

Cyberbullying and the Digital Divide:  
Student and Teacher Perceptions and Reactions

Dissertation

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## **Abstract**

The advent of the digital age has not only changed the way that individuals consume information but the way individuals interact socially. Adolescents, in particular, now utilize instant messaging, text messaging, cellular phones, email, and social networking sites to communicate with their peers constantly and instantaneously. While this has opened new channels of communication for adolescents that can often be advantageous, this has also left many vulnerable to social experiences that are manipulated and meant to hurt. Perhaps the most detrimental of these experiences is cyberbullying. The purpose of this study was to examine students' and teachers' perceptions and reactions toward cyberbullying and technology. A cross-sectional online survey of 53 students and 47 teachers was implemented to obtain this information. Results indicate that cyberbullying remains a problem that is largely underreported and has the potential to negatively impact students. Differences in perceived methods to effectively address cyberbullying among teachers and students further indicate the need for greater attention on prevention and intervention reform.

## **Dedication**

For my husband and daughter. Thank you for the joy and happiness you bring to my life.

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## **Chapter 1: Introduction**

### **Statement of the Problem**

Cyberbullying has become an increasingly emergent problem, placing students' psychological health, safety, and well-being at risk (Li, 2008; Mason, 2008). Schools, however, are reluctant to address cyberbullying because many incidents originate off campus (Hinduja & Patchin, 2008). Nevertheless, the literature indicates that cyberbullying often permeates onto school grounds, and that failing to address it has serious negative consequences in the educational environment regardless of its place of origin. (Snakenborg, Van Acker & Gable, 2011). To address the repercussions associated with cyberbullying, it is necessary to understand the role it plays in schools and how it affects the lives of the individuals involved.

Despite the majority of incidents of cyberbullying occurring off school grounds, cyberbullying incidents are noted to occur on-campus. This is aptly demonstrated by an anonymous student's story submitted to Snakenborg et al. (2011):

The beginning of my freshman year of high school I set up a *MySpace* account. Shortly thereafter, someone got into my account and changed all of the headings, comments, and picture titles with nasty critiques of my looks or with the word SLUT! I was mortified. I think the person got my password from a computer at school after I logged in and forgot to log off before leaving. Rather than report what had happened, I just deleted my account so that no one else would see my

profile and what had been written about me...I remember feeling a little uncomfortable for a week or so, and stayed offline for a long time after. I waited at least a year or more before I made a new *MySpace* page. (p.88)

This example demonstrates the all too real occurrence of cyberbullying in schools. Indeed, Smith et al. (2008) found that approximately 6% of cyberbullying cases occurred at school, compared to 11% off school grounds. This lower rate is likely attributed to most schools placing blocks or firewalls on websites and treating cell phones as a disruptive force that is managed or excluded from the school and/or classroom (Hinduja & Patchin, 2009). Even so, students have found ways to get around these barriers. For example, many youth have determined ways to bypass firewalls or blocked websites at their schools through utilizing proxy servers, which offers a computer network service to make indirect network connections to other network services (Glatter, 2006). Basically, youth can access websites such as, Facebook at school by accessing another website (e.g., [www.leafdrink.com](http://www.leafdrink.com)), inputting "[www.facebook.com](http://www.facebook.com)" into a webpage form field, and then are rerouted to that site. Pew Research Center (2010) also provided an evaluation of "Teens, Cell Phones, and Texting" with findings that 65% of 12-17 year olds still bring their cell phones to school every day despite there being a ban. Furthermore, 43% of these teens texted in class at least once a day or more. Therefore, even with rules regulating technology, opportunities are afforded for individuals to encounter cyberbullying on school grounds, thus making it necessary for schools to address.

Responding to cyberbullying at school can, however, be difficult because of the issue of anonymity. Nevertheless, a number of cybervictims seem to be aware of their perpetrators identity. Juvonen and Gross (2008) reported that 73% of the youth they

evaluated were “pretty sure” or “totally sure” of their cyberbully’s identity with 51% of youth experiencing online bullying by a schoolmate. Kowalski and Limber (2007) also found that the majority of cyberbullying perpetrators reported targeting a classmate from school. Such findings demonstrate the strong likelihood that perpetrators are peers from school, emphasizing the continuity between youth’s social worlds in school and online.

School participation and performance can also be affected because of the range of emotions and consequences related to cyberbullying (Feinberg & Robey, 2009). Symptoms and issues include low self-esteem, poor academic performance, low commitment to school, and emotional distress (Brown, 2010; Hinduja & Patchin, 2010; Ybarra & Mitchell, 2004). For example, Ybarra, Diener-West, and Leaf (2007) found that victims of online harassment reported feelings of depression, and increased amounts of detentions, suspensions, and days of school skipped. Online harassers were also noted as more likely to engage in problematic behaviors (e.g., damaging property, physical assaults, and police contact), drink alcohol, and smoke cigarettes (Ybarra & Mitchell, 2004). Wolak, Mitchell, and Finkelhor (2006) further found that youth rated 30% of online harassment incidents as extremely upsetting with approximately one-third of respondents experiencing one or more symptoms of stress including staying away from the Internet, being unable to stop thinking about the incident, feeling jumpy or irritable, and/or losing interest in activities.

Along similar lines, students who are involved with cyberbullying (as a perpetrator and victim) may perceive a poorer climate at their school than those who do not experience cyberbullying. Hinduja and Patchin (2008) conducted a study where 6-8 grade youth were asked whether they, “feel safe at school,” “feel that teachers at their

school really try to help them succeed,” “enjoy going to school,” and “feel that teachers at their school care about them.” Both cyberbullies and cybervictims were less likely to agree with these statements than those who were not cyberbullied. While a causal statement cannot be made about these findings (i.e., a poor school climate causes cyberbullying behaviors), it is apparent that these variables are related.

A final area that has yet to be recognized in the literature is that schools may contribute to the occurrence of cyberbullying through requiring the use of technology for a variety of activities, such as homework assignments and classroom projects. Though this may not be a direct cause of cyberbullying, numerous studies have shown that as time spent online and familiarity with technology increases, so does the likelihood for involvement with cyberbullying (Juvonen & Gross, 2008; Ybarra & Mitchell, 2004). For example, while researching a topic for school online, students may take a break to chat with friends on an instant messaging system or peruse a social networking site (e.g., Facebook) thereby inviting opportunities for cyberbullying experiences. In addition, students may be taught techniques for how to navigate the online world in their computer classes at school, inadvertently giving students the tools for carrying out acts of cyberbullying.

This pattern of results suggests the crucial need for schools to be involved in intervention and prevention efforts related to cyberbullying (Mason, 2008). Indeed, schools are beginning to build such programs. Unfortunately, reviews of policies developed to address cyberbullying in schools revealed that most were not very comprehensive and did not address several important issues involved in the phenomenon. Missing in many policies were responsibilities beyond those of the teaching staff, follow-

up of incidents, management and use of records, and preventative measures. Also, policies did not distinguish between, or adjust for, variations in primary and secondary schools. Some addressed cyberbullying only as a type of bullying, and made no special distinctions or rules for dealing with it (Yilmaz, 2010; McNamara, & Moynihan, 2010).

A contributor to this lack in effective school policy may be related to the digital divide, which is defined as the gap in intensity and nature of information technology use (Jackson et al., 2008). This difference may best be understood in terms of viewing individuals as *digital natives* or *digital immigrants*. Digital natives are individuals who were born into the digital age (1980 or beyond) and have strong knowledge of and skills related to digital technology. Digital immigrants, in contrast, are individuals who have embraced the Internet and related technologies but were born prior to the digital age (Palfrey & Gasser, 2008, p. 352). As a result, digital immigrants given access to technology cannot necessarily be expected to know how to use it effectively. In fact, adults who are digital immigrants may experience a certain level of anxiety when dealing with technology and thus react inappropriately to cyberbullying situations (i-SAFE, 2003).

Not only may a divide be present in terms of adults feeling discomfort with their knowledge of technology, but they also may not fully understand the social value that technology plays in adolescents' lives. Youth's interaction with technology is an integral part of their social lives. They talk to their friends via cell phone and text message, interact on social networking sites (e.g., Facebook, Instagram), share pictures and videos online, and engage in online gaming. Adults, on the other hand, are more prone to use technology for specific tasks, such as purposed communication, checking on the news, or



making travel arrangements (Hinduja & Patchin, 2009). This difference in the way that technology is utilized between digital natives and digital immigrants may subsequently impact the manner in which cyberbullying is perceived. That is, adults may minimize the impact that cyberbullying has on youth because of their lack of understanding of how important a role technology plays in their social lives.

Despite the implied difficulty involved in developing effective strategies to combat cyberbullying, schools must take the appropriate precautions to ensure student safety. In order for this to happen, multiple perspectives of key stakeholders (i.e., teachers and students) involved in cyberbullying must be obtained so individuals can be better informed on how to create such measures. By taking these steps, cyberbullying can begin to be addressed effectively.

### **Purpose of the Study**

The purpose of this study is to examine students' and teachers' perceptions and reactions toward cyberbullying and technology. The aim of this study is to extend knowledge of cyberbullying, to ascertain how cyberbullying relates to students sense of school belonging and social anxiety, better understand the manner in which cyberbullying is addressed in schools, and determine how technology is used and understood by students and teachers. A cross-sectional online survey will be implemented to obtain this information. Adolescent students will complete a questionnaire assessing prevalence, reaction to the form of cyberbullying used, who youth report cyberbullying instances to, manners in which to address cyberbullying, students sense of school belonging, social anxiety, and factors related to the digital divide. The teacher survey will be an abbreviated version modeled on the student survey. It is primarily interested in

understanding teachers' awareness of student involvement with cyberbullying, manners in which cyberbullying should be addressed, and issues related to the digital divide. Because research on cyberbullying is in its emerging stages a more in depth knowledge will help to guide in the creation of effective prevention and intervention in schools.

### **Significance of the Study**

The advent of the digital age has not only changed the way that individuals consume information but the way individuals interact socially. Adolescents, in particular, now utilize instant messaging, text messaging, cellular phones, email, and social networking sites to communicate with their peers constantly and instantaneously. While this has opened new channels of communication for adolescents that can often be advantageous, this has also left many vulnerable to social experiences that are manipulated and meant to hurt. Perhaps the most detrimental of these experiences is cyberbullying. For example, emerging research indicates that cyberbullying is linked to low self-esteem, poor academic performance, emotional distress, feelings of depression, increased amounts of detentions, and days of school skipped (Brown, 2010; Hinduja & Patchin, 2010; Ybarra, Diener-West, and Leaf, 2007).

This pattern of results suggests the crucial need for effective intervention and prevention programs (Mason, 2008). Cyberbullying, however, is only beginning to emerge as a research topic. As a result, many of the prevention and intervention programs that exist today are modeled after traditional bullying programs that have proven to be effective (Kowalski & Limber, 2007). While this is a good starting point, cyberbullying has many characteristics that are distinct of traditional bullying, which need to be addressed. That is, cyberbullying can occur under the cloak of anonymity, therefore,

leaving the potential for the knowledge of the perpetrator and the characteristics of the perpetrator unknown (Hinduja & Patchin, 2009). Anonymity also allows an individual to feel a sense of disinhibition (i.e., freed from behavioral restraints that might be felt in face-to-face interactions), making it easier for the individual to act on inappropriate behavioral impulses (Smith et al, 2008). Additionally, cyberbullying can occur at virtually anytime due to the portability and ease of access to technological devices (Hiduja & Patchin, 2009). Finally, because adults may not have an adequate understanding of technology or the social importance it holds in adolescent's lives it may be a topic that is not given the seriousness it deserves when addressed (Palfrey & Gasser, 2008). By gaining a deeper understanding of the characteristics and impacts of cyberbullying as well as evaluating whether there is a difference in the manner in which teachers and students perceive cyberbullying and technology greater steps can be taken to create effective prevention and intervention programs in schools.

### **Research Questions**

The current study seeks to extend knowledge of cyberbullying and the ways its addressed in schools by asking and answering the following questions:

1. Is there a difference between students' and teachers' perception of the seriousness of cyberbullying?
2. To what extent does student cyberbullying status (i.e., cyberbully, cybervictim, cyberbully/victim, and not involved) contribute to student problems, such as (a) school belonging and (b) social anxiety?

3. What is the effect of each of the following variables on teacher attitudes toward the seriousness of cyberbullying: (a) teacher comfort with technology, (b) their interaction with technology, and (c) their perception of the importance of technology?
4. What is the effect of each of the following variables on student attitudes toward the seriousness of cyberbullying: (a) their comfort with technology, (b) their interaction with technology, and (c) their perception of the importance of technology?
- 5a. What is the relationship between teacher status (i.e., digital immigrant and digital native) and the extent to which they believe schools are addressing cyberbullying effectively?
- 5b. What is the relationship between student cyberbullying status and the extent to which they believe schools are addressing cyberbullying effectively?
- 5c. Is there a difference between teachers' and students' perception of the extent to which they believe schools are addressing cyberbullying effectively?

### **Limitations of the Study**

A number of limitations are posed in the following study. First, the use of a non-random, convenience sample limits the generalizability of the results, calling for replication of this study with a random sample of students. Furthermore, it is possible that victims of cyberbullying may be more likely to participate in this study, which may inflate frequencies. In an attempt to avoid this potential limitation, the participants will be told that the survey involves questions about technology and school experiences, which may reduce the tendency for victims to be overrepresented. Another limitation is the use of self-report data for cyberbully and cybervictim status. Traditional bullying research

indicates that bullies and victims often underreport the problem of bullying (Raskauska & Stoltz, 2008). Although the survey will be entirely anonymous and can be taken outside of the school setting, interpretation of the findings should take into account the use of self-report. Finally, the correlational nature of the data does not allow for causality to be inferred. However, it does provide much needed description of cyberbullying and appropriate manners to address it among adolescents.

### **Definition of Terms**

1. **Cyberbullying:** The willful and repeated harm inflicted through the use of computers, cell phones, and other electronic devices.

