J. EDUCATIONAL COMPUTING RESEARCH, Vol. 32(3) 265-277, 2005

CYBER-HARASSMENT: A STUDY OF A NEW METHOD FOR AN OLD BEHAVIOR*

TANYA BERAN
QING LI
University of Calgary

ABSTRACT

A total of 432 students from grades 7-9 in Canadian schools reported their experiences of cyber-harassment, which is a form of harassment that occurs through the use of electronic communications such as e-mail and cell phones. More than two-thirds of students (69%) have heard of incidents of cyber-harassment, about one quarter (21%) have been harassed several times, and a few students (3%) admitted engaging in this form of harassment. In addition, victims of cyber-harassment reported a variety of negative consequences, especially anger and sadness, and had experienced other forms of harassment. These results suggest several avenues of research needed to explain how and why adolescents use technological advances to harass their peers.

Traditionally, peer harassment has been viewed as a face-to-face encounter between a bully and a victim in view of an audience of peers (Espelage & Swearer, 2003). A new method of peer harassment has emerged, known as cyber-harassment, or, cyber-bullying. These terms are used interchangeably to refer to harassment that is directed at a peer through the use of information and communication technology. The present study examined the nature and extent of this method of harassment among adolescents.

*This project was supported by a grant from the Imperial Oil Foundation at the University of Calgary.

A substantial percentage of students experience bullying at least sometimes, ranging from 14% to 27% (Fekkes, Pijpers, & Verloove-Vanhorick, 2005; Whitney & Smith, 1993). Girls tend to report less bullying than do boys (Borg, 1999; Boulton & Underwood, 1992), and bullying has been shown to increase from primary to secondary school and then decrease (Borg, 1999; Cullingford & Morrison, 1995; Pellegrini & Long, 2002).

Harassment in school typically involves humiliating and threatening actions exerted by a more dominant and aggressive peer against a weaker, submissive peer (Juvonen & Graham, 2001). In a review of the research, Beran (in press) reported that there are two main categories of aggressive behaviors: **Direct harassment**, also referred to as *overt aggression*, includes verbal insults and physical assaults. **Indirect attacks**, also identified as *relational aggression*, refer to behaviors such as excluding someone from an activity and spreading rumors. Thus, behaviors such as name-calling, swearing at someone, hitting, pushing, telling classmates not to talk to someone, and telling untrue stories about someone exemplify peer harassment.

The purpose of these harassing behaviors, according to social dominance theory, is to force someone into a position of submission (Pellegrini & Long, 2002). A child emits aggressive signals to another child who involuntarily yields to the aggressor by crying, cowering, or retreating (Hawker & Boulton, 2001). Accordingly, the aggressor demonstrates power and dominance over the victim. This involuntary subordination may result in depression and helplessness (Price, Sloman, Gardner, Gilbert, & Rohde, 1994), which may maintain or exacerbate the harassment over a long period. Indeed, some students report being bullied for more than a year (Sharp, Thompson, & Arora, 2000).

In addition to depression and helplessness, studies have identified many psychosocial experiences of victims. They are described as lacking social competence, tending to cry easily, and having difficulty defending themselves from an attack (Schwartz, Dodge, & Coie, 1993). In a meta-analysis of victim characteristics, Hawker and Boulton (2000) reported that victims are likely to experience anxiety, low self-esteem, and loneliness. In addition to these internalizing behaviors, victims may display externalizing problems such as impulsivity and hyperactivity (Camodeca, Goossens, Schuengel, & Terwogt, 2003; Johnson et al., 2002; Schwartz, Proctor, & Chien, 2001).

Although a substantial amount of research on school bullying has accumulated since Olweus' pioneering work in the 1970s (Olweus, 1997, 1978, 1979), surprisingly little research has focused on cyber-bullying. Many teachers and administrators now recognize the problem of school bullying. Few, however, are aware that students are being harassed through electronic communication, or, cyber-bullying. Consistent with the lack of awareness by school professionals, researchers have yet to examine systematically the nature of cyber-bullying.

