would think the safety one – we're hearing about the cell phones "well my mum needs to know where I am" as a safety issue, they try to play that card, but the reality is, seven years ago [chuckles] we did not have the access to cell phones. I mean if there was an emergency, the school would get called, you'd get paged in class. And so I don't think they're [chuckles] realistic in playing that card. (Teacher)

> Maria: […] The other day, yesterday one of the boys' [cell phones] went off and he's like "it's my mom" and I'm like "hang up on her. She knows you're in class." "Well what if it's an emergency?" "She'll call the office. She knows where you are." There's no such thing as an emergency that your parents have to call you during class. They <u>say</u> it's the parents, I highly doubt it. […] (Teacher)

While some "emergencies" may not appear as such to teachers, some students cited seemingly reasonable examples, such as hearing if a family member was doing well after surgery.

> Lily: I know I had to bring my mum's cell phone a few times to school because my dad was in like, an operation so I told my teacher before, like, "I'm like, I'm probably gonna get a call in between class because my dad's in the hospital". I told her the situation and she's like "ok, just put it on vibrate and when you need to go, just get up and leave the class and you need to come back". But I mean some teachers if you like, even if you tell them, they'll be like "no, they can call the office and the office can tell you."
> (Toronto focus group 8)

In this case, informing the teacher, setting a phone to vibrate and discreetly leaving the room in order to minimize class disruption seemed straightforward for all those involved.

Beyond individual emergencies, in more recent years issues of safety, particularly in public buildings such as schools, have become of greater concern. With public buildings coming under sudden and deadly attacks, particularly in the form of school shootings at Columbine High School in Littleton, Colorado or C. W. Jefferys Collegiate Institute in Toronto, for instance, parents and students are acutely aware of potential dangers in the school. The instant access of cell phones to loved ones in emergencies is seen as a legitimate reason to possess them, even by some administrators:

> Chicago: And I'm a parent as well so I would understand when my kids get older, that there could be a situation where […] if something is going on, I want immediate access to them and woe be any administrator that gets in my way of trying to tell me "no I can't contact my son or daughter for something really important." (Administrator)

Some students in the Toronto focus groups (groups 1 and 8) spoke of 'lockdown drills' where they practiced what to do in the situation of a dangerous (and possibly armed) person entering the school. These frightening rehearsals serve as a reminder that perhaps instant communication in these situations is a new necessity of everyday life, even in schools. In sum, a climate of safety and risk was frequently referenced primarily to support the use of cell phones, but also to counter the use of electronics, especially personal music devices, illustrating one important area of distinction between cell phones and music players.

Regulation and Enforcement

While there seemed to be legitimate reasons for students to have cell phones with them or to listen to personal music devices during particular times during the school day, there were also a number of concerns beyond safety that teachers and administrators raised about having such electronic devices in the classroom, particularly in terms of silent communication and information storage. Pagers have often been outlawed in schools because of their association with drug dealers. One teacher raised similar concerns in relation to cell phones:

> Laura: Um… cell phones, yeah once again, perhaps you know, if there was an extreme situation where there was a uh, a medical – a pending medical situation, where a kid needed to have it on hand, ok. Needed to be paged within class. But how do you differentiate that between the one who's [chuckles] um, who's potentially drug hustling down, right? They're getting vibrated… to the washroom. I mean that's – I mean when do you call the shots on when it's an ok act to have that cell phone vibrate versus one that's not ok? (Teacher)

Secondly, getting and keeping student attention in a classroom is often difficult if students are secretly listening to music with one earbud headphone or speaking to friends by texting under desktops. One teacher noted,

> Maria: Yeah. I'd rather see a ban on cell phones than a ban on mp3 players actually.
> I: Why cell phones?
> Maria: The texting like under their desks. Like I have these desks that have like the insides? […] And then they say things like "well I'm using it as a calculator." "Well no you're not because you can go to the back and borrow one of mine. Like, you're not using it as a calculator," they're passing them back and forth, like who knows what's going on. (Teacher)

Thirdly, although most test periods involve specific rules around permitted materials and vigilant teacher monitoring, some administrators and teachers worry that students can cheat on tests by texting answers to each other or by recording formulae or essays on their mp3 player.