When we talk about bullying, these things happen repeatedly, and it is difficult for the student being cyberbullied to defend himself or herself. We also call it cyberbullying, when a student is teased repeatedly in a mean and hurtful way. But we don't call it cyberbullying when the teasing is done in a friendly and playful way.

Cyberbullying can happen in the following ways:

**Text message bullying.** Receiving abusive text messages (SMS) on your cell phone.

**Cellular phone pictures and/or video-clip bullying.** Nasty pictures/photos or video-clips, sent to you, or nasty pictures/photos or video-clips sent to others about you.

**Phone call bullying.** Receiving nasty/upsetting or silent calls on your cell phone.

**Email bullying:** Receiving abusive emails to your email account.

**Chat-room bullying.** Being bullied in a chat room through abusive messages.

**Instant messaging bullying.** Bullying through messages on MSN messenger, Yahoo messenger, Gmail chat, Facebook chat, or similar messaging services.

**Website bullying.** Bullying that involves actions, such as setting up a negative website about someone, revealing personal details, etc.

2. **Digital divide:** The gap in intensity and nature of technology use.
3. **Digital native:** Individuals born in the digital age (1980 or beyond) and have a strong knowledge of and skills related to digital technology.
4. **Digital immigrant:** Individuals who have embraced the Internet and related technologies but were born prior to the digital age.
5. **Self-monitoring:** The ability to observe yourself and know when you are engaging in appropriate and inappropriate behaviors.
6. **Outside monitoring:** Identifying individuals to supervise and check for those who abuse technology and are being abused by technology.
7. **Reporting cyberbullying:** Reporting acts of cyberbullying either by telling someone face-to-face or through an anonymous means, such as using an \ anonymous email system provided at an organization or placing a message in a comment box at school.
8. **Peer leadership:** Using peers as leaders and mentors to regulate and prevent cyberbullying.
9. **Education on cyberbullying:** Informational sessions, assemblies, and classroom lessons to inform students, school personnel, and parents about the nature and impact of cyberbullying.

**10. School belonging:** The extent to which students feel personally accepted, respected, included, and supported by others in the school social environment.

**11. Social anxiety:** An intense fear of social and performance situations.

## **Chapter 2: Literature Review**

With the rise of instant communication technology, cyberbullying has emerged as a new and distinct form of bullying. Though the problem of traditional bullying is recognized in schools, few are aware of the extent that cyberbullying is occurring and, hence, its repercussions. Students' academic and social outcomes are often impacted, victims typically experience emotional and psychological trauma, and the quality of the school environment may deteriorate (Brown, 2010; Hinduja & Patchin, 2009; Li, 2006). Unfortunately, many people, such as school personnel, see other forms of aggression as more in need of attention; leaving schools ill equipped to deal with this new form of aggression (Li, 2006). While modern adolescents face a wide range of difficulties, cyberbullying must be taken seriously before it escalates into something that can no longer be ignored.

### **Traditional Bullying versus Cyberbullying**

#### **Definition of Traditional Bullying and Cyberbullying**

According to one commonly accepted definition, traditional bullying occurs when a person is exposed to negative actions on the part of one or more other persons repeatedly and over time; and the victim has difficulty defending himself (Olweus, 1993, p. 9). This definition requires three components before a situation can be labeled as bullying: (a) an aggressive behavior that involves unwanted, negative action, (b) repetition of this behavior over time, and (c) an imbalance of power or strength between



the bully and the victim (Olweus, 1993). This process can take on many different forms the most common include direct bullying, indirect bullying, and relational aggression. Direct bullying involves physical attacks, such as hitting or kicking; indirect bullying consists of behaviors such as verbal insults, threatening remarks, and name-calling; and relational aggression involves behaviors intended to harm relationships through social exclusion or spreading rumors in direct and indirect manners (Crick and Grotpeter, 1995; Olweus, 2003).

In contrast to this relatively straightforward definition, the definition of cyberbullying takes on many forms and can constitute varying behaviors (Hinduja & Patchin, 2009; Li, 2008; Ybarra & Mitchell, 2004). One commonly used definition provided by Hinduja and Patchin (2009) states that cyberbullying is the willful and repeated harm inflicted through the use of computers, cell phones, and other electronic devices (p. 5). This behavior can occur through e-mail, cell phones, social networking sites (e.g., Facebook, Instagram, and Twitter), instant messaging programs, chat rooms, voting/rating websites, blogging sites, virtual worlds, and online gaming (Hinduja & Patchin, 2009).

In addition, Willard (2005) identifies eight forms of cyberbullying:

- Flaming: Electronic fights that use messages that contain angry or vulgar language.
- Harassment: The repeated sending of malicious or insulting messages.
- Denigration: Posting gossip or damaging someone's reputation online.
- Impersonation: Pretending to be someone or posting material that is intended to damage a person's reputation or friendships.

- Outing: Sharing someone's personal or secret information online.
- Trickery: Convincing someone to share information and then making that information publically available online.
- Exclusion: Intentionally excluding someone from an online group.
- Cyber Stalking: Repeated intense harassment that incites fear.

(Willard 2005, pp. 1-2).

The above definitions demonstrate that traditional bullying and cyberbullying involve aggressive and intentional acts. Researchers continue to debate, however, details such as what constitutes a repetitive act and whether a power imbalance is present in cyberbullying. These discrepancies were discussed in depth in Dooley, Pyzalski, and Cross' (2009) theoretical and conceptual analysis of face-to-face bullying and cyberbullying. The analysis noted that face-to-face bullying behavior occurs over time and is conducted by the perpetrator, while repetition in cyberbullying is not so easily operationalized. For example, repetition may be clear when a perpetrator repeatedly sends threatening text messages, but is less clear when a cyberbully posts a derogatory comment toward another on a social networking site where information can be accessed by many (Leishman, 2005; Slonje & Smith, 2008). While the latter is a single act, social networking sites allow others to share this information or access it at a later time, making it difficult to categorize whether a single or repetitive act of aggression has occurred (Hinduja & Patchin, 2009).

Cyberbullying also involves a different type of power imbalance than conventional bullying. While not mentioned in the definition of cyberbullying above, many researchers imply an imbalance of power in cyberbullying incidents (Smith et al,

2008; Topçu, Erdu-Baker, and Çapa-Aydin, 2008). Traditional bullying often involves physical, social, and emotional displays of power (Olweus, 1993). Cyberbullies, on the other hand, typically exhibit their power through a better command of technology than their peers or by gaining access to personal information, pictures, or video that can inflict harm (Hinduja & Patchin, 2009). A qualitative study conducted by Vandebosch and Van Cleemput (2008) examined these power imbalances by asking whether youth viewed victims of cyberbullying as weaker, equal in strength, or stronger. The study found that weaker victims were also frequently targets of traditional bullying, while victims who were identified as equals or stronger were victimized due to the perpetrator being able to remain anonymous or having a knowledge of technical applications. Victims also reported that their perpetrators' anonymity induced feelings of frustration and powerlessness. Individuals who may not be able to wield power in a traditional bullying situation, then, may feel emboldened through the technological skills they possess and the ability to remain anonymous, making power a more nebulous and shifting concept in cyberbullying (Hinduja & Patchin, 2009).

In addition to shifting power relationships, cyberbullying has a number of other distinct qualities. First, the perpetrator can remain virtually anonymous by, for example, creating temporary e-mails, using pseudonyms in chat rooms, and creating fake webpages (Hinduja & Patchin, 2008). Traditional bullying, on the other hand, typically leaves less room for ambiguity due to the bullying incident frequently occurring face-to-face (Espelage & Swearer, 2003). Anonymity also allows an individual to feel a sense of disinhibition (i.e., freed from behavioral restraints that might be felt in face-to-face interactions), making it easier for the individual to act on inappropriate behavioral

impulses (Smith et al, 2008). Furthermore, when compared to traditional bullying, humiliating and hurtful information can be displayed to a much larger audience at a much faster rate due to the viral nature of cyberbullying. Finally, because electronic devices allow for contact at virtually any time and almost any place, an individual can be continually victimized (Hiduja & Patchin, 2009), as opposed to a traditional bullying situation in which a victim can find respite off school grounds or in the solace of his own home. These distinct qualities make addressing cyberbullying difficult.

### **Prevalence of Bullying and Cyberbullying**

A number of studies comparing the rates of traditional bullying and cyberbullying have found that traditional bullying generally occurs at a greater rate (Juvonen & Gross, 2008; Raskauskas & Stoltz, 2007; Smith et al., 2008; Williams & Guerra, 2007). Studies have found that approximately 7.5-13% of adolescents bullied others, 10.6-20.7% were victimized, and 1-13% engaged in both bullying/victimization (Demaray & Malecki, 2003; Nansel et al., 2001; Seals & Young, 2003). Meanwhile, 3-29% of youth have been found to be cyberbullies, while 6%-42% have been found to be cybervictims (Berson, Berson, & Ferron, 2002; Finkelhor, Mitchell, & Wolak, 2000; Ybarra & Mitchell, 2004). Though cyberbullying rates appear comparable to traditional bullying, they likely lack consistency because they are influenced by the method of measurement, the mediums used (e.g., email, text message, and blogs), the definition provided (particularly for cyberbullying), and the age of the respondents (Williams & Guerra, 2007). While the precise rate at which it occurs is unclear, involvement with bullying (both cyber and traditional) clearly affects youth and plays a significant role in their lives.

## **Gender, Age, and Race**

Studies have shown that demographic characteristics are also related to involvement with cyberbullying. For example, traditional bullying research has repeatedly shown that males engage in more bullying overall and prefer physical bullying, while females tend to favor indirect or relational bullying (Crick & Grotpeter, 1995; Espelage, Nansel et al., 2001; Simmons, 2003; Williams & Guerra, 2007). In contrast, studies suggest females play an equal or greater role in cyberbullying compared to males. For example, Noret and Rivers (2006) found as girls aged they were more likely to be reported as cyberbullies when compared to boys. This finding, along with reports that girls were more likely to be cybervictims, was further substantiated in Smith et al.'s (2008) study involving focus group interviews of adolescents aged 11-16. However, when Smith and colleagues sought to generalize these findings in a quantitative survey study, they found no gender differences between youth who engaged in or experienced cyberbullying, aligning with findings that support a lack of gender differences in cyberbullying (Williams & Guerra, 2007; Ybarra & Mitchell, 2004).

While these findings are somewhat inconsistent, girls do appear to experience and participate in cyberbullying more than traditional bullying. A variety of factors may cause this difference. For example, because cyberbullying is largely text-based and girls tend to be more verbal, the cyber world may be a more conducive platform for their aggressive behaviors (Hinduja & Patchin, 2009). Cyberspace also allows girls to engage in emotional and psychological forms of bullying, paralleling trends in traditional bullying (Owens, Shute, & Slee, 2000). Finally, social norms discourage girls from acting

out aggressive tendencies physically, pushing them toward the mental and emotional medium of cyberspace (Brown, 2003; Hinduja & Patchin, 2009).

In terms of age, studies have shown that traditional bullying rates peak in the middle school years (i.e., 6<sup>th</sup>-8<sup>th</sup> grade) and decline as youth progress through high school (Nansel et al., 2001; Olweus, 1994; Seals & Young, 2003). In contrast, cyberbullying incidents appear to be at their height in later middle school (Williams & Guerra, 2007) or high school (Ybarra & Mitchell, 2004; Smith et al., 2006). This difference is likely due to youth becoming more skilled at handling electronic devices and their increased participation in online activities, such as social networking sites or blogs (Kowalski & Limber, 2007). Indeed, studies have found that cyberbully perpetrators and perpetrator/victims devote more time to online activities and are more proficient with computers than those who have been identified as solely victims (Ybarra & Mitchell, 2004).

Finally, little association has been found between race in both traditional bullying (Grahams & Juvonen, 2002; Nansel et al., 2001; Seals & Young, 2003) and cyberbullying (Hinduja & Patchin, 2008; Ybarra et al., 2007). In traditional bullying, it appears that perpetration largely occurs on the basis of competence or social status rather than because of a student's race (Nansel et al., 2001). In addition, race may not significantly differentiate a student's experience of cyberbullying due to interpersonal communication occurring predominantly through electronic text, rendering such a characteristic less relevant (Hinduja & Patchin, 2009).

## **Overlap of Traditional Bullying with Cyberbullying**

Because cyberbullying resembles traditional bullying in many ways, with some even arguing it is simply an extension of traditional bullying (Juvonen & Gross, 2008), a number of researchers have recently explored possible overlap between traditional bullying and cyberbullying. Researchers have hypothesized that students who would not consider engaging in traditional bullying may be more willing to become perpetrators via technology usage, especially if they have been victims of traditional bullying in the past (Hinduja & Patchin, 2009). Indeed, Ybarra and Mitchell (2004) found that youth who are victims of traditional bullying are significantly more likely to harass others online, with just over half of Internet harassers reporting having been a target of traditional bullying. Studies conducted by Raskauskas & Stoltz (2007) and Smith et al. (2008), however, found no support for these findings. In addition, Ybarra, Diener-West, and Leaf (2007) found that victims of school bullying had an increased likelihood of being harassed online; however, they found little overlap between involvement (as a perpetrator) in cyberbullying and traditional bullying. Raskauskas and Stolz (2007) and Smith et al. (2007), meanwhile, found that traditional bullying roles (i.e., bully or victim) of students predicted the same role in electronic bullying. These findings, therefore, aid in demonstrating that while bullying may start in the school there is a likelihood of it being extended to an electronic environment or vice versa (Li, 2008).