TECHNOLOGY USE AND CYBER-BULLYING

More than half a billion (580 million) people worldwide now have Internet access (Nua Internet Surveys, 2003). The Internet is rapidly growing in homes, schools, and businesses at a rate of at least 100% per year (Nua Internet Surveys, 2002). A recent survey of 15,500 schools in Canada found that 98% of elementary schools and 99% of secondary schools have computers with Internet connections (Statistics Canada, 2004). More than one million computers are available to students and teachers, and it is estimated that 90% of these computers are connected to the Internet (Statistics Canada, 2004). In other words, there is one computer at school for every five students. Further, in about 60% of schools students are allowed access to Internet-connected computers outside of class time, such as at lunch hours and after school when there is presumably less supervision (Statistics Canada, 2004). Thus, virtually every student in Canada has access, which is unsupervised at times, to computer technology at school as a form of electronic communication.

Another form of technology drastically increasing in use is the cell phone. In 2003, about one-third of youth in the United States had their own mobile phones, whereas about half of children in Europe owned cell phones. Furthermore, of the American youth aged 10-14 years who have cell phones, 70% reported feeling safer when they carried their phones as it would allow them to quickly contact friends and family (RCR wireless news, 2004).

Although computer use in the classroom may have a beneficial impact on learning and cell phones may facilitate student interactions, this technology inevitably brings new challenges and problems for society and our schools (Yu, 2002). Electronic communication can serve as a medium in which students engage in malevolent behaviors that include harassing others. This method of harassment is becoming known as cyber-harassment (or cyber-bullying). Specifically, cyber-bullying is the repeated and intentional use of various forms of technology such as cell phones, pagers, e-mail, instant messaging, and Web sites by individuals or groups to harm others.

Although some of these forms of technology are relatively new, cyber-bullying may be occurring at a high rate. For instance, up to one quarter of young female Internet users say they have felt frightened or upset about things said to them during chat room sessions (Ipsos-Reid, 2001). In a survey conducted in Britain, 25% of adolescents between 11 and 19 years of age reported experiencing cyber-bullying (National Children's Home, 2002). Only a few years earlier, 6% of youth had reported being harassed online (Thorp, 2004). At about the same time, a survey conducted in Canada shows that one-quarter of young Canadian Internet users received messages expressing hate for others (Mnet, 2001). In a small sample of developmentally delayed adolescents, Katz (2001) found that many adolescents experience sexual harassment over the Internet, and Spitzberg and

Hoobler (2002) reported that one-third of undergraduate students reported being stalked over the Internet.

These preliminary studies suggest that cyber-harassment is becoming a significant problem. Attempts to reduce this behavior are complicated as "cyber-bullies" may be anonymous, and, therefore, difficult for school administrators and parents to identify. In fact, anonymous communication prevents detection of harmful behavior, may encourage users to engage in risky behaviors, and may also avert their embarrassment and responsibility (Teich, Frankel, Kling, & Lee, 1999). For example, Teich and colleagues (1999) identified several types of online abuse, such as impersonation, fraud, spam, hate mail, and other criminal activities, and recommended policy, regulation, and punishment. Thus, the potential benefit of improved social relations through the use of easy and inexpensive communication may actually be hindered by the risk of encouraging abuse, hate, and crime.

These studies suggest that harassment occurs through electronic communication, yet it is unclear how often these behaviors occur among peers. As this behavior becomes recognized as an important problem, researchers must provide information about its occurrence to inform and support educators. Considering that many Internet users are socially isolated (Mesch, 2001) and that some may even look for peer support on the Internet where they are encouraged to act out in violence against their bullies (Markward, Cline, & Markward, 2002), indicates a link between technology and school bullying. Thus, to support the appropriate use of technology in schools, teachers and administrators must be knowledgeable about the extent and various forms of cyber-bullying and, as a result, teach students about safe and appropriate computer applications. Further, educators, who have the responsibility of teaching students, may actually have less understanding and comfort with computer technology than students themselves. Teachers need to be aware, therefore, of the various ways students are currently using technology.