> Chicago: Having said that, there have been concerns that students can easily of course, on an iPod or a PDA [personal digital assistant], record information. So the kid can be listening actually to a recitation of notes about things. Or, theoretically, if you want to say "Ok Mr. Chicago, do a demand write essay on such and such." Fine I just flip to the channel in my ipod where I have read in the essay on Joseph Stalin and the take over of Russia –whatever it is – and I'm away to go. […] Or I have all the math formulas being read out, I have all the math formulas and I choose which ones I want to listen to. All the science formulas. Enforcement then becomes impossible because I couldn't possibly know what's recorded what's on the iPod or run around and test and things like that which means the fall back option is the most conservative to say, "ok they all go away." (Administrator)

Finally, there were concerns that these items tend to be fairly expensive and could be stolen from students, or even from teachers who have temporarily confiscated them, potentially leaving them open to prosecution if these devices are stolen whilst in their possession:

> Glenn: […] but see we also have this issue with um, with money so we have – like if you take something away from a kid, now what do you do with it? Like you're personally responsible. […] But then I tell them it's going in my drawer and it's sitting here and then when you leave class I expect you to take it with you and make it disappear. And if you can't do that, then I'm just going to send it downstairs and they can deal with it. (Teacher)

These staff concerns reflect their responsibilities for ensuring academic rigour, fairness, discipline and self-protection. They also present an adversarial relationship between students and teachers, however, with students expected to mislead or to lie about their activities. Fears of cheating and secret communication between students are not new, of course, but electronic devices provide new techniques for teachers to consider. In the face of this, some advocate a blanket ban on electronics, although even in the case of such bans, enforcement remains a challenge.

The issue of electronic devices in schools is multifaceted, and enforcing rules about them can prove difficult. Rules pertaining to the use of cell phones and personal music devices can vary dramatically between schools, administrators, classrooms, and teachers, ranging from teacher discretion about use of the devices in class under particular circumstances, to having them turned off while at school/in class, to banning them from the school/class altogether. Students are well aware of these differences:

> Jeezy: Oh, actually at my school, you can carry Walkmans, but you can only have them in the cafeteria, you can't have them in the halls.
> Tina: So say you bring it in the class and it's not turned on, do you get in trouble still?
> Jeezy: And it's not turned on? Well it depends, some teachers will let you have it on as long as you doing your work, but then there are some teachers that tell you to turn it off. (Toronto focus group 6)

Students often accepted these differences if they found the rationale for the differences logical. As previously noted, many teachers saw potential benefits to listening to music during particular class times and could understand cell phone usage under special circumstances; some even coped with rules against electronics by simply not enforcing them. With so many rules and other issues in their classrooms, many teachers felt that some rules were not worth fighting over and that

"you have to pick your battles." Yet some administrators lamented such 'teacher discretion' on electronics because it lead to inconsistencies such as those noted above.

> Jack Black: If I'm in a math class and I'm the teacher and I say "in my class there will be no mp3 players or anything. If I see it I'll call your mom, you can come pick it up." Then they don't bring it, right? But the problem happens that when they go to the next class and the teacher says "oh yeah, you can bring it." Then the kids are getting mixed messages. "Why is it ok here, why is it not ok here?" And it's that whole issue of inconsistency. […] Obviously, like I said, there's exceptions. We have a special ed. resource room, where kids that who have ADD need to go work, that kind of thing. And if [the teacher] wants to decide that they can sit with their headphones that fine! You know? And those are those exceptions but if you start saying "class by class" then it becomes a teacher's point of view of whether they agree. (Administrator)

Some teachers shared this administrator's concerns, especially as they felt that more lenient teachers or those who ignore the rules undermine those teachers who try to enforce them.

Inconsistencies were also an issue within classrooms. Some teachers noted that they were not as vigilant as they should be in spotting student infractions or that it depended on their mood that day or on their opinion of the student committing the infraction. In the latter case, students who were good students, who completed work, or seemed to only use a cell phone rarely, were often allowed to do so, whereas students who were seen as troublemakers or poor students were more likely to have their devices confiscated. Students were more concerned about this kind of inconsistency, e.g. favouritism towards students who were generally seen as more popular, athletic, or on students council (Raby & Domitrek, 2007), than with different rules in different classes.