## **Impact**

Despite cyberbullying occurring in a virtual environment, the consequences are equally detrimental to those displayed in traditional bullying. Traditional bullies and victims typically have poorer psychological adjustment than individuals not involved in

bullying (Nansel et al., 2001). In addition, adolescents who bully are generally unhappy with school, have significantly higher rates of depression, are involved in alcohol consumption and smoking, and are at risk for committing later violent acts. Victims, on the other hand, tend to have high levels of anxiety, lower self-esteem, and diminished levels of peer acceptance (Olweus, 1993). Based on these findings, Patchin & Hinduja (2010) conducted a study to see if similar detrimental impacts would be evident in cyberbullying. Their study evaluated 1,963 middle school students to determine whether experiences of cyberbullying were linked to self-esteem. Results found that students who experienced cyberbullying (as both a cyberbully and cybervictim) had significantly lower self-esteem than students who had little to no experience with cyberbullying. The study could not establish, however, whether victimization caused lower levels of self-esteem or vice versa. Likewise, Ybarra et al. (2007) found that victims of online harassment reported feelings of depression and increased incidences of detentions, suspensions, and days of school skipped; these students were also more likely to carry a weapon. The study also found that online harassers were more likely to engage in problematic behaviors (e.g., damaging property, physical assaults, and police contact), have low commitment to school, drink alcohol, and smoke cigarettes (Ybarra & Mitchell, 2004). More recently, Ybarra and Mitchell (2007) also discovered that online harassment correlated positively with perpetrators' aggressive and rule breaking behavior.

As can be seen, the line between traditional bullying and cyberbullying can be blurry. Though each definition includes aggressive and intentional acts, precisely what constitutes repetition and how a power imbalance manifests itself in cyberbullying remain to be determined (Dooley, Pyzalski, & Cross, 2009). In terms of demographic



characteristics, males typically bully more than females in traditional bullying, while females appear to play an equal or greater role in cyberbullying (Noret & Rogers, 2006; Williams & Guerra, 2007). In addition, studies have found that traditional bullying peaks during the middle school years, while cyberbullying peaks slightly later (i.e., end of middle school or early high school) (Smith et al., 2006; Williams & Guerra, 2007; Ybarra & Mitchell, 2004). A relationship also seems to exist between traditional bullying roles and cyberbullying roles with each overlapping one another (Raskauskas & Stoltz, 2007; Smith et al., 2006; Ybarra et al., 2007). Finally, both traditional bullying and cyberbullying impact youth in detrimental ways highlighting the importance of continued research in this area.

### **International Studies**

Incidents of cyberbullying have been reported in a number of countries outside the United States, including Australia, Britain, Canada, and China. Because of this international presence, differences and commonalities need to be compared across countries in order to determine if culture may have any effect on cyberbullying behaviors. By doing so, there is potential to address the problem at a more informed level.

**United Kingdom.** Researchers in the United Kingdom (U.K.) have conducted a number of studies on cyberbullying. For example, the National Children's Home (NCH) (2002, 2005) produced two surveys on cyberbullying. The first of these studies, which focused primarily on text message bullying, found that 25% of 11- to 19-year-olds in the U.K. had been threatened or bullied through cell phones or personal computers, and 16% had received threatening or harassing text messages. Of those who reported being bullied via text messages, 29% had not told anyone that they had been bullied. A more detailed

follow-up survey, "Putting U in the picture-Mobile phone bullying survey 2005," evaluated 770 youth aged 11-19. Findings indicate that 20% of these youth encountered some form of digital bullying. A breakdown of this statistic found that text message bullying (14%) was the most prevalent form of cyberbullying, followed by chat room (5%) and e-mail bullying (4%). In addition, 11% of youth admitted to bullying via text message. Twenty-eight percent of those cyberbullied had told no one about the occurrence. Similarly, Noret and Rivers (2006) conducted a longitudinal study of 11,000 English youth aged 11-15 from 2002 to 2005. Within this time, the study found a 1% increase in hurtful text messages and e-mails received (6% of students to 7%).

In London, Smith et al. (2008) conducted two survey studies with 11- to 16-year-old students. The first study included 92 youth along with focus groups to supplement the author's findings. The second was a larger-scale study of 533 students intended to generalize the findings of the first study. Both studies identified seven subcategories of cyberbullying: text message bullying, picture/video clip bullying (via cell phone), phone call bullying, email bullying, chat-room bullying, instant message bullying, and website bullying. Findings indicate 22% percent of the students reported cyberbullying others, while 12% of students had been cyberbullied. The study also found that cyberbullying occurred more outside of school than inside. A number of cyberbullies attended the same schools as their victims, therefore, keeping the schools involved in the problem. The most prevalent forms of bullying were phone call and text message bullying, with instant message bullying taking greater precedence in the second study. Picture and video bullying via cell phone, while less prevalent, was found to have the greatest negative impact. In contrast, text message and phone call bullying had a low impact on students.

No age effects were found in the first study; the second study, however, found an increase in involvement as cyberbullies and cybervictims aged. Additionally, an overlap was found between cybervictims and traditional victims and cyberbullies and traditional bullies. Participants of the study recommended blocking or ignoring messages or reporting the incidents as means of combating cyberbullying, however, 43.7% of students reported telling nobody about cyberbullying incidents.

**Sweden.** In response to cyberbullying studies conducted in the U.K., Slonje and Smith (2008) surveyed 360 lower secondary (12- to 15-year-olds) and sixth-form college students (15- to 20-year-olds) to determine the nature and extent of cyberbullying in Sweden. The authors primarily focused on text messaging, email, phone, and picture and video clips as tools used to cyberbully. Prevalence ratings indicate that 11.7% of Swedish students experienced cyberbullying, while 10.3% of students were cyberbullies. The rate of victimization is therefore similar to Smith et al.'s (2008) findings in the U.K., however, the rate of perpetration is far lower in Sweden. This is perhaps, due in part, to heavy emphasis placed on traditional bullying prevention in Sweden.

Additionally, Slonje and Smith (2008) found that 12- to 15-year-olds reported higher rates of experience with and engagement in cyberbullying than 15- to 20-year-olds. E-mail was the most utilized form of cyberbullying, though all other identified forms were used as well (i.e., text messaging, phone, picture and video clips). As was found in the Smith et al. (2008) study, picture/video cyberbullying had the highest negative impact on students, with phone call bullying following close behind. When students were asked if they sought help when cyberbullying occurred, 50% reported that they did not tell anyone, 35.7% told a friend, and 8.9% told a parent. Like many of

international studies that will be reviewed in this section, no gender differences were found.

**Australia.** In Australia, Price and Dalgeish (2010) conducted a larger-scale mixed methods study that specifically looked at self-identified cybervictims between the ages of 10 and 18. They found that 33% of youth had been cyberbullied, which is higher than findings in the U.K. and Sweden. Price and Dalgeish also found that youth had experienced cyberbullying most frequently during the primary school to high school transition (13-14 years old). In contrast to Slonje and Smith's (2008) findings in Sweden, females experienced more victimization than males. The most commonly utilized form of cyberbullying was e-mail, followed by chat rooms and social networking sites. For youth 13 years and older, however, social networking sites became the dominant form of cyberbullying, while chat rooms were the most common form for 10- to 12-year-olds. Students were typically called names when these forms of cyberbullying were employed, while posting defamatory images was less utilized. The study also found a relationship between traditional bullying and cyberbullying, with some cybervictims also experiencing or engaging in face-to-face bullying. When youth were questioned about the impact cyberbullying had on them, feelings of sadness, annoyance, fright, anger, and frustration were reported. A more even spread, in comparison to the U.K. and Sweden, was found in terms of when students reported cyberbullying instances. Thirty-nine percent of students were most likely to tell their friends, followed by 27% telling nobody, 29.4% telling parents, and 24.6% telling a teacher.

**Turkey.** In Turkey, Topçu, Erdur-Baker, and Çapa-Aydin (2008) compared cyberbullying experiences among 183 14- to 15-year-old public and private school

students. Results indicate that public school students reported greater incidence of cyberbullying and cybervictimization. The study found a lack of gender differences in both public and private schools for cybervictimization and cyberbullying. As additionally identified in the U.K., Sweden, and Australia, utilized forms of cyberbullying among public and private school students included e-mail, text messages, photos, chatrooms, webcams, instant messaging, and webpages created. When instances of cyberbullying occurred, public school students were more likely to experience emotional distress (i.e., feelings of anger, sadness, and embarrassment) whereas private school students were more likely to report that they did not care or that they interpreted instances of cyberbullying as a joke. Similar to findings in Australia, victims of cyberbullying were most likely to ask a friend for help, followed by a parent or sibling.

**China and Canada.** Li (2008) conducted a cross-cultural study examining Canadian and Chinese adolescent student experiences with cyberbullying via a questionnaire. Data were collected in both countries, with samples of 157 Canadian middle school students (12-15 years old) and 202 Chinese seventh grade students (11-14 years old). The study found that 25% of Canadian students were cybervictims and 15% were cyberbullies. When an adult was aware of an instance of cyberbullying, 67% of students reported that the adult intervened. Only 9% of students, however, reported incidents of cyberbullying to adults, such as parents or teachers, which parallels many of the above findings. The study found that Chinese students were significantly less likely to engage in cyberbullying (a finding similar to Sweden) than Canadian students, with 33% reported as cybervictims and 7% as cyberbullies. Chinese students were also significantly more likely to inform an adult if they were cyberbullied (66% reported doing so).

Likewise, Chinese adults were significantly more likely to intervene if they were aware of cyberbullying incidents (73%). Both Canadian and Chinese students, like U.K., Swedish, and Australian students, encountered multiple forms of cyberbullying, including e-mail, chatroom, and cell phone.

**United States.** In the United States, Ybarra & Mitchell (2004) used the Youth Internet Safety Survey to evaluate the Internet use of 1,501 youth aged 10-17. Of the youth surveyed, 15% were identified as Internet harassers, while 7% reported being harassed online. Thirty percent of the youth harassed online also reported being a target of traditional bullying. In comparison, over half of online harassers also reported being victims of traditional bullying. Comparable to findings in Australia, Sweden, and the U.K., males and females were equally likely to engage in online harassment. Additionally, youth who were 15-17 years old were more likely to engage in online harassment than 10- to 12-year-olds. Delinquency, depressive symptomatology, and failing grades at school were also associated with an increased risk of harassing others online.

Ybarra, et al.'s (2007) follow-up study evaluated 1,588 youth aged 10-15. Online harassment was reported by 35% of the subjects, with 8% of such instances occurring at least monthly. Youth who were harassed frequently were also more likely to be victims of traditional bullying as well. This finding was further supported in Price and Dalgeish's (2010) study of Australian students. The study also found an increase in the frequency of school behavior problems, such as skipping school, weapon carrying, detentions, and suspensions, among those who were frequently harassed online. As an expansion of this study, Raskauskas and Stoltz (2007) surveyed 84 youth aged 13-18. Aside from Internet

use, the authors evaluated alternate forms of electronic bullying, such as text messaging and picture cell phones. Raskauskas and Stoltz also compared multiple forms of traditional bullying, including indirect and direct forms of bullying, to electronic bullying. Results indicate that 49% of youth reported being electronic victims, while 21% were electronic bullies. These statistics are likely inflated due to 1-2 instances of harassment being included in the definition of electronic bullying. The study found that text messaging was the most prevalent form of both cyberbullying (21.4%) and cybervictimization (32.1%). The researchers also found overlap between electronic victims and traditional victims and between electronic bullies and traditional bullies. In contrast to Ybarra and Mitchell's (2004) findings, traditional victims were not identified as electronic bullies.

More recently, Juvonen and Gross (2008) evaluated 1,454 12- to 17-year-old youth via an anonymous Web-based survey. During the year the study was conducted, 72% of the youth experienced at least one incident of cyberbullying, with 19% reporting having experienced cyberbullying frequently. Additionally, 85% of youth who reported experiencing cyberbullying at least once were also exposed to traditional forms of bullying in school, indicating that traditional victims were significantly more likely to be cyberbullied. This parallels findings in the U.K. and Australia. The most common cyberbullying tactic was name-calling or insults, with password theft being the next-most common. Tools most utilized in cyberbullying were instant messaging (19%) and message boards (16%). Age and gender were not found to be predictive of cyberbullying. In contrast, heavy use of the Internet (i.e., 3 hours or more a day) significantly predicted risk of repeated cyberbullying. Cyberbullying was also associated with increased distress,

much like in Australia and Turkey. Despite this consequence, youth rarely told an adult about cyberbullying experiences (10%) mirroring findings in the U.K., Canada, Sweden, and Turkey.

### **Similarities and Differences of Cyberbullying Between Countries**

The mentioned studies demonstrate that cyberbullying is a pervasive problem across a number of countries. Age and gender findings were somewhat variable across studies. However, as implied in the above section, cyberbullying appears to occur most frequently in late middle school and early high school (Price & Dalgeish, 2005; Slonje & Smith, 2008; Ybarra & Mitchell, 2004), with females being equally likely to more likely to be involved in cyberbullying (Juvonen & Gross, 2008; Noret & Rivers, 2006; Slonje & Smith, 2008). A majority of the studies between countries found an overlap between traditional victims and cybervictims and traditional bullies and cyberbullies, suggesting that traditional bullying may be extended to the home via electronic means. Some might argue the opposite to be the case, with bullying starting at a distance and eventually occurring face-to-face (Li, 2008). Though causal direction has yet to be determined, both forms of bullying (cyberbullying and traditional bullying) may serve as indicators of potential for the other to happen. In contrast, the overlap between traditional victims and cyberbullies was a less stable finding across studies and countries. Smith et al. (2008) hypothesize that this variance may be because cyberbullies display a closer relationship to traditional bully/victims than traditional bullies. Further study is necessary to determine the nature of these phenomena.

Cyberbullying also appears to have a negative impact on youth worldwide. The most striking of these findings was the differential impact that various forms of



cyberbullying (e.g., picture, video, text message, or email) had on youth. Though the most used forms of cyberbullying across studies were typically cell phone or e-mail, picture and video bullying had the highest negative impact in Britain and Sweden (Smith et al., 2008; Slonje & Smith, 2008). According to youth, such negative affect was experienced because the victims could see hurtful and embarrassing photos of themselves that had the potential to reach large audiences if pictures or videos were posted on the Internet (Slonje & Smith, 2008). Future studies must determine whether this effect can be further generalized so that prevention and intervention efforts can be more focused.

Finally, a number of countries reported that students were unlikely to inform an adult if they had been cyberbullied; only Chinese students were likely to do so. Culture may play an important role in this difference. According to Li (2008), the teacher/student relationship in traditional Chinese schools often parallels the parent/child relationship. Furthermore, because China is a collective culture, youth and adults may be more willing to rely on one another for support. In contrast, Western cultures promote independence, which may deter youth from asking for help.