This study explored the nature and extent of cyber-bullying among adolescents. In particular, the following questions guided this exploration.

1. What electronic media are used for cyber-harassment, and how often does it occur?
2. What are adolescents' reactions to cyber-harassment?

METHOD

A total of 432 students (193 boys and 239 girls) in grades 7–9 were selected from nine junior high schools from middle class, ethnically diverse communities in Calgary. Schools were randomly selected and only those adolescents with signed consent were permitted to participate. A research assistant administered questionnaires to students in class and informed them that they were not obligated

to complete the questionnaire and not to record their names to ensure anonymity. Approximately 15 minutes was required to complete the questionnaire.

Measures

The authors developed a 15-item survey to address the purpose of this study (see Appendix). These items are based on the first author's experience working in schools, conducting research, and hearing students' disclosures of cyber-harassment. A definition of harassment developed by Olweus (1996) and frequently used in research was included at the beginning of the survey to clarify its meaning. Open-ended questions asked about the types of technology used to harass students and details about the incidents. Closed-ended questions asked about the frequency of hearing about, experiencing and engaging in cyber-harassment, emotional and behavioral responses, and the relation between cyber-harassment and other forms of harassment. These responses were rated on a Likert scale from "Never" to "Almost Every Day." The Alpha coefficient of the reliability of the ten items measuring emotional and behavioral responses was .88.

RESULTS

As shown in Table 1, students reported being aware of several forms of technology that had been used to harass peers. E-mail or Instant Messaging and the Internet were the most often reported. Specific examples of cyber-harassment were also reported. One student reported hearing of someone sending insults through e-mail to the school principal. Another student indicated that a girl was "dared to take a naked picture and e-mail and post it." In addition, a student

Table 1. Number of Students Reporting Cyber-Harassment (N = 432)

	n	%
Computers		
e-mail/Instant messaging	229	53
Internet	198	46
Chat rooms	47	11
Web pages	11	3
Unspecified	31	7
Other		
Cell phones	109	25
Answering machines	26	6
Video cameras	18	4

reported that a friend received death threats. Only about one third of students (n = 136) indicated they had not heard of any form of cyber-harassment occurring.

Regarding victimization, almost one-quarter of students (23%, n = 100) experienced cyber-harassment at least a few times, 35% (n = 148) experienced it once or twice, and 42% (n = 182) never experienced it. Thus, in total 100 students (23%) experienced cyber-harassment a few times or more. A univariate analysis of variance (ANOVA) with student gender, $F(1, 430) = .01, p > .05$, and grade, $F(2, 430) = 1.10$, $p > .05$, as independent factors, showed no main or interaction effects, indicating that boys and girls in lower and higher grades reportedly experience a similar frequency of cyber-harassment.

In addition to being aware of incidents and being victimized, some students reported using electronic communications to harass their peers. Specifically, 22% (n = 94) reported doing it once or twice, 4% (n = 15) reported doing it several times or more often, and 74% (n = 318) reported never doing it. ANOVA results indicate that there are no gender or grade differences ($p > .05$).

To determine how students are affected by cyber-harassment, responses to the 10 emotional and behavioral responses were examined (see Table 2). These responses are reported separately because we wanted to know the range of students' experiences of cyber-harassment. Since the total number of students who experienced cyber-harassment is 100, the frequency counts can also be interpreted as percentages. Victims were affected in many ways by the

Table 2. Impact of Experiencing Cyber-Harassment (n = 100)