Finally, even in contexts where rules against electronic devices are supposed to be school wide for all members of the school community, a couple of teachers/administrators we interviewed argued that staff should be exempt from bans on cell phones because they use them to do their jobs:

> Brian: Say for instance if they um, [the] teacher has a cell phone. I wear a cell phone on most days because, especially with a building this size, sometimes it's necessary for me to contact the principal if I don't know where she is or vice versa, ok? And have students challenged me on it? I say "yeah, your rules apply to students, they do not apply to me. And I'm sorry, but that's just life and the way it is." (Administrator)

> Joe: For me, like I'm also [a manager], this is part of my work [gesturing at cell phone on belt] […] So as I travel around, if a teacher says "oh, I've got this problem." Bang. I pick up my phone […]. This is a staple of my job. // So for them to come along and say "well students can't have cell phones and teachers should model that rule and not have cell phones either," I think that's wrong. (Teacher)

To some teachers and administrators cell phones have become integrated parts of their jobs. Yes for some students, such rule inconsistency was considered hypocritical:

> Matthew: My principal carries one around. He'd sit there typing things into his PDA and then notice I was wearing headphones and say, "Matthew, no electronic devices." (Whitton focus group 1)

> Allison: I think also the teacher too. I mean we had this one case where our one teacher's like, father was in the hospital. And he's the biggest nutcase about having cell phones. He sees you with a cell phone, he freaks. And his father's in the hospital, and he's like "my cell phone might go off at anytime!" And we're just like "jerk". Here he is yelling at us if you have any electronics and he has his cell phone on waiting for a phone call. (Whitton focus group 9)

One teacher also noted that administrators who want mp3 player bans often listen to music in their office while working and wondered what the difference was. Staff positions on this issue often coincided with how they saw themselves relative to students: If they understood the relationship between adults and young people to be unequal (e.g. in terms of guidance and/or responsibilities), it made sense that rules should be different for students and teachers; if they saw themselves as equal to students and/or as role models, they felt they should follow the same school rules.

Overall, our data showed that teachers varied considerably in their views on how personal electronic devices should be regulated and the consistency of this regulation. The administrators

we interviewed, however, tended to favour school or board-wide bans, since they had ultimate responsibility for the school and they wanted all staff members on the same page in terms of enforcement – differences between classrooms were seen to undermine rules and their consistent enforcement. When told that some teachers could see the value of having personal music devices in the classroom under particular circumstances, most administrators were adamant that *they* should be the ones to make that decision, not teachers. As Jack Black notes, "I think that's the only way insofar as the consistency point of view, you know?" (Administrator). Administrators frequently commented on the importance of context when meting out discipline and consequently were often critical of zero tolerance policies. The context of a rule infraction, particularly the life situation of the student involved, was something they felt it necessary to consider. At the same time, however, they tended to stress the need for consistency in rule application across the diverse contexts of the school – and for other students to *see* that consistency. It is ironic that students, in contrast, seemed to seek more consistency in the application of rules across students (and staff) and less in terms of the geography of the school. This perhaps stems from students' disdain of perceived favouritism and discrimination in terms of application and their desire for fairness. As some administrators noted, however, sometimes it is less fair to treat students from a range of backgrounds and circumstances in the same way – and it is staff who have greater knowledge of students' personal circumstances.

A Digital Generation?

We have found that students, teachers and administrators do not share the same views about the regulation of electronics in schools. In part, this is because each of these groups of stakeholders has distinct goals and interests in the school setting, as we discuss shortly, but

perhaps also due to their different orientations to such personal electronic and digital technologies. The use of personal electronic devices is increasing globally. The quick turnover rate in the production of newer models of cell phones and mp3 players and mass-marketing campaigns, such as the colourful and catchy iPod commercials, appeal to consumers (and particularly young people). However, there seems to be a gap between those who use such devices as part of their everyday lived experiences and those who do not. Some perceive this gap to be age-related. As an administrator noted, "It um, it may also be a generational thing. […] We're just estranged to where it sort of uh, [we're] not connected to that technology and things like that. So it will take a little bit for us to get used to… to be able to do it." (Chicago, Administrator)