Though general comparisons can be made among countries, large-scale cross-national studies focusing on cyberbullying have yet to be conducted. If patterns in factors such as age, gender, impact, and prevalence can be detected across countries, schools can conduct interventions at a population level. Conducting these studies across several cultures may also suggest areas of potential improvement, such as finding a way to increase incident reporting to adults in countries other than China. Taken together, these studies demonstrate the need for preventative efforts against cyberbullying

## **Legal Issues Involved with Cyberbullying and Schools**

Despite the pervasive nature of cyberbullying and its demonstrated impact, schools have shown reluctance in becoming involved with this matter over fear of civil litigation due to regulating students' speech or behaviors protected by First Amendment rights (Stewart & Fritsch, 2011). This fear may be further exacerbated because of the evolving nature of the law associated with this behavior and the lack of consensus on schools legal authority (Willard, 2005). Nevertheless, schools need to take action rather than idly stand by as students are negatively impacted (Hinduja & Patchin, 2011). The following aims to address the critical legal questions faced by schools through a review of landmark legislative actions and court rulings that have helped to form a path for the manner in which schools can appropriately intervene with cyberbullying.

### **Landmark Cases**

Schools may question to what extent they have the right to restrict student expressions or discipline students for inappropriate behavior such as cyberbullying. A landmark case that provides guidance to such ponderings is *Tinker v. Des Moines Independent Community School District* (1969). In this case, students from three public schools were suspended for wearing a black armband to school in order to protest the Vietnam War. The U.S. Supreme Court held that this form of speech was protected because students "do not shed their constitutional rights to freedom of speech or expression at the schoolhouse gate" (*Tinker v. Des Moines Independent Community School District*, 1969). That is, school officials may not punish or restrict student speech unless they can clearly demonstrate that it will result in a material and substantial disruption of typical school activities or invades the rights of others. The important

phrase in this ruling is “substantial interference.” Because the students in this case were quiet and passive disruption could not be cited, therefore, making it unconstitutional to restrict the students behavior. Thus, a precedent was set for what courts could use to determine if students’ speech is protected under the First Amendment (Stefkovich, Crawford, & Murphy, 2010).

In contrast, *Barr v. Laffon* (2008) demonstrated that school clothing could be regulated when high school students at a Tennessee high school wore t-shirts depicting the confederate flag. In this case, racial tensions were enflamed resulting in multiple racially motivated threats and physical altercations, racist graffiti, and eventually a school lockdown. While the lower court sided with the students, the upper court rejected these findings due to the school being able to demonstrate the potential for material interference. The school additionally delivered a method of instruction and desired to ensure the safety and well-being of the students, which allowed the school to restrict what would perhaps be upheld in other contexts.

The Supreme Court also addressed the extent to which school could control students’ right to free speech in *Bethel School District v. Fraser* (1986). Here, a public high school student delivered a nomination speech for a fellow student that referred to him in an “elaborate, graphic, and explicit sexual metaphor” (*Bethel School District v. Fraser*, 1986). After the speech, Fraser was informed that he would be suspended for three days and removed from the list of candidates as a possible speaker at high school commencement. At both the District Court and Circuit Court of Appeals levels the verdict was ruled in favor of the student, citing *Tinker* (1969). This decision, however, was reversed by the Supreme Court arguing that there is a substantive difference between

a nondisruptive expression and speech or behaviors that impinge on the work of the schools and students' rights. The court further recognized that schools need to maintain the parameters of socially appropriate behavior as well as play a role in "protecting minors from exposure to vulgar and offensive spoken language" (*Bethel School District v. Fraser*, 1986).

Along similar lines, *Hazelwood School District v. Kuhlmeier* (1988) addressed students' right to free speech when publishing content in school newspapers. In particular, the high school principal removed several pages from a school newspaper that described an anonymous student's experience with pregnancy due to concerns that the student might be identified from the text. The school was subsequently sued on the basis that school officials were prohibiting the student journalists' First Amendment rights. The court ruled in favor of the school because students' rights in public school are not automatically "coextensive with the rights of adults in other settings, and must be applied in the light of the special characteristics of the school environment" (*Hazelwood School District v. Kuhlmeier*, 1988). As such, the school itself is not considered a public forum, thus allowing certain restrictions of speech in the school paper. Both *Tinker* and *Hazelwood* therefore established that off-campus speech has greater legal protection than speech on school grounds. As a result, exceptionally offensive or threatening electronic communication from school grounds could be restricted based on these rulings.

More recently, *Morse et al., v. Frederick* (2007) demonstrated the reach of the school extends beyond its grounds. In 2002, a high school principal observed students unfurl a banner stating, "BONG HiTS 4 JESUS" at a school sanctioned event (Winter Olympics torch relay). While this act did not occur on school property (across the street

from the school), the school principal confiscated the banner upon seeing the act and suspended Frederick for ten days. The U.S. Supreme Court ruled in favor of the school arguing that the banner was displayed during a school event, which qualified the expression as “school speech” rather than protected off-school grounds speech.

Additionally, the courts noted “schools may take steps to safeguard those entrusted to their care from speech that can be reasonably regarded as encouraging illegal drug use” (*Morse et al., v. Frederick*, 2007). Therefore, even though students were not on school grounds, the court ruled the activity was a school event (similar to a field trip) making it allowable for Fredrick to be punished.

*Klein v. Smith* (1986) additionally explored whether educators have the right to take action against students for speech or behaviors that occur away from school grounds. The case involved a high school student who made a vulgar gesture to a teacher off-campus, after school hours. As a result, the student was suspended for ten days for vulgar and inappropriate language directed to a staff member. The judge ruled in favor of the student stating, “the First Amendment protection of freedom of expression may not be made a casualty of the effort to force-feed good manners to the ruffians among us” (*Klein v. Smith*, 1986). Therefore, because the school could not demonstrate that the incident would adversely affect the orderly operation of the school they could not discipline the student for off-campus behavior they simply did not agree with. This case further demonstrates how incidents of cyberbullying may be addressed, especially because the majority of instances occur or are exacerbated off-campus.

In general, students right to free expression is upheld in the schools, however, those rights may be more easily restricted while on campus (Hinduja & Patchin, 2011).

For example, the cases reviewed demonstrate that if a substantial disruption or significant interference with students' rights occur the schools may have the authority to restrict expressions or discipline their students for inappropriate speech or behavior (*Tinker*). Schools may also have grounds for discipline or restriction in this area if speech or actions on the part of the students thwarts the educational mission of the school (*Fraser* and *Morse*) or creates an unsafe or hostile environment for a student (*Barr*). Though these cases do not specifically address cyberbullying, it does demonstrate how such rulings can be applied to the new situations schools are encountering when cyberbullying occurs (Hinduja & Patchin, 2011). The following discusses cases specifically related to schools responding to students' electronic behaviors.

### **Cases Involving Cyberbullying and Schools**

*Beussink v. Woodland R-IV School District* (1998) was the first case to address online harassment by a student. The case involved a high school student in Marble Hill, Missouri that created a personal website on his at home computer ridiculing school officials through the use of vulgar language. Upon school administration discovering the website, the student was suspended for ten days because of the website's content. The student subsequently sued the school. The U.S. District Court ruled that the student's First Amendment rights had been violated stating, "disliking or being upset by the content of a students' speech is not an acceptable justification for limiting student speech under *Tinker*" (*Beussink v. Woodland R-IV School District*, 1998). That is, the student's homepage did not create a substantial disruption or material interference with school activities, therefore making school administrators unable to discipline the student for off-campus behavior.

In *Emmet v. Kent School District* (2000), a senior in high school created a webpage on his home computer titled the “Unofficial Kentlake High Home Page,” with a disclaimer warning visitors that the site was not sponsored by the school and was for entertainment purposes only. Content on the webpage included commentary on school administration and faculty as well as mock obituaries of students. The website also allowed visitors to vote for who would “die next.” A creative writing class that students participated in the previous year, in which they were required to write their own obituary, apparently inspired the online obituaries. The webpage even made local news referencing the page as containing a “hit list” of people to be killed, despite the absence of any such language on the webpage. Following the news report, the student was placed on emergency expulsion for intimidation, harassment, disruption to the educational process, and violation of Kent School District copyright. This was later reduced to a five day suspension.

The court, applying findings from *Tinker*, *Fraser*, and *Kuhlmeier* held that student distribution of non-school sponsored material couldn’t be prohibited “on the basis of undifferentiated fears of possible disturbances or embarrassment to school officials” (*Emmet v. Kent School District*, 2000). The court also argued that the student presented no evidence that the mock obituaries and voting on the website were intended to harm or threaten anyone. That is, the school district was unable to provide sufficient evidence that the website was intended to intimidate or threaten anyone or that the site created a significant disturbance at school. The ruling of *Fraser*, therefore, did not apply in the case of *Beussink* or *Emmet* because in neither situation could the school prove that a

substantial disruption was created at school. Thus, it is implied that the schools must proceed with caution when it comes to disciplining students for off campus activities.

Nevertheless, there are courts that have held that schools were in their rights for intervening in off-campus situations. For example, in *J.S. v. Bethlehem Area School District* (2000) a student created a website that featured a picture of a teacher's head dripping with blood along with her face morphing into Adolf Hitler. The site also included lists for why the teacher "should be fired" and that she "should die" including the statement "... give me \$20.00 to help pay for the hitman" (*J.S. v. Bethlehem Area School District*, 2000). The student was expelled for his use of threatening statements and making derogatory statements. In addition, the teacher indicated that she suffered extreme distress because of the incident, which led to physical problems (headaches and loss of appetite), psychological problems (anxiety and depression), and an inability to teach for the remainder of the year. The courts, therefore, upheld the expulsion of J.S. because the website had a "demoralizing impact on the school community" and because there was a "sufficient nexus between the website and the school campus to consider the speech as occurring on campus" (*J.S. v. Bethlehem Area School District*, 2000). Though there was no validity to J.S.'s threat, the website significantly and adversely impacted the educational environment.

In a similar case, eighth grade middle school student, Aaron Wisniewski, created an instant messaging (IM) icon of a pistol firing a bullet at his English teacher's head. Below the drawing was a caption that read " Kill Mr. VanderMolen" (*Wisniewski v. Board of Education of the Weedsport Central School District*, 2007). During a period of three weeks, at least fifteen individuals from Aaron's IM buddy list were able to see the



icon while chatting online, some of which were Aarons's middle school classmates. A classmate of Aaron's eventually brought this to the attention of Mr. VanderMolen who then contacted the local police, the superintendent, and Aaron's parents. In response to these actions, the school suspended Aaron for five days. His parents subsequently sued arguing that school personnel did not have sufficient training about how to assess such threats and that Aaron's First Amendment rights were violated. The United States Court of Appeals for the Second Circuit held that the icon represented a "true threat," and as a result, was not protected by the First Amendment reasoning that the student should have known that the icon would cause a material disruption to the school.

An additional case sought to determine if a student could be punished for creating a "parody profile" of his high school principal on MySpace (*Layschock v. Hermitage School District*, 2011). Justin Layshock created the MySpace profile while at his grandmother's house. In particular, the profile featured comments that had the principal committing unprofessional actions and focused on the principal's "big" size. Later, three other students created profiles about the principal on MySpace, which were even more vulgar and offensive than Justin's'. The Principal was informed of these profiles by his 11<sup>th</sup> grade daughter and subsequently asked the technology directory of the school to disable access to the profiles at school. Nevertheless, students were still able to gain access to these profiles and, as a result, computer use had to be limited at the school, computer programming classes were cancelled for a number of days, and the computer system had to eventually be shutdown for five days. It was later admitted by Justin that he was the creator of the first profile and he apologized for his actions to the principal.

This resulted in disciplinary action. None of the other individuals who created profiles were ever punished.

The United States Court of Appeals for the Third Circuit held that the disciplinary action that the school took violated Justin's First Amendment rights. Because multiple MySpace profiles had been created the school district could not specify which profile led to the school disruption nor could they specify whether the disruption was because of the profiles created or because of the investigative approach of the school administration. It was therefore, argued that the school could not "reach beyond the school yard to impose what might otherwise be appropriate discipline" because the expressive content originated outside the school did not disturb the school environment, and was not related to any school sponsored event (*Layschock v. Hermitage School District*, 2011).

These legal decisions exemplify the courts preference for protecting students' First Amendment rights over schools retaining the responsibility to discipline for electronic content that permeates into the schools. Cyberbullies, therefore, are given a long leash when it comes to what they can say or what actions they can take before they can legally be disciplined (Hinduja & Patchin, 2011). Nonetheless, schools have been successful in taking action against electronic harassment and may become more so as they gain a greater understanding of how to approach such incidents. Taking from the cases reviewed, disciplining students for cyberbullying that originates off-campus can occur if a school can demonstrate: (1) substantially or materially disrupted learning; (2) interference with the educational process of school discipline; (3) use of the school technology to harass; or (4) other students are threatened or civil rights are infringed on.

## **School Policy and State Statutes**

One way in which schools can avoid the legal issues described above is by creating a comprehensive policy that addresses bullying, cyberbullying, and technology use (Hinduja & Patchin, 2011). Parry Aftab (2006), noted Internet lawyer, recommends when schools create a policy to establish a range of disciplinary actions and their parameters, use language a layperson can understand, and, when the policy is complete, present it to lawyers in order to determine if the appropriate steps have been taken. Despite these recommendations, reviews of policies developed to address cyberbullying in schools revealed that most were not very comprehensive and did not address several important issues involved in the phenomena. Missing in many policies were responsibilities beyond those of the teaching staff, follow-up of incidents, management and use of records, and preventative measures. Also, policies did not distinguish between, or adjust for, variations in primary and secondary schools. Some addressed cyberbullying only as a type of bullying, and made no special distinctions or rules for dealing with it (Yilmaz, 2010; McNamara, & Moynihan, 2010). Such findings highlight the difficulty in creating an effective and appropriate school policy. Nevertheless, schools must take the appropriate precautions to ensure student safety and to ensure the school district is less susceptible to civil litigation.