	Frequency of each response				
	Never	Once/ twice	Few times	Many times	Almost every day
Emotions					
Angry	17	26	32	18	7
Sad/hurt	30	34	21	12	3
Anxious	60	22	13	4	1
Embarrassed	56	25	11	7	1
Cried	61	20	9	8	2
Afraid	64	21	13	1	1
Blames myself	57	25	11	4	3
Behaviors					
Poor concentration	44	34	16	6	0
Low school achievement	79	11	5	4	1
Absenteeism	87	9	2	0	2

harassment. More than half of the victims (57%) stated that they felt angry on several occasions, and about one-third (36%) reported feeling sad and hurt. An ANOVA was then conducted using the entire sample to determine gender and grade differences using the sum of the ten emotional and behavioral responses to obtain an impact score. No significant differences were found for gender, $F(1, 428) = .92$, $p > .05$, or grade, $F(2, 428) = .41$, $p > .05$. The relation between cyber-harassment and face-to-face (or traditional school bullying) harassment (without use of electronic communications) was also explored. More than half (64%) of students who were victims of cyber-harassment, also reported victimization by another type of harassment.

DISCUSSION

Although computers have been introduced in classrooms as a means of facilitating access to educational information (Bailey & Cotlar, 1994), many students in our sample were involved or heard of someone involved in cyber-harassment. About two thirds of students reported hearing about incidents of cyber-harassment, one-quarter of students were harassed several times or more, and about one-quarter of the students in our sample reported using this form of communication to intentionally harm their peers. In addition, many students reported being negatively impacted by the experience, and had been harassed in other ways as well. These results suggest that "bullying has gone digital" and requires further research to explain how and why adolescents in a technologically advanced society harass one another.

Many students in our sample reported using technology for harmful purposes. The frequency of experiencing traditional harassment reported in several studies (Bentley & Li, 1995; Farrington, 1993) is similar to the reported rate of cyber-harassment in the present study. Moreover, the majority of students experiencing this latter form of harassment were also victimized at school. Thus, many students who are victims of face-to-face harassment at school may also be targeted in cyberspace. The severity of cyber-harassment also varies with incidents ranging from annoying to dangerous with the occurrence of death threats. Indeed, victims report experiencing several types of harassing behaviors (Ladd & Ladd, 2001), and electronic communication allows an additional method of harassment. Perhaps bullying begins at school and then extends into the home and community through the use of technology. It is also possible that bullying at a distance by using computers and cell phones then leads to face-to-face bullying. More specifically, as a result of not receiving consequences for engaging in cyber-harassment, students may then continue the harassment when in close contact with a student at school. In addition, cyber-harassment may alter bullying at school. For example, if "electronic bullies" remain undetected, their bullying behaviors at school may become more severe and directly, rather than indirectly, exerted against a victim. Future research must

explore how cyber-bullying possibly decreases, maintains or exacerbates other forms of bullying.

Just as victims of school bullying report discomfort and distress (Rigby, 2001), several victims of cyber-harassment indicated feelings of sadness, anger, anxiety, and fear that may have impaired their ability to concentrate and succeed academically. Thus, even though cyber-bullying does not always occur in the presence of peer witnesses (for example, threatening messages relayed through cell phones), it may have a similar impact on victims by establishing power and control over them through humiliation. It seems plausible that social dominance theory can be applied to cyber-harassment as victims seem to experience fear and perhaps also helplessness, and, thus, consider themselves to be in a subservient position to the "cyber-aggressor." It is also noted that many students in our sample indicated that they were not impacted by the cyber-harassment. Perhaps they consider this behavior to be "normal" or "expected," or they did not attribute a hostile intent to the message.

Future research is needed to expand our understanding of cyber-harassment. The sample in this study was limited to students in grades 7-9 in Canadian schools who were willing to participate and no grade differences were found in reports of cyber-harassment. It is suggested that the age range be expanded to include younger and older students and that gender differences be simultaneously examined. Additional measures should be developed and the validity of the present results should be verified. The reliability of the present measure was high, but its accuracy remains to be determined. Also, although the sample was randomly selected, few students returned consent forms, thus reducing the generalizability of the findings.