Marc Prensky attempted to define terms to differentiate those who live on either side of this perceived technological gap by distinguishing *digital natives* who have "spent their entire lives surrounded by and using" digital technology and therefore "think and process information fundamentally differently from their predecessors" (Prensky, 2001, p. 2) and (older) *digital immigrants* who have "at some later point in [their] lives, become fascinated by and adopt many or most aspects of the new technology" though they will "always retain… a foot in the past" where they will turn to other familiar, less technological resources first (books instead of the Internet, for example) (Prensky, 2001, p. 3). These *digital immigrants* who have been "'socialized' differently from their kids, and are now in the process of learning a new language" (Prensky, 2001, p.3). While such a generational gap may in part explain some of the divergent views evident between students and staff, Prensky's terms suggest geographic movement that has not occurred and problematically polarize generations. Indeed, we noted that teachers' views on electronic devise were more related to the type of class they taught than age: teachers who

taught more technologically-friendly courses in business or the sciences, or who worked with students with unique needs, seemed to better understand students wanting to listen to music while working, for instance, than teachers who taught classes in the humanities or social sciences who were more likely to see cell phones and mp3 players as tempting "distractions." Similarly, it would be wrong to assume that all students use electronics the same amount and in the same ways. As a result, it is perhaps more helpful to think of electronics users on a *continuum* between integrated and peripheral use, regardless of age. While many of us use technology and electronics as part of our everyday lives, integral users tend to use electronic devices as a first resort and also as a regular supplement to everyday activities. Students frequently seemed to be integral electronic users, and this usage seemed logical to them. As one teacher suggested:

> Jen: … I also just think that… uh, like in the case of … technology and cell phones and mp3 players and – I think they're just so… [interrupted by an announcement] used to it they don't… they don't understand why [they shouldn't be allowed to use them]. Like if it doesn't make sense to them – they're very rational right? – So if it doesn't rationally make sense, you're not going to get them to do it and… you know? (Teacher)

Many students saw their possession and usage of cell phones and mp3 players as part of their everyday lives. As noted previously, they understood there were times and places to use such electronics and were quite puzzled when they could not use them at school in situations similar to those in which they used them outside of school (e.g. while doing their homework). According to students, teachers and administrators, some parents also seem comfortable with the technology and favour their children carrying electronic devices at school.

For integral electronics users, students and adults who are used to using electronics in their everyday lives, a ban is bizarre since social etiquette on using such devices, particularly cell phones, is in place. Some focus group respondents described themselves as matter-of-fact about removing headphones to listen to lessons, turning off cell phones or setting ringers to vibrate to

avoid disturbing large number of individuals and leaving crowded areas (such as classrooms) discreetly to privately have important cell phone conversations. However, some teachers and administrators noted that students have not all assimilated this etiquette:

> Chicago: Nowadays when you go to the movies, they say "please turn your cell phone off" or "put it on mute." And that's just a courtesy thing and I think that the generation has to adopt [it]. There's the skill then there's the sense of responsibility that goes with it and we don't have that built up so much as the text messaging phone speed right? (Administrator)

One teacher noted some irony in overly policing these devices when students need to hone such etiquette in order to become responsible digital citizens.

By contrast, peripheral users may still use electronic devices during their day (as required for work for example), but do not use electronics as often, nor do they normally use them to supplement other activities. Positioning themselves as peripheral electronic users, some teachers did not see the "need" to have these devices in class: that they did not contribute to students' education but were distractions to the learning process. Similarly, one teacher, when told that students felt they focus more on seatwork while listening to music said that "they *think* they are" (Maria, Teacher). Another teacher even said she selectively cited "studies" in order to counter students' desire to use personal music devices in class:

> Jen: Yeah, but I'll refer to "studies" that you know, say that your brain – like brain research stuff. Um, because I know, I know it's terrible to tell a lie but, I know that that – I know, I've read, we've looked at some stuff which says that music – I think they're conflicting, I haven't looked into it a lot – but some studies say music can help you learn and music cannot help you learn. So I'm choosing to have the "not" … (Teacher)

There seems to be a need by some teachers and administrators, positioned as peripheral electronics users to convince integral electronics users (often students) that they are incorrect in their perception that these electronics are helpful to them, even though their evidence is speculative. Yet clearly teachers were not unanimously against personal electronic devices, in

part due to specific pedagogical contexts and their classroom responsibilities as well as their own relationship with technology. In contrast, the administrators we talked to were for the most part adamant that listening to music on mp3 players and using cell phones is distracting to student learning in general and that they do not belong in schools.