Indeed, a number of states are creating laws that include cyberbullying provisions. In particular, 34 states have now included cyberbullying in their anti-bullying statutes (National Conference of State Legislatures, 2010). For example, Minnesota requires that each school board develop a written policy prohibiting intimidation and bullying of all students. The policy must address all forms of bullying including, electronic forms and

forms involving Internet use (**Minn. Stat. § 121A.0695, 2010**). Though these laws vary by state, Hinduja and Patchin (2009) note the following elements are generally involved:

- Order that cyberbullying be added to school anti-bullying policies.
- Criminalize or create specific disciplinary actions for cyberbullying.
- Develop new provisions to enable school staff to take action when off-campus behaviors affect on-campus order.
- Mandate that schools implement new reporting and disciplinary procedures when instances of cyberbullying occur.
- Require the creation and implementation of Internet safety, ethics, etiquette training, and curriculum within the school district. (p. 119)

Despite this recent recognition in state statutes, it's important to keep in mind that laws are continually evolving. Precedent may consequently be affected with the introduction of new case and statutory law related to cyberbullying. Furthermore, legal issues will likely evolve as technology evolves. Therefore, schools must maintain awareness of the evolution of legal issues related to cyberbullying and adjust their school district policies accordingly (Hinduja & Patchin, 2011).

### **Prevention and Intervention of Cyberbullying in the Schools**

While school policies and state laws against cyberbullying are still developing, schools already play an essential role in limiting cyberbullying experiences (Li, 2006; Willard, 2005). Li (2010), however, found that a majority of pre-service teachers did not believe cyberbullying was a serious problem in schools. These teachers also reported not feeling confident in identifying or managing cyberbullying when it occurs. This hesitance has led some schools to consider restricting or banning digital tools in an attempt to

prevent cyberbullying. These actions, however, are likely to do more harm than good. For example, students can use technology for cyberbullying outside of school, where teachers and administrators have no control over their behaviors (Couvillon & Ilieva, 2011). In addition, technology is more likely to play a positive role in youths' lives than a negative role; online interaction not only allows access to a plethora of resources, it teaches youth important social and emotional skills by providing a venue to practice exercising self-control, relating to others, and engaging in critical thinking and decision making (I.R. Berson, Berson, & Ferron, 2002). Rather than enacting totalitarian bans on technology, schools must employ a comprehensive approach to developing prevention and intervention measures that includes families and the community at large (Ybarra & Mitchell, 2004). Through collaboration, all parties can work to identify, resolve, and prevent cyberbullying (Mason, 2008).

### **Cyberbullying and the Digital Divide**

A contributor to a lack in effective prevention and intervention strategies may be related to the digital divide. The term "the digital divide" was coined in 1995 to refer to the gap between those who had access to information technology and those who did not (NTIA, 1995). The divide was primarily based on income and education, though differential Internet access and use was also noted in regards to race, gender, age, and location (i.e. urban vs. rural) (Jackson et al., 2008). The digital divide had the potential to contribute to cyberbullying by being a phenomenon primarily experienced in educated, economically stable populations. Ybarra and Mitchell (2004) found that Caucasians and youth from households who made an annual income of \$75,000 or more were more likely to engage in Internet harassment, supporting this hypothesis. Over the years, however,

this gap has narrowed, with technology use increasing for individuals regardless of demographic characteristics. Statistics show that Internet access in the home has increased from 18.6% in 1997 to 71.1% in 2010 (NTIA, 2011). Youth are now more likely to access the Internet than any other group, with 90% of 5- to 17-year-olds reporting computer use (NTIA, 2002).

Given these changes, the digital divide has taken on a new meaning. The term now refers to the gap in the intensity and nature of information technology use (Jackson et al., 2008). This difference may best be understood in terms of viewing individuals as *digital natives* or *digital immigrants*. Digital natives are individuals who were born into the digital age (1980 or beyond) and have strong knowledge of and skills related to digital technology. Natives share a common culture characterized by attributes and experiences related to how they interact with information technologies, information itself, other individuals, and institutions. Digital immigrants, in contrast, are individuals who have embraced the Internet and related technologies but were born prior to the digital age (Palfrey & Gasser, 2008, p. 352). Thus, digital immigrants may learn to adapt to a digital environment but, to some degree, retain an “accent.” For example, digital immigrants may turn to the Internet for information second rather than first or read the manual for a program rather than assume that the program itself will teach them how to use it (Prensky, 2001). Hargittai (2002) demonstrated the difference in digital immigrants’ approaches to technology by evaluating the ways individuals found information online. Subjects aged 18-81 were given tasks such as finding information about local events and locating music they could listen to online. The study found significant generational differences in people’s ability to use the Internet, with 18-19 year olds successfully

navigating all of the online tasks asked of them while individuals older than 60 were only able to complete slightly over half of the requested tasks. Furthermore, 18- to 29-year-olds were quicker at completing assigned tasks than older individuals.

Such findings indicate that adults given access to technology cannot necessarily be expected to know how to use it effectively. In fact, adults may experience a certain level of anxiety when dealing with technology and thus react inappropriately to cyberbullying situations (i-SAFE, 2003). Students' unwillingness to report cyberbullying to adults highlights the impact of this new digital divide on cyberbullying (Juvonen & Gross, 2008; Li, 2008; NCH, 2005; Slonje & Smith, 2008). Reasons for this reluctance range from youth fearing that they will have cell phone or Internet privileges revoked to not viewing adults as competent in handling bullying that occurs via electronic means (Hinduja & Patchin, 2009; Juvonen & Gross, 2008). Because youth have grown up with computers, cell phones, and the Internet, electronic devices have become an extension of their real world behaviors. Digital immigrants, on the other hand, will likely have difficulty comprehending this lifestyle practice due to their use of technology for specific tasks (e.g., purposed communication or travel arrangements) rather than as an integral part of their lives (Hinduja & Patchin, 2009).

It is, therefore, imperative that adults and teachers improve their digital literacy. That is, digital immigrants need to learn how to use technology effectively (Palfrey & Gasser, 2008). Data from the i-SAFE survey (2003) demonstrate this need by pointing out the difference between parents' perceptions of student Internet use and what students report as their reality. The study found that a majority of parents reported they had established rules for Internet use with their children (87%) and had significant knowledge

about what their children did online (69%). Students' reports, however, were dramatically different, with 36% of students indicating that their caretakers had not established rules for their Internet use and 41% of students not sharing with their parents the types of Internet activity in which they took part. These findings suggest adults may not take cyberbullying seriously because they do not consider technology important in their own lives and thus may diminish its importance to their children

One way to narrow the disconnect between adults' perceptions and youth's reality is by understanding the social impact technology has on youth. Palfrey and Gasser (2008) point out that digital natives develop their identities in the digital world as well as in the real world. For example, cyberspace provides the opportunity for youth to learn and refine their ability to exercise self-control, relate to others' viewpoints with tolerance and respect, and express sentiments in a healthy manner (Berson et al., 2002). Furthermore, it has become commonplace for youth to disclose personal information, such as pictures, videos, or personal blogs, while online, often not because they want to be placed in a dangerous situation but because they are seeking social approval, intimacy, or relief of distress. In fact, Gross (2009) found that, when compared to solitary computer activity, instant messaging with an unknown peer could alleviate distress caused by social exclusion.

Being a digital native also carries repercussions. For example, youth have reported that they take part in cyberbullying because they "want to have fun" (Smith et al., 2008). This finding implies that youth may not fully understand the impact of their digital actions. Because the consequences of inappropriate behavior may not be immediately clear, cyberbullies are less likely to deal with the emotional or psychological



effects that cybervictims endure. That is, a visual feedback loop (e.g., facial expressions) is not present, reducing any inhibition of inflicting pain due to empathy at seeing the cybervictim's distress (Hinduja & Patchin, 2009; Smith et al., 2008).

In addition to understanding how technology contributes to youth's worldview, adults must also become more knowledgeable about what youth are doing online. Monitoring youth in digital space can be very similar to monitoring them in real space. The first step is to be actively engaged with what youth are doing online. As demonstrated by Berson, et al. (2002), the more often adults significant to adolescent's lives talk about their online experiences, the less likely youth are to engage in risky behaviors such as disclosing personal information online. Adults can also begin to communicate with youth via digital technology in order to demonstrate competency and interest. For example, conversations can be initiated through text messages or by sending a message on Facebook. Though youth may be resistant to these forms of "digital invasion" at first, they will likely come to appreciate adults' interest (Palfrey & Gasser, 2008).

The impact of the divide is already clear, with very few youth seeking out adults for help when instances of cyberbullying occur. Youth need allies to help them understand new social cues and to counter the disinhibition effect associated with online life. These goals cannot occur if adults (digital immigrants) do not learn how to effectively and confidently use technology. Becoming digitally literate does not mean that adults need to have the same zeal that youth have for being connected to the digital world. Instead, a basic understanding of how the digital world functions and the important role it plays in youth's lives is needed. With this understanding, adults will be

more likely to be viewed as a stable support system not only in their face-to-face interactions, but in their digital interactions as well.

### **School-Based Prevention and Intervention Techniques**

Hinduja and Patchin (2009) discuss the steps schools can take toward preventing cyberbullying through the use of an ongoing and widespread continuum. First, Hinduja and Patchin recommend that students and school staff be routinely educated about the nature and consequences of traditional bullying and cyberbullying in order to maintain a continual awareness of the issue. School-based actions include enforcing strict policies, such as limiting Internet and cell phone use in school. The researchers also suggest that youth should collaborate with the school to develop effective filtering and blocking systems so that students may better understand the consequences of infiltrating such systems (Willard, 2005). When incidents of cyberbullying do occur, Hinduja and Patchin recommend encouraging students to engage in open discussions with school staff and participate in incident reporting. The researchers also encourage schools to promote cyberbullying prevention strategies by displaying signage, holding assemblies, distributing documents and resources, and creating curriculums that discuss appropriate ways to use computers and communication devices. Finally, Hinduja and Patchin recommend assembling a task force of school personnel, students, family members, law enforcement, and members of the community to ensure successful prevention efforts.

Mason (2008) proposes that cyberbullying prevention and intervention measures occur at three levels: system-level interventions, classroom interventions, and individual interventions. At the systems level, Mason recommends that curriculum-based antibullying programs should address both traditional bullying and cyberbullying, with

the goal of reducing the likelihood of experiencing bullying/cyberbullying (both as offenders and targets) inside and outside of the school setting, developing healthy peer interactions, and minimizing the potential for new problems. Schools are also expected to construct their own policies on cyberbullying, including guidelines for acceptable technology while in school. At the classroom level, Mason recommends that students be taught skills that will allow them to effectively and independently prevent cyberbullying (Willard, 2005). For example, lessons on cyberbullying, as well as social skills and conflict resolution, should be incorporated in classes so that students can learn the proper techniques to address these problems. At the individual level, Mason emphasizes the importance of focusing on students who are known to be involved with cyberbullying as both a perpetrator and victim (Olweus, 1993). Response options at this level include school or outside mediation, involving key personnel (e.g., school psychologists or resource officers) in the schools, and, if severe enough, procuring legal assistance and involving law enforcement to protect schools and victims.

Childnet (2007) is a nationwide initiative sponsored by the U.K. government that takes a whole-school community approach. The initiative operates under the belief that cyberbullying should not solely be addressed by an appointed teacher, but by the school community (i.e., administrators, teachers, staff, caregivers, and youth). Childnet proposes four key objectives to ensure success in preventing cyberbullying. The first is that identified program measures are accessible and easy to understand so that those who are less confident with technology can feel comfortable implementing prevention measures. The second is to make the program practical in order to increase the feasibility of individuals taking action. The third objective is to provide a comprehensive program that

introduces and explains how and why technology is an integral part of youth's lives and helps communicate youth's perspectives. The fourth and final objective is to explain technology rather than demonize it. This method emphasizes the importance of giving youth the tools to use new technology safely and responsibly.

These four objectives are then used to provide guidance for carrying out preventive measures, with the intention that all parties in the school community work together in harmony with the school in creating a prevention framework that reflects the culture, preferences, and needs of the school community (Childnet, 2007). These preventive measures should also align with existing laws and the school's mission and vision statements. For preventive efforts to be effective and comprehensive, according to Childnet (2007), schools must understand and talk about cyberbullying, update existing policies and practices, make reporting cyberbullying easier, promote the positive use of technology, and evaluate the impact of preventive activities.

While these prevention and intervention strategies differ in their scope, a number of commonalities exist. Each calls for schools to create policies that clearly define and require Internet compliance while at school. Students should also be fully aware of the consequences of engaging in cyberbullying and understand that those consequences will be enforced. Additionally, school personnel should be extensively trained so they can properly respond to cyberbullying issues, with families and the community being involved in the process as well. Schools should view students as collaborators, involving them in activities such as working with teachers or serving as peer mentors. These efforts should be ongoing and adjusted as needed based on changes in technology and laws.

Finally, different methods, such as inclusion of technology, schoolwide resources, special sessions, and community activities, should be employed in prevention efforts.

### **Formal Anticyberbullying Programs**

The majority of the preventive measures detailed above recommend embedding a formal anticyberbullying program within a larger schoolwide antibullying program.

These programs typically involve scripted lessons to spark student discussion related to cyberbullying and manners in which it can be prevented or addressed when it occurs (Snakenborg et al., 2011). Little is currently known, however, about the efficacy of such programs. Schools, as a result, must select programs with caution and attempt to determine their usefulness in advance.

One common starting point is by using a program that has demonstrated success at preventing traditional bullying and supplementing that curriculum with netiquette lessons (i.e., lessons discussing appropriate online behavior and responsibility) (Hinduja & Patchin, 2009). Such programs allow schools to address all forms of bullying at once (Snakenborg et al., 2011). The Olweus Bullying Prevention Program (Olweus, Limber, Milhalis, 1999) was the first comprehensive whole-school intervention implemented on a large scale. This approach stipulates that all members of the school community, including staff, students, and parents, be provided with information about what bullying is and how they should respond to it (Olweus et al., 1999). In particular, the program confronts student bullying in grades 1-8 by strengthening the supervision of children who bully, decreasing social isolation among children who are victimized, and recruiting student and adult bystanders to confront bullying when it occurs. The overall goal of the program is

to reduce existing bully/victim problems in and out of the school setting and to prevent the development of new problems (Olweus et al., 1999).