Implications

Cyber-harassment requires further study and additional measures to determine how to prevent it; nevertheless, general recommendations can be made based on empirically supported strategies used to prevent school bullying. Administrators, teachers, and parents are encouraged to discuss harassing behaviors with students to raise awareness about the severity of the problem and plan how to intervene. A code of conduct that identifies and manages cyber-harassing behaviors must also be established. Students may need reassurances that they will be supported if they report cyber-harassment, and may need to learn how to prevent being targeted by keeping personal information such as passwords private (Katz, 2001). Simply advising students to disconnect from the Internet to stop the harassment is not recommended since they may then become disconnected from their peer group. Moreover, harassment that occurs in cyberspace may also occur face-to-face, so simply avoiding electronic communication will not stop other harassing behaviors. Thus, initiatives to prevent cyber-harassment should be implemented within a broader context of creating a positive school climate. Adults and students should plan these strategies together to increase commitment. In

addition, professionals providing services to adolescents must be informed about cyber-harassment and include it as part of their assessment and intervention. As more technological advances are made, these strategies must be monitored and modified to effectively manage this form of harassment to promote responsible use of technology.

Considering that many illegal activities occur over the Internet (for instance, money laundering and theft of intellectual property), responsible behaviors must be promoted at an early age. As we learn more about cyber-harassment and develop strategies to manage it, administrators will likely experience difficulties with surveillance and other control mechanisms. However, just as smoking, littering, and driving after consuming alcohol have become socially unacceptable, attitudes about bullying in school and cyberspace need to change so that more support is provided to protect students from fear and intimidation from harassment that ultimately interferes with their learning.

APPENDIX
Student Survey

Thank you for participating in this survey.

School _____ Grade _____ Gender _____

Harassment occurs when a student, or several students, says mean and hurtful things or makes fun of another student or calls him or her mean and hurtful names, competely ignores or excludes him or her from their group of friends or leaves him or her out of things on purpose, tells lies or spreads false rumors about him or her, sends mean notes and tries to make other students dislike him or her, and other hurtful things like that. When we talk about harassment, these things happen repeatedly, and it is difficult for the student being harassed to defend himself or herself. We also call it harassment when a student is teased repeatedly in a mean and hurtful way. But we don't call it harassment when the teasing is done in a friendly and playful way. Also, it is not harassment when two students of about equal strength or power argue or fight.

1) Have you heard of students using technology to harass other students (for example, the Internet, computers, cell phones, answering machines, video cameras): If yes, what types of technology were used?

   _____

   _____

2) If yes, how was the technology used? Please describe the event.

_____

_____

3) Have these types of harassing behaviors involving technology been directed toward you? Please indicate:

1	2	3	4	5
never	once/twice	a few times	many times	almost every day

4) If yes, how have you been impacted? (Circle one)

I felt sad and hurt

1	2	3	4	5
never	once/twice	a few times	many times	almost every day

I felt angry

1	2	3	4	5
never	once/twice	a few times	many times	almost every day

I felt embarrassed

1	2	3	4	5
never	once/twice	a few times	many times	almost every day

I felt afraid

1	2	3	4	5
never	once/twice	a few times	many times	almost every day

I felt anxious

1	2	3	4	5
never	once/twice	a few times	many times	almost every day

I missed school because of it

1	2	3	4	5
never	once/twice	a few times	many times	almost every day

I cried

1	2	3	4	5
never	once/twice	a few times	many times	almost every day

I had difficult concentrating

1	2	3	4	5
never	once/twice	a few times	many times	almost every day

My marks have dropped because of it

1	2	3	4	5
never	once/twice	a few times	many times	almost every day

I blame myself

1	2	3	4	5
never	once/twice	a few times	many times	almost every day

5) Do the people who harassed you by using technology also harass you in other ways (not using technology)?

1	2	3	4	5
never	once/twice	a few times	many times	almost every day

6) Do you use technology to harass others?

1	2	3	4	5
never	once/twice	a few times	many times	almost every day

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Direct reprint requests to:

Dr. Tanya Beran
c/o Division of Applied Psychology
University of Calgary
AB, Canada T2N 1N4
e-mail: tnaberan@ucalgary.ca