Conclusion

While personal electronics, such as the Sony Walkman, have been available and widely used since the early 1980s, only recently has there been such fervent debate about policies governing these devices in a school setting. We have noted the divergent interests within the school, specifically between students, teachers and administrators, under a variety of themes.

Many students (and some teachers) contextualize spaces and times where they note the (in)appropriateness of cell phone and mp3 player usage. For the most part, our focus group participants seem to use electronics as an integral part of their lives; they are comfortable with everyday use of these technologies. Students are also motivated by the desire to ensure spaces of personal time within the school and to make school an enjoyable, safe and social experience as well as an academic one. Many adults within the school see electronic devices as peripheral (and unnecessary) devices to learning, however. Teachers and administrators have responsibilities that students do not have and many argue that there are good pedagogical and safety reasons for not having these devices at school, including that they might facilitate drug dealing and cheating, pose as distractions and lead to theft. Due to their role in the school it is also unsurprising that administrators are more likely than students to view the school as a homogenous space. It is evident that students, teachers and administrators have different positions related to how they contextualize school spaces linked to their differing roles and responsibilities.

While students, teachers and administrators all have valid concerns and standpoints regarding electronic gadget usage, rule-making and dissemination comes primarily from school boards and administrators, despite some limited opportunities for teachers and some students to participate. The lack of 'ground level' input on the regulation of electronics coincides with the larger pattern we have noticed so far during our data gathering on school rules – a lack of genuine student participation during their creation and revision. This pattern is troubling since students lack an understanding of themselves as potent political citizens and frequently seem to resort to the rather impotent practice of rule-breaking as a means to voice their objections to rules (Raby & Domitrek, 2007). If teaching responsible citizenship is the ultimate goal of education, there is an urgent need to include student input on matters of school policy. Such involvement would also open wider discussion of the pros and cons of personal electronic devices in schools. Similarly, while there are more opportunities for teacher participation though staff and management council meetings, the final say is always in the hands of the principal and the school board. Some teachers expressed concern that administrators were implementing rules that did not reflect an understanding of classroom dynamics and the struggles teachers need to deal with on an everyday basis. With such gaps between stakeholders (students, teachers and administrators) on the regulation of personal electronic devices in schools, communication and participation across all stakeholders seems vital to create successful policy.

From our observations, there are clearly many struggles that stem from increasing personal electronics usage in North American society and these are not likely to dissipate as mobile technologies become increasingly popular. As part of the wider question of student and teacher participation, our data suggests that blanket electronics bans on school property are problematic for many. While several administrators interviewed cited the TDSB electronics ban

as positive and hoped that their board would implement similar policies[5], such a ban did not seem favourable to most teachers and students. While some teachers said that having a ban would eliminate everyday struggles with students and thus make their lives easier, others noted that they would lose the discretion to let students use devices in beneficial situations or other special circumstances. Blanket bans also treat the school as a homogeneous space, which is quite distinct from how students understand the school.

Based on our findings, three other observations emerge. First, that rules pertaining to electronics need clear rationales. Students were much more likely to accept and follow a rule if the rationale behind it was clearly explained and made logical sense. Secondly, while cell phones and personal music players are similar in some regards, they are quite different in their functions and rule-making might well benefit from recognizing these differences. Finally, there seems to be a need for education about broader etiquette around what is considered appropriate usage of personal electronic devices in public places and broader education around the potential uses (and abuses) of technology. While our research suggests that many students have adopted appropriate etiquette related to when and how to use their devices (not during lessons for example), some teachers and administrators countered that not all students were as successful at doing so. Similarly, those teachers and administrators who completely dismiss electronics as distractions fail to see the nuances of electronics usage and their possible beneficial applications under particular circumstances.