Quasi-experimental studies, such as The Bergen Project against Bullying (1991), revealed that the Olweus Bullying Prevention Program (1999) resulted in reductions of 50% or more in self-reported bully/victim problems among both boys and girls. The study also found clear reductions in general antisocial behavior, such as vandalism, inebriation, and truancy. Furthermore, improved order and discipline and more positive social relationships were found to take place in the classroom (Olweus, 1991). Based on this empirical evidence, the Olweus Bullying Prevention Program is the only program that has been identified as a Blueprint for Violence Prevention by the Center for the Study and Prevention of Violence at the University of Colorado. Using this program as a model will therefore aid school personnel in designing prevention and intervention measures for cyberbullying.

Kowalski and Agatston (2008) created Cyber Bullying: A Prevention Curriculum based on the holistic approach of the Olweus Bullying Prevention Program (1999) (involving the school, home, and the community). The curriculum is designed to help 6<sup>th</sup>-12<sup>th</sup> grade students understand the concept and consequences of cyberbullying, as well as to resist and intervene when it occurs. Students participate in activities such as leading discussions, role-playing, writing journal entries about cyberbullying incidents, and designing anti-bullying websites. School administrators are also given resources for dealing with the on-campus and off-campus challenges of cyberbullying. Supporting materials include boilerplate letters to parents; incident reports; acceptable-use policies; guidelines for choosing students leaders; and legal information, including forms for

evidence gathering. The researchers later introduced corresponding curriculum for grades 3-5.

i-SAFE Inc. (2011), a leader in Internet safety education, also developed a subscription-based prevention curriculum for K-12 students. The program trains school personnel, parents, and community members to implement the program either in-person or via DVD. Younger students (grades K-4) are introduced to Internet concepts and vocabulary and taught how to engage in safe Internet use through hands-on learning. Students in grades 5-8 participate in activities and discussions that focus on preventing and addressing cyberbullying. Traditional lesson formats are then used in grades 9-12, which focus on addressing various forms of cyberbullying (e.g., text message, email, instant message) and the etiquette and appropriate use of electronic learning. Discussions with this age group are also centered on Webcast videos. When i-SAFE evaluated the effectiveness of their program, 55% of students in grades 5-12 reported being more careful about where they went and what they did online, while 42% of students reported being more careful when sharing personal information online.

NetSmartz (n.d.) is a schoolwide program directed toward middle and high school students. This curriculum includes seven modules that focus on a variety of topics. Students are taught the importance of limiting the personal information they share while they are online. They then watch true stories on a DVD about the different forms and consequences of cyberbullying. Students are also taught vocabulary that deals with Internet behavior and are encouraged to identify adults they can trust and turn to when they're feeling vulnerable. Finally, students are given strategies for avoiding cyberbullying. A study from Brookshire and Maulhardt (2005) determined that

participation in NetSmartz increased youth's awareness of Internet dangers and allowed them to feel more confident as Internet users.

### **Responding to Cyberbullying at School**

Aside from prevention measures, schools should have plans and procedures in place to deal with instances of cyberbullying. Hinduja and Patchin (2009) suggest a general model that includes the following steps:

- Assess the threat at hand
- Ensure the victim's safety
- Offer empathy and compassion to the victim
- Separate the cyberbully from the victim if necessary (or closely monitor interactions)
- Investigate and collect evidence
- Notify parents
- Notify Internet service provider if the act of perpetration occurs online
- Notify the police if a physical threat has been made
- Enforce appropriate disciplinary action
- Contact legal counsel when serious disciplinary action is required (p. 162)

Gardner (2010) stresses that the most important consideration in response efforts is providing support to the cybervictim. In particular, support should include addressing any negative impact experienced as a result of the cyberbullying incident and providing the victim with adequate skills to prevent and respond to cyberbullying. School personnel should ensure that any damaging or embarrassing content that is placed online or distributed to others is removed from the Internet. Typically, the most effective way to



remove this content is by simply having the person who originated the post (if known) remove it. The next best strategy is to contact the host and make a request for the content to be removed. For example, individuals can click on a “report” link at Facebook and have the option of reporting whether a friend is annoying the individual, an inappropriate photo or comment is posted, or someone is harassing or bullying the individual. School personnel may also want to help the victim understand the climate of the online community to which they belong so the student can appropriately identify whether he is in a situation that could potentially be harmful. The victim should further reflect on possible behaviors or communications that contribute to victimization (Pepler & Craig, 2000; Willard, 2005). School personnel should then help the victim learn how to respond assertively when he experiences cyberbullying and encourage him not to retaliate or respond to the situation with anger. In general, such actions will only exacerbate the situation or result in crimes or statutory violations (Snackenburg et al., 2011; Willard, 2005). Instead, the cybervictim should create opportunities to gain peer support, work collaboratively with his family, and be encouraged to experience success in favored domains (Pepler & Craig, 2000).

In regards to disciplinary action, schools must take steps to change the attitudes and behaviors of the cyberbully, along with providing guidance and education if need be (Gardner, 2010). For instance, teachers must hold the cyberbully accountable for his actions by confronting excuses that minimize the cyberbullying behavior or externalize the cause of the behavior. Authority figures must also point out that the cyberbully had other options regardless of the reason for provocation (Pepler & Craig, 2000). School personnel may also want to implement activities that promote empathy and allow the

cyberbully to take on the perspective of the cybervictim in order to better understand the repercussions of his actions.

School personnel must also bear in mind the differential impact cyberbullying incidents can have on victims (Smith et al., 2008). For example, an embarrassing photo posted on a website may cause a greater sense of humiliation to the target than a hurtful email. Administrators must also take the cyberbully's intentions into consideration. While malicious intent may be one of the reasons an individual targets a victim, perpetrators may not realize the effects of their actions due to the disinhibition effect. That is, students may not realize their actions are hurtful because they cannot see their targets' body language or emotional reactions (Hinduja & Patchin, 2009). Disciplinary actions can be properly adjusted to the individual cyberbullying situation by understanding the impact on the individual and the intention of the perpetrator.

Finally, school personnel must involve parents when addressing cyberbullying. Methods of doing so include providing support to both cybervictims and parents and attempting to seek informal resolutions between the cyberbully and cybervictim with the parents' aid (Willard, 2005). School personnel must also be prepared to work with defensive parents, especially if their child is identified as a cyberbully (Mason, 2008). If parents are defensive, school personnel should calmly explain that cyberbullying interferes with the mission and vision of the school and that it is important to collaborate when such situations arise (Hinduja & Patchin, 2009).

Schools play a vital role in ensuring the safety of youth today, and addressing cyberbullying is no different. By collaborating with educators, parents, students, and other community members, individuals can begin to identify and address this problem

before significant cybervictimization and its associated negative impacts occur (Patchin & Hinduja, 2010; Ybarra & Mitchell, 2004). In order to combat cyberbullying effectively, schools must remain up-to-date with technological advances and laws, take preventive measures, and appropriately address incidents of cyberbullying. In turn, youth will be empowered to acquire the skills necessary to protect themselves and avoid doing harm to others.

### **Implications of Cyberbullying in Schools**

Because research on cyberbullying is in its emerging stages, there is still much to learn about its scope, implications, and what can be done to effectively engage in intervention and prevention efforts. The current study seeks to extend knowledge of cyberbullying by evaluating its prevalence, pervasive nature, the manner in which it's addressed, the impact it has on school belonging and social anxiety of individuals, and the nature and extent of which technology is used. Furthermore, student responses will be compared to teacher responses in regards to the manner in which technology is embraced and how cyberbullying is perceived and addressed. It is expected that cyberbullying will be a pervasive problem among adolescents, and hence, will affect them in a number of detrimental ways. Furthermore, it is hypothesized that the nature and extent of which technology is used will vary between adults and adolescents thus demonstrating a significant barrier as to why cyberbullying has yet to be addressed effectively and with the seriousness it deserves in schools.

## **Chapter 3: Methodology**

### **Research Questions**

The purpose of this study was to examine students and teachers' perceptions and reactions toward cyberbullying and technology. As such, this study sought to find the answers to the following questions:

**Research Question One:** Is there a difference between students' and teachers' perception of the seriousness of cyberbullying? The following hypothesis was formulated according to this question:

- Given that students typically underreport cyberbullying, it was expected that students would perceive cyberbullying as a more serious problem at school than teachers (Slonje & Smith, 2008; Smith et al., 2008).

**Research Question Two:** To what extent does student cyberbullying status (i.e., cyberbully, cybervictim, cyberbully/victim, and not involved) contribute to student problems, such as (a) school belonging and (b) social anxiety? The hypotheses for this question are listed below:

- Research has found a variety of negative impacts related to cyberbullying. Victims often report feeling angry, frustrated, sad, embarrassed, or scared (Smith et al., 2008; Hinduja & Patchin, 2009). In addition, cyberbullying involvement has been associated with low self-esteem and poor academic performance (Brown, 2010; Hinduja & Patchin, 2010). Similar results were therefore expected

with students involved with cyberbullying (as a victim or perpetrator) experiencing high levels of social anxiety.

- Traditional bullying research has found that sense of school belonging is negatively associated with bullying behavior (Bosworth, Espelage & Simon, 1999). As such, it was expected that students involved with cyberbullying would have a lower sense of school belonging than students who are not involved.

**Research Question Three:** What is the effect of each of the following variables on teacher attitudes toward the seriousness of cyberbullying: (a) their comfort with technology, (b) their interaction (i.e., frequency of technology use and possession of varying technological devices), and (c) their perception of the importance of technology?

The hypothesis is as follows:

- It was expected that the (a) lower level of comfort a teacher would feel with technology, (b) the less frequently they would interact with technology, and (c) the less their perception of the importance with technology would be the less seriously a teacher would perceive cyberbullying at school. This hypothesis was made because the literature indicates that the adults can struggle to keep up with the overwhelming amount of transformations that technological advances have introduced into our culture, therefore, leaving many adults to adopt technology into their lives as supplements to their normal activities (Prensky, 2001). Therefore, teachers who have less comfort with technology, interact less with technology, and view technology as less important would in turn take

cyberbullying less seriously due to not fully understanding that adolescents often view technology as an extension of their real world behaviors.

**Research Question Four:** What is the effect of each of the following variables on student attitudes toward the seriousness of cyberbullying: (a) their comfort with technology, (b) their interaction with technology, and (c) their perception of the importance of technology? The hypothesis is as follows:

- This question is more exploratory. However, it is natural to assume that students that are more comfortable with technology, interact more frequently with technology, and perceive technology as more important will take cyberbullying more seriously due to their awareness of how impacting technology can be in terms of cyberbullying.

**Research Question Five (a):** What is the relationship between teacher status (i.e., digital immigrant and digital native) and the extent to which they believe schools are addressing cyberbullying effectively? The hypothesis is as follows:

- Because teachers who are classified as digital natives were expected to have a strong knowledge of and skills related to digital technology as well as a deeper understanding of the fact that technology is an integral part of socialization for adolescents (Prensky, 2001), it was hypothesized that digital natives would select methods of addressing cyberbullying that are deemed more effective (e.g., education on cyberbullying and talking to a teacher) than digital immigrants (e.g., taking away technology).

**Research Question Five (b):** What is the relationship between student cyberbullying status and the extent to which they believe schools are addressing cyberbullying effectively?

- This question is more exploratory. However, it is likely that cybervictims and cyberbullies will be more inclined to rate anonymous reporting as an effective method of addressing cyberbullying due to the high rate of underreporting and perpetrators feeling safer to engage in cyberbullying due to the cloak of anonymity (Hinduja & Patchin, 2009; Slonje & Smith, 2008).

**Research Question Five (c):** Is there a difference between teachers' and students' perception of the extent to which they believe schools are addressing cyberbullying effectively?

- Research indicates that students have a pessimistic outlook when it comes to adults playing a significant role in alleviating the problem of cyberbullying with students feeling that peers should play a larger role in reducing instances of cyberbullying (Blumenfeld & Cooper, 2010). As a result, it is expected that students will be more likely to select peer based methods of intervention (e.g., peer mentors and self-monitoring) than teachers.

### **Research Design**

The following study was conducted by implementing a cross-sectional online survey. This method of study does not allow for treatments, interventions, or manipulation of variables (Ary, Jacobs, & Sorenson, 2010). As a result, a non-experimental design was used, which is defined as a “research design where researchers observe or measure subjects without altering or controlling their situation” (Vogt &

Johnson, 2011, p. 253). Such designs are generally correlational in nature because variables cannot be investigated experimentally. Therefore, the variables of this design will be allowed to vary freely investigating how change in one variable relates to change in another (Crano & Brewer, 2002). This was particularly appropriate in the case of this study because many variables include the attitudes and opinions of the subject (Ary et al., 2010).

### **Sample**

The study included a sample of teachers and middle school (8<sup>th</sup> grade) and high school (9<sup>th</sup> and 10<sup>th</sup> grade) students from central and northwestern Ohio and northeastern Illinois. These grades were targeted due to students being most at-risk for cyberbullying during this age (Price & Dalgleish, 2010; Raskauskas & Stoltz, 2007; Smith et al., 2008; Ybarra & Mitchell, 2004). Because teachers and students volunteered to participate in the study, this was considered a convenience sample. Overall, 481 students were invited to participate in the study. Of those recruited, 73 parents gave permission for their child to participate (15.17%). Sixty-one of the students who were given permission accessed the survey, and 53 students completed the survey (11%). Therefore, 72% of the students who were given permission completed the survey. In terms of the teacher sample, 92 teachers were invited to participate in the study with 52 teachers accessing the survey and 47 teachers (51%) completing the survey. This resulted in a final population of 53 students and 47 teachers (N = 100).

Table 1 presents the descriptive characteristics of the student sample. There were a total of 53 respondents between the ages of 13 and 17 with a mean age of 15.22 (SD= 1.05). The sample was distributed approximately evenly across gender with the greatest



amount of responses coming from 10<sup>th</sup> grade students (58.5%) and the least amount of responses coming from 8<sup>th</sup> grade students (3.8%). In addition, the vast majority of student participants (81.1%) were Caucasian. Other races that comprised the sample included: Latino/a (11.3%), Asian (2.8%), Multiracial (1.9%), and Bi-racial (1.9%).

Table 1

*Student Demographics*

	n	%
Gender		
Female	26	49.1
Male	27	50.9
Age	49	15.22 (1.05)
13	2	3.8
14	12	22.6
15	12	22.6
16	19	35.8
17	4	7.5
Grade Level		
8 <sup>th</sup>	2	3.8
9 <sup>th</sup>	20	37.7
10 <sup>th</sup>	31	58.5
Race		
Caucasian	43	81.1
Latino/a	6	11.3
Asian	2	3.8
Multiracial	1	1.9
Bi-racial	1	1.9

Notes: Age = mean, (Standard Deviation).

The descriptive characteristics of the teacher sample are depicted in Table 2. There were a total of 47 respondents with a greater amount of females (68.1%) than males (31.9%). More teachers were considered digital immigrants (born 1980 or earlier) (76%)

than digital natives (24%). The average number of years taught was 17.9 with 15.2% of teachers having taught 8<sup>th</sup> grade, 52.2 percent 9<sup>th</sup> grade, and 32.6 percent 10<sup>th</sup> grade. Similar to the student population, the majority of teacher participants were Caucasian (93.6%). Additionally, 2.6% were Asian, 2.1% were Multiracial, and 2.1% were other.

Table 2

*Teacher Demographics*

	n	%
Gender		
Female	32	68.1
Male	15	31.9
Age		
Digital Immigrants (age 33 or older)	36	76.0
Digital Natives (age 32 or younger)	11	24.0
Years Taught	47	17.9 (10.26)
Grade Level Taught		
8 <sup>th</sup>	7	15.2
9 <sup>th</sup>	24	52.2
10 <sup>th</sup>	15	32.6
Race		
Caucasian	44	93.6
Asian	1	2.1
Multiracial	1	2.1
Other	1	2.1

Note: Years Taught = mean, (Standard Deviation).

## **Study Variables**

### **Demographic/Descriptive variables**

Demographic variables collected during this study included age, race, gender, grade (taught or attended), and number of years taught. Age is a continuous variable representing the participant's age in years (ratio scale). This was simply used as a descriptive variable in the student survey. In the teacher survey, however, teachers were dichotomized into digital immigrants (0; 33 years old and older) and digital natives (1; 32 years old and younger) so that experimental analyses may be performed. Number of years taught is a continuous variable. Gender is a dichotomous variable where male = 2 and female = 1. Grade is an ordinal variable with three levels 8<sup>th</sup>, 9<sup>th</sup>, and 10<sup>th</sup> grade. Race is categorical with seven levels, Caucasian, Black/African American, Latino/a, Asian, Bi-racial, Multiracial, and other.

To gain a better understanding of the nature of cyberbullying, cyberbullies and cybervictims were asked to rate the frequency (in the past 30 days) in which they were involved with seven different forms of cyberbullying. Forms of cyberbullying include: (a) text message bullying, (b) cellular phone pictures and/or video clip bullying, (c) phone call bullying, (d) email bullying, (e) chat room bullying, (f) instant messaging bullying, and (g) website bullying. A four-item ordinal response scale was provided including: never, seldom, frequently, and constantly. Participants additionally were asked if they ever told anyone about encountering cyberbullying (as a victim or bystander). Students were asked to respond (1) yes or (2) no to whether they told (a) nobody, (b) a teacher, (c) another adult at school, (d) a parent or guardian, or (e) a friend. If a student responded that they had told an individual about cyberbullying they were asked if that individual

was helpful and why. Questions are posed on a Likert scale ranging from 1 not helpful to 3 very helpful. The why question is posed in an open-ended format. Finally, teachers and students were asked to provide an open-ended response as to what makes the strategies for addressing cyberbullying the most effective and what could be done to make those strategies better.

### **Dependent variables (DV)**

Four dependent variables were measured in this study including:

**DV1) Perception of the seriousness of cyberbullying.** Perception of the seriousness of cyberbullying was measured as the degree to which students or teachers feel that cyberbullying is a serious problem at school. This was measured on a 4-point Likert scale (1 = strongly disagree to 4 = strongly agree).

**DV2) School belonging.** Several definitions of school belonging exist. For the purpose of this study Goodenow's (1993) definition was used to operationally define the variable. That is, sense of school belonging refers to students' feelings of being respected and of comfort in their particular school. To assess sense of school belonging, students were asked five questions, such as "I feel like a part of this school" and "I am happy to be at this school." All items are in a 5-point Likert-format, with choices ranging from strongly agree (1) to strongly disagree (5).

**DV3) Social anxiety.** Social anxiety is operationally defined as an intense fear of social and performance situations. To measure this, students were asked 3 items from the Mini-Social Phobia Inventory (Mini-Spin) (Conner et al., 2001). For example, participants were asked to respond to remarks such as, "I avoid situations where I am the center of attention". Each item is rated on a 5-point scale (1 = not at all, 5 = extremely).

**DV4) Perception schools are using appropriate methods to address cyberbullying effectively.** The dependent variable was measured by students' and teachers' perception of what they felt were useful ways to address cyberbullying. Students were asked to identify the usefulness of various ways to address cyberbullying including: self-monitoring, outside-monitoring, anonymous reporting, use of peer mentors, education on cyberbullying and technology, talking to parents, talking to school administrators and teachers, enforcing school rules, enforcing laws, and not allowing technology use. These concepts were identified in Blumenfeld and Cooper's (2010) study of youth responses to cyberbullying. The questions were posed in a Likert-scale question format ranging from strongly disagree to strongly agree. The question items are scored either 4,3,2 or 1, where 4 represents strong agreement and 1 represents strong disagreement.

A number of cyberbullying intervention methods are operationally defined. Definitions include:

- **Self-monitoring:** The ability to observe yourself and know when you are engaging in appropriate and inappropriate behaviors.
- **Outside monitoring:** Identifying individuals to supervise and check for those who abuse technology and are being abused by technology.
- **Reporting cyberbullying:** Reporting acts of cyberbullying either by telling someone face-to-face or through an anonymous means, such as using an anonymous email system provided at an organization or placing a message in a comment box at school.

- **Peer leadership:** Using peers as leaders and mentors to regulate and prevent cyberbullying.
- **Education on cyberbullying:** Informational sessions, assemblies, and classroom lessons to inform students, school personnel, and parents about the nature and impact of cyberbullying.

In addition, participants were asked to rate the top three methods, of those described above, for addressing cyberbullying.

#### **Independent variables (IV)**

Seven independent variables were measured in this study. They are outlined below:

**IV1) Students.** Students were operationally defined as any 8<sup>th</sup>, 9<sup>th</sup>, or 10<sup>th</sup> grade student who agreed to participate in the study regardless of their cyberbullying status.

**IV2) Teachers.** Teachers were operationally defined as any 8<sup>th</sup>, 9<sup>th</sup>, or 10<sup>th</sup> grade teacher who agreed to participate in the study.

**IV3) Cyberbullying status.** Cyberbullying status in the student survey reflects the students experience with cyberbullying as a (a) cyberbully, (b) cybervictim, (c) cyberbully/victim and (d) not involved. Specifically, adolescents were asked, “How often have you been cyberbullied in the past 30 days?” and “How often have you cyberbullied others in the past 30 days?” The participant was asked to select their level of involvement, which ranges from 1 (never) to 4 (constantly). It was intended that participants who frequently or constantly had been cyberbullied would be identified as cybervictims, students who had frequently or constantly cyberbullied others will be identified as cyberbullies, students who both identified as having been cyberbullied and

cyberbullying others frequently or constantly would be identified as a cyberbully/victim, and students who indicated that they are never or seldom involved with cyberbullying (as a victim or perpetrator) would be labeled as not involved. However, because none of the students identified as experiencing cyberbullying frequently or constantly, cyberbullies, cybervictims, and cyberbully/victims were identified if they selected they had seldom been involved with cyberbullying over the past 30 days. Immediately before these questions, participants were given a definition of cyberbullying to aid in understanding its nature. In particular, Hinduja and Patchin's (2009) definition was used, which states: cyberbullying is the willful and repeated harm inflicted through the use of computers, cell phones, and other electronic devices.

**IV4) Digital status.** Digital status includes establishing whether the participant is a digital native or digital immigrant. Teachers were specifically asked, "How old are you?" in order to ascertain whether or not they were born before or after 1980. This is because the standard definitions to identify digital natives and digital immigrants are the following:

1. **Digital native:** Individuals born in the digital age (1980 or beyond) and have a strong knowledge of and skills related to digital technology.
2. **Digital immigrant:** Individuals who have embraced the Internet and related technologies but were born prior to the digital age.

However, in order to understand the nature and extent of technology use additional questions were asked. Participants were asked which forms of technology they have access to. This was asked as a yes/no question and was coded as a dichotomous variable. Participants were further asked about their comfort level with technology. For example,

they were asked, “What is your comfort level with using a smart phone?” Responses are on a Likert scale and ranged from (1) very uncomfortable to (4) very comfortable.

Participants were next asked how would they feel if they did not have access to different forms of technology (e.g., cell phone, text messaging, and social networking). Likert responses once again range from (1) very uncomfortable to (4) very comfortable. In addition, participants were requested to provide the amount of time (percentage) they spent interacting with individuals on various forms of technology (e.g., text message, chat formats, social networking sites). Participants who identified that they spent more than 50% of their time interacting with individuals face-to-face were considered individuals who did not interact with technology frequently. Finally, participants were asked to rate how important different forms of technology are to them (1 = very unimportant, 4 = very important). It is expected that individuals who identify as having access to multiple means of technology, display a high comfort level with technology, interact frequently with technology, and perceive technology as important will be more likely to be a digital native. In contrast, individuals who identify as having few technological devices, interact infrequently with technology, and perceive technology as unimportant are expected to be identified as digital immigrants. In order to obtain digital native and digital immigrant status the examiner averaged the 4 scales of comfort overall, technology access, technology importance, and technology interaction and then took the median split to define the groups.

**IV5) Comfort with technology.** Comfort with technology is operationally defined as participant’s independent judgment (teacher and student) of comfort with using various forms of technology (i.e., computer, smart phone, text messaging, social networking site,



and chat formats) and comfort with going without various forms of technology (smart phone, email, text message, social networking site, chat format, and the Internet). For example, participants were asked, “What is your comfort level with using a smart phone?” Responses are on a Likert scale and range from (1) very uncomfortable to (4) very comfortable. Participants were asked how would they feel if they did not have access to different forms of technology. Likert responses ranged once again from (1) very uncomfortable to (4) very comfortable. Individuals who displayed high levels of comfort with technology (stating they are comfortable and very uncomfortable) and high discomfort with going without technology (stating they are very uncomfortable or uncomfortable) were identified as comfortable with technology. Individuals who displayed discomfort with technology (stating they are uncomfortable and very uncomfortable) and high levels of comfort going without technology (stating they are comfortable or very uncomfortable) were identified as uncomfortable with technology. In order to create this scale an automatic recode was performed for the “comfort with going without technology” with higher scores representing higher levels of comfort and lower scores representing lower levels of comfort.

**IV6) Interaction with technology.** Interaction with technology is operationally defined as the percentage of time individuals (teachers or students) spent interacting with their friends with various forms of technology (i.e., text messaging, phone calls on smart phone, chat formats, social networking site, and face-to-face). Participants were asked to provide the amount of time (percentage) they spent interacting with individuals in these manners. Participants who identified that they spent more than 50% of their time

interacting with individuals face-to-face were considered individuals who did not interact with technology frequently.

**IV7) Perception of the importance of technology.** The perception of the importance of technology was operationally defined as students' or teachers' independent judgment of whether various forms of technology (i.e., text messaging, smart phone, email, social networking site, and chat formats) are important. Participants were asked to rate how important different forms of technology are to them (1 = very unimportant, 4 = very important).

### **Instruments**

Students and teachers were asked to complete a self-report online survey containing both open- and closed-ended questions. This method of data collection is appropriate given the nature of the phenomenon. The approach allows for inclusiveness, ease in reaching the sample, and familiarity to the target group. In addition, the use of an online survey allows for an extra layer of anonymity and privacy, which may help participants feel more comfortable discussing sensitive issues (Mallen et al., 2005). Studies have shown that students and teachers are also more likely to provide better open-ended responses containing more information, in comparison to if they were asked to participate in a traditional survey, therefore, giving greater insight to the problem at hand (Smyth, Dillman, Christian, & McBride, 2009).

Because cyberbullying is a relatively new phenomenon, few measures have been developed to assess cyberbullying and related issues (Vandebosch & Cleemput, 2008). However, the close link between traditional bullying and cyberbullying implies that information obtained from traditional bullying measures can be informative for studies

of cyberbullying (Li, 2008). The survey, therefore, was partially based on the structure of the Olweus Bully/Victim questionnaire (1996). In addition, some of the scales for measuring the variables were constructed and tested via standard reliability analysis (coefficient alpha), and exploratory/confirmatory factor analysis from past studies (i.e., school belonging and social anxiety measures). However, this proposed project uses shortened scales due to the school context. A detailed explanation of the student and teacher survey is provided below.

### **Student Survey**

The student survey is contains both Likert-type scale items and open-ended questions organized around the following categories: demographic variables, types and frequency of cyberbullying and cybervictimization, strategies to address cyberbullying, the impact of cyberbullying, and the digital divide. Open-ended questions provided a space for participants to delve deeper into the various categories addressed within the overall cyberbullying instrument. The mix of the two approaches, therefore, allowed for a flexible approach to gather data on a sensitive topic (Protheroe, Bower, & Chew-Graham, 2007).

**Demographic information.** The first four questions of the survey gathers demographic information about the student in order to provide better descriptive characteristics of the participant and to assess the relationship between demographic characteristics and cyberbullying (Olweus et al., 1996). Demographic variables collected during this study included age, race, gender, and grade. Age is a continuous variable representing the participant's age in years (ratio scale). Gender is a dichotomous variable where male = 1 and female = 0. Grade is an ordinal variable with three levels 8<sup>th</sup>, 9<sup>th</sup>, and

10<sup>th</sup> grade. Race is categorical with seven levels, Caucasian, Black/African American, Latino/a, Asian, Bi-racial, Multiracial, and other.