[5] After data collection and during the course of writing this paper, the local board passed a new policy stating that cell phones could only be used in designated areas of the school and banned from classrooms and wash/locker rooms, in distinct contrast to the TSDB policies (Osprey News Network, 2007). Authorized cell phone use areas, while still allowing students to carry cell phones in cases of emergency, seems to be a compromise reflecting the positions of all stakeholders.

Appendix: Focus Group Descriptions

Whitton Focus groups	**Description**
#1 Youth centre in mall	15-17 years; Five females and two males.
#2 Street youth drop-in shelter	16-21 years; Four females and ten males; 7 youth were out-of-school, 3 due to age.
#3 Political youth group	16-18 years; Three males.
#4 Performing arts group	One 13-year-old, the remaining members 16-17; Three females, one male.
#5 French school group	Aged 15-18; Six females.
#6 Catholic school group	Aged 17-18; Two females, two males.
#7 Boys and Girls Club	Aged 13-16; Four females, two males.
#8 New immigrant youth group	Aged 15-18; Two female, five male.
#9 LGBTTQ youth group	Aged 15-19; Five male, four female.
Toronto Focus groups	
#1 Inner city youth drop-in	14-18 years; Two females and seven males.
#2 Informal group	14-15 years; Two females and one male.
#3 Youth leadership group	15-17 years; Three females.
#4 New immigrant youth group	14-18 years; Four girls, three boys.
#5 Alternative hobby group	14-15 years; Three females, one male.
#6 Youth homeless shelter	17-19 years; Three females, two males.
#7 Boys and Girls Club	14-16 years; Three females, four males.
#8 Catholic youth group	15-18 years; Three females.
#9 Native group	18-19 years; One female, four males.

References

Beech, M. (2006, March 7). Cellphone ban? *Welland Tribune,* pp. A1-A2.

Brodsky, W. (2002). The effects of music tempo on simulated driving performance and vehicular control. *Transportation Research* (Part F), *4*, 219-241.

Brown, L. (2007, February 1). Schools, parents divided on expelling cellphones. *Toronto Star*, p. A1.

Bull, M. (2001). The world according to sound. *New Media & Society, 3*, 179-197.

Campbell, R. (2006a). Teenage girls and cellular phones: Discourses of independence, safety and 'rebellion'. *Journal of Youth Studies, 9*, 195-212.

Campbell, S. W. (2006b). Perceptions of mobile phones in college classrooms: Ringing, cheating and classroom policies. *Communication Education, 55*, 280-294.

Canada's Office of Consumer Affairs. (2006). Consumer trends update: The expansion of cellphone services. Retrieved Sept 25, 2007, from http://strategis.ic.gc.ca/epic/site/oca-bc.nsf/en/ca02267e.html

Canadian Radio-Television and Telecommunications Commission. (2006, December 14). The future environment facing the Canadian broadcasting system. Retrieved February 25, 2008, from http://www.crtc.gc.ca/ENG/publications/reports/broadcast/rep061214.htm

CBC News. (2006, November 24). Quebec school bans cellphones after YouTube video. Retrieved January 30, 2008, from http://www.cbc.ca/canada/ottawa/story/2006/11/24/you-tube.html

CBC News. (2007, April 17). Cyber-bullying could lead to school expulsion in Ontario. Retrieved October 23, 2007, 2007, from http://www.cbc.ca/canada/ottawa/story/2007/14/17/safeschools.html

Chen, S.-L. S. (1998). Electronic narcissism: College students' experiences of walkman listening. *Qualitative Sociology, 21*, 255-276.

Childress, H. (2004). Teenagers, territory and the appropriation of space. *Childhood, 11*, 195-205.

CityNews. (2006). New school fight videos surface as parents worry about their kids' safety. Retrieved January 11, 2007, from http://www.citynews.ca/news/news_3748.aspx

CityNews. (2007). Cellphone use banned in all Toronto public schools. Retrieved June 7, 2007, from www.citynews.ca/news/news_9977.aspx

de Souza e Silva, A. (2006). From cyber to hybrid: Mobile technologies as interfaces of hybrid spaces. *Space and Culture, 9*, 261-278.

Furnham, A., & Bradley, A. (1997). Music while you work: The differential distraction of background music on the cognitive test performance of introverts and extraverts. *Applied Cognitive Psychology, 11*, 445-455.