**Cyberbullying (perpetrator and victim) measure.** The cyberbullying section of the student survey is based on the structure of the Olweus Bully/Victim questionnaire (1996), which includes 20 items. Four Likert-scale questions about students' perspective of the significance of cyberbullying and other aggressive acts at school (i.e., face-to-face bullying, school violence, and sexual harassment) were asked. The question items are scored either 4,3,2 or 1, where 4 represents strong agreement that an aggressive act is occurring and 1 represents strong disagreement that an aggressive act is occurring.

Students were asked, "How often have you been cyberbullied in the past 30 days?" and "How often have you cyberbullied others in the past 30 days?" Response options are on a 4-point scale, which ranges from (1) never to (4) constantly. If a student indicated they were involved with cyberbullying (as a victim, perpetrator, or both) they were also asked to rate the frequency (in the past 30 days) in which they were involved with seven different forms of cyberbullying. Forms of cyberbullying include: (a) text message bullying, (b) cellular phone pictures and/or video clip bullying, (c) phone call bullying, (d) email bullying, (e) chat room bullying, (f) instant messaging bullying, and (g) website bullying. A four-item ordinal response scale was provided including: never, seldom, frequently, and constantly.

**Addressing cyberbullying measure.** Thirteen items were created to measure strategies to address cyberbullying and whether it is addressed effectively at school. Items were constructed based on Blumenfeld and Cooper's (2010) study of youth responses to cyberbullying. Students were asked to identify the usefulness of various

ways to address cyberbullying including: self-monitoring, outside-monitoring, anonymous reporting, peer mentors, education on cyberbullying and technology, talking to parents, talking to school administrators and teachers, enforcing school rules, enforcing laws, and not allowing technology use. The questions were posed in a Likert-scale question format ranging from strongly disagree to strongly agree. The question items were scored either 4,3,2 or 1, where 4 represents strong agreement with the strategy suggested for addressing cyberbullying and 1 represents strong disagreement with the suggested strategy. Students were also be asked to rank their top three choices for addressing cyberbullying (based on the strategies above) and then provide an open-ended response as to what makes the strategies they identified the most effective and what could be done to make them better. Finally, students were asked if they think their school is prepared to address cyberbullying. This question is posed on Likert scale with responses ranging from (SD) strongly disagree to (DNA) my school is not addressing cyberbullying.

To gain a deeper understanding of the manner in which students perceived cyberbullying is addressed, cybervictims and bystanders were asked if they told anyone about cyberbullying. Students were asked to respond (1) yes or (2) no (dichotomous variable) to whether they told (a) nobody, (b) a teacher, (c) another adult at school, (d) a parent or guardian, and (e) a friend. If a student responded they had told an individual about cyberbullying they were asked if that individual was helpful and why. Questions are posed on a Likert scale ranging from 1 not helpful to 3 very helpful. The why question was posed in an open-ended format.

**School belonging measure.** Modified items from the Psychological Sense of School Membership (PSSM) were used to assess whether cyberbullying (as a victim or perpetrator) predicted adolescents' sense of school belonging (Anderman, 2003; Goodenow, 1993). Participants were asked five questions in this section, including "I feel like a part of this school", "I am happy to be at this school," "I feel close to people at this school," "I feel safe in my school," and "The teachers at this school treat students fairly." All items are in a 5-point Likert format; with choices ranging from strongly agree (1) to strongly disagree (5). This measure is reported as having good internal consistency reliability with a Cronbach's alpha of .78.

**Social anxiety measure.** To examine social anxiety among the student population the Mini-SPIN was used. This is 3-item self-rated scale derived from the Social Phobia Inventory. The Mini-SPIN can be used as a screening tool to help identify individuals at increased risk for having a social anxiety disorder. Using a cutoff score of 6 or greater, the Mini-SPIN demonstrates 90% accuracy in diagnosing the presence or absence of generalized social anxiety disorder (Connor et al., 2001). All items are in a 4-point Likert format with choices ranging from (0) not at all to (4) extremely. The Mini-Spin sum score thus ranges from 0 to 12. The internal consistency of the Mini-Spin showed a Chronbach's coefficient alpha of 0.81.

**Digital divide measure.** Twenty-six items were used to measure the nature and extent to which technology is utilized based on the research of Palfrey and Gasser (2008) and the consultation of a committee member of the researcher. Participants were asked which forms of technology they have access to. This was asked as a yes/no question and was coded as a dichotomous variable. Participants were also be asked about their comfort

level with technology in terms of (a) comfort with using various technological devices and with (b) going without various forms of technology for three days. For example, students were asked, “What is your comfort level with using a smart phone?” and “If you were without text messaging for three days how would it make you feel?” Responses are on a Likert scale and ranged from (1) very uncomfortable to (4) very comfortable. Participants were further asked to provide the amount of time (providing a percentage for each interaction) they spent interacting with individuals on various forms of technology (e.g., text message, chat formats, social networking sites) and with individuals face-to-face. Finally, participants were asked to rate how important different forms of technology are to them (1 = very unimportant, 4 = very important).

### **Teacher survey**

The teacher survey was an abbreviated version of the student survey. It is primarily interested in understanding teachers’ awareness of student involvement with cyberbullying and their perceptions on how to address it. Additionally, questions surrounding the digital divide and how it impacts teachers’ awareness and perspective of cyberbullying were asked.

**Demographic information.** The first five questions of the survey gather demographic information about the teacher in order to provide better descriptive characteristics of the participant. Demographic variables to be collected during this study include age, race, gender, grade, and how many years taught. Age is a continuous variable representing the participant’s age in years (ratio scale). Gender is a dichotomous variable where male = 2 and female = 1. Grade is an ordinal variable with three levels 8<sup>th</sup>, 9<sup>th</sup>, and 10<sup>th</sup> grade. Race is categorical with seven levels, Caucasian,

Black/African American, Latino/a, Asian, Bi-racial, Multiracial, and other. Years taught is a continuous variable on a ratio scale.

**Seriousness and prevalence of cyberbullying measure.** A 4-item Likert-scale question about teacher's perspective of the significance of cyberbullying and other aggressive acts at school (i.e., face-to-face bullying, school violence, and sexual harassment) was asked. The question items were scored either 4,3,2 or 1, where 4 represents strong agreement that aggressive acts are occurring and 1 represents strong disagreement that aggressive acts are occurring. In addition, teachers were asked "How often have you heard about cyberbullying occurring with students at your school in the past 30 days?" The question items are scored either 4,3,2 or 1, where 4 represents always and 1 represents never.

**Addressing cyberbullying measure.** Thirteen items were created to measure strategies to address cyberbullying and whether it is addressed effectively at school. Items were created based on Blumenfeld and Cooper's (2010) study of youth responses to cyberbullying. Teachers were asked to identify the usefulness of various ways to address cyberbullying including: self-monitoring, outside-monitoring, anonymous reporting, peer mentors, education on cyberbullying and technology, talking to parents, talking to school administrators and teachers, enforcing school rules, enforcing laws, and not allowing technology use. The questions were posed in a Likert-scale question format ranging from strongly disagree to strongly agree. The question items are scored either 4,3,2 or 1, where 4 represents strong agreement the strategy to address cyberbullying and 1 represents strong disagreement with the strategy to address cyberbullying. Teachers were also asked to rank their top three choices for addressing cyberbullying (based on the



strategies above) and then provide an open-ended response as to what makes the strategies they identified the most effective and what could be done to make them better. Finally, teachers were asked if they think their school is prepared to address cyberbullying. This question is posed on Likert scale with responses ranging from (SD) strongly disagree to (DNA) my school is not addressing cyberbullying.

**Digital divide measure.** Twenty-six items were used to measure the nature and extent to which technology is utilized based on the research of Palfrey and Gasser (2008) and the consultation of a committee member of the researcher. Teachers were asked which forms of technology they have access to. This was asked as a yes/no question and was coded as a dichotomous variable. Teachers were also asked about their comfort level with technology in terms of (a) comfort with using various technological devices and with (b) going without various forms of technology for three days. For example, teachers were asked, “What is your comfort level with using a smart phone?” and “If you were without text messaging for three days how would it make you feel?” Responses are on a Likert scale and ranged from (1) very uncomfortable to (4) very comfortable. Participants will further be asked to provide the amount of time (providing a percentage for each interaction) they spent interacting with individuals on various forms of technology (e.g., text message, chat formats, social networking sites). Finally, participants were asked to rate how important different forms of technology are to them (1 = very unimportant, 4 = very important).

### **Data Collection Procedures**

Starting in September 2012, the researcher contacted school districts seeking permission to recruit students and teachers through their school. Principals were provided

with an information sheet, which discussed the intent of the study and the procedures that were to be carried out. The researcher then contacted school principals to discuss questions they may have and whether they would allow the researcher to recruit through their school.

Once the researcher obtained the principals' support, teachers were requested to attend an information meeting. At the meeting, the researcher discussed the study, solicited teacher participation for the online survey, requested that homeroom teachers announce the study to their students, and distribute information sheets to students (see Appendix C). The information sheet contained a url link so the parent could access an online parental permission form (see Appendix D). If the parent(s) agreed to allow their child to participate in the study they were asked to provide an email address for their child so the child could be provided with a link to the online survey. The child and his/her parent were given two weeks to electronically sign the parental permission form. However, because the response rate was low, the parent and child were given additional time to respond to the survey. The researcher also reminded students to give the information sheet to their parent and have them read through it. Upon receiving online parental permission, the researcher provided a link to access the online survey by sending it to the child's email address. Teachers who displayed interest in the study were given the option of providing their email so a link could be sent to their account. Child assent (see Appendix E) and teacher consent (see Appendix F) were provided on the first page of the online survey. Only upon electronic assent/consent was the student/teacher able to access the survey.

The survey was conducted using a secure online survey tool (i.e., OSU - qualtrics). Middle and high school students (8<sup>th</sup> – 10<sup>th</sup> grade) and teachers (8<sup>th</sup> – 10<sup>th</sup> grade) participated in the online survey. Students and teachers had the opportunity to take the survey at their convenience. The survey took approximately 15 to 20 minutes for participants to complete.

### **Considerations of Methodology**

There are many benefits associated with online surveys. They have the potential to reach a large number of participants and permit the collection of larger amounts of data than would be possible with traditional survey methods. They can be conducted quickly and easily and are more economical than mailed surveys (Ary et al., 2010). Additionally, online surveys can significantly reduce the amount of time and effort and costs related to inputting data into a system for analysis. Furthermore, because online surveys are available at anytime participants can reply when and where they choose (Cook, Heath, & Thompson, 2000).

The major limitation of online surveys is that samples are limited to those with access to technology and who choose to respond. The large number of potential participants also does not overcome the problem of sampling error due to lack of representativeness (Ary et al., 2010). This is particularly a concern in the present study given that the sample is purposive. As a result, generalizability to the greater population is hindered. The use of a non-random sample also limits equal opportunity for participant selections, further threatening external validity (Stanley & Campbell, 1963).

## **Validity Issues**

A question that all researchers must ask is whether the inferences drawn about the relationship between the variables of a study are valid or not (Ary et al., 2010). Campbell and Stanley (1963) defined two general categories of validity of research designs: internal validity and external validity. Internal validity for correlational studies refers to the accuracy and quality of the study (Creswell, 2009) while external validity is defined as the extent that results of an experiment can be generalized to different subjects and settings (Vogt & Johnson, 2011).

A major threat to internal validity with most survey studies is that the data is self-reported. Instead of providing truthful reports, participants may be inclined to lie or provide socially desirable answers. For example, students may not be willing to self-identify as a cyberbully because they know this will be viewed in a negative light. An additional threat is the differences in definitions and operationalizations of cyberbullying. As Vandebosch and Cleemput (2008) point out, inconsistent results have been found in existing studies of cyberbullying because respondents do not always consider definitions of cyberbullying. Finally, because many of the research questions are correlational in nature it is not possible to account for all the variables that may be associated with the dependent variables.

A major external validity limitation of online surveys is that samples are restricted to participants who have access to and knowledge of technology (Flatley, 2001). Furthermore, sampling error may occur because only some of the possible respondents were surveyed from the population (due the utilization of convenience sampling) (Dillman, Smyth, & Christian, 2009). That is, findings may not accurately reflect what is

found in the population at large. Non-response error may also pose a problem. This results when “participants selected for a survey who do not respond are different in a way that is important to the study from those who do respond” (Dillman et al., 2009, p. 19), therefore, reflecting inaccurate generalizations.

### **Data Analysis**

To address the research questions for this study, several statistical procedures were utilized and are outlined below. All data analyses were carried out using the Statistical Package for the Social Sciences (SPSS).

#### **Descriptive statistics**

Descriptive statistics were first computed to better understand the nature of the sample evaluated. Frequencies, percentages, and cross-tabulations were used to analyze categorical variables. For example, participants were categorized according to their level of involvement in cyberbullying: cyberbully, cybervictim, cyberbully/victim, and not involved and percentages were calculated for the typical forms that cyberbullying takes (e.g., text messaging, email, etc.). In addition, means and standard deviations were obtained for continuous variables, such as age and number of years taught. Teacher age, however, is displayed as a percentage in order to better conceptualized this split between digital native and digital immigrant respondents.

#### **Research Question One: Is there a difference between students’ and teachers’ perception of the seriousness of cyberbullying?**

Correlational analyses were utilized to answer Research Question One. The independent variables compared to one another were (1) students and (2) teachers with the dependent variable being the perception of the seriousness of cyberbullying. Cramer’s

V analysis was conducted for all relationships. Cramer's V is an appropriate form of analysis because a 2 x 4 table was constructed where the independent variable is nominal and the dependent variable is ordinal. First, the relationship between the independent variables and the dependent variable were examined. Then, relationships between the perception of the seriousness of cyberbullying and the perception of the seriousness of other aggressive