Furnham, A., Trew, S., & Sneade, I. (1999). The distracting effects of vocal and instrumental music on the cognitive test performance of introverts and extraverts. *Personality and Individual Differences, 27*, 381-392.

Green, G. (2006). Mobile panic: Health, manners, and our youth. In *Mobile panic: Health, manners, and our youth* (pp. 107-125). New York: Routledge.

Green, N. (2001). Who's watching whom? Monitoring and accountability in mobile relations. In B. Brown, N. Green & R. Harper (Eds.), *Wireless world: Social and interactional aspects of the mobile age* (pp. 32-45). London, UK.: Springer.

Green, N. (2003). Outwardly mobile: Young people and mobile technologies. In J. E. Katz (Ed.), *Machines that become us: The social context of personal communication technology* (pp. 201-217). New Brunswick, NJ: Transaction.

Hallam, S., & Price, J. (1998). Can the use of background music improve the behaviour and academic performance of children with emotional and behavioural difficulties? *British Journal of Special Education, 25*, 88-91.

Hallam, S., Price, J., & Katsarou, G. (2002). The effects of background music on primary school pupils' task performance. *Educational Studies, 28*, 111-122.

Katz, J. E., & Sugiyama, S. (2006). Mobile phones as fashion statements: Evidence from student surveys in the US and Japan. *New Media & Society, 8*, 321-337.

Keith, S., & Martin, M. E. (2005). Cyber-bullying: Creating a culture of respect in a cyber world. *Reclaiming Children and Youth, 13*, 224-228.

Koskinen, I., & Repo, P. (2006). *Personal technology in public spaces* (Working Papers 94). Helsinki, Fin.: National Consumer Research Centre.

Lobet-Maris, C. (2003). Mobile phone tribes: Youth and social identity. In L. Fortunati, J. E. Katz & R. Riccini (Eds.), *Mediating the human body: Techonology, communication and fashion* (pp. 87-92). New Jersey: Lawrence Erlbaum.

McGinnis, S. (2007, May 17). Calgary school asks YouTube to pull fight video. Retrieved January 30, 2008, from http://www.canada.com/topics/technology/story.html?id= 243d1083-28b4-47a9-a206-6803e4c34336

Oldham, G. R., Cummings, A., Mischel, L. J., Schmidtke, J. M., & Zhou, J. (1995). Listen while you work? Quasi-experimental relations between personal-stereo headset use and employee work responses. *Journal of Applied Psychology, 80,* 547-564.

Osprey News Network. (2007, October 24). Cellphone friendly areas being set up. *Welland Tribune,* p. A2.

Pain, R., Grundy, S., Gill, S., Towner, E., Sparks, G., & Hughes, K. (2005). 'So long as I take my mobile': Mobile phones, urban life and geographies of young people's safety. *International Journal of Urban and Regional Research, 29,* 814-830.

Pates, J., Karageorghis, C. I., Fryer, R., & Maynard, I. (2003). Effects of asynchronous music on flow states and shooting performance among netball players. *Psychology of Sport and Exercise, 4,* 415-427.

Pool, M. M., Koolstra, C. M., & van der Voort, T. H. A. (2003). The impact of background radio and television on high school students' homework performance. *Journal of Communication, 53,* 74–87.

Prensky, M. (2001). Digital natives, digital immigrants (Part 1). *On the Horizon, 9*(5), 2-6.

Raby, R., & Domitrek, J. (2007). Slippery as fish but already caught? Secondary students' engagement with school rules. *Canadian Journal of Education, 30,* 931-958.

Ransdell, S. E., & Gilroy, L. (2001). The effects of background music on word processed writing. *Computers in Human Behaviour, 17,* 141-148.

Raskauskas, J., & Stolz, A. D. (2007). Involvement in tradional and electronic bullying among adolescents. *Developmental Psychology, 23,* 564-575.

Scott, A. (2006, March 8). One step closer. *Welland Tribune,* pp. A1, A3.

Srivastava, L. (2005). Mobile phones and the evolution of social behaviour. *Behaviour and Information Technology, 24,* 111-129.

Statistics Canada. (2007, May 4). Residential telephone service survey. *The Daily*. Retrieved June 7, 2007, from www.statscan.ca/Daily/English/070504/d070504a.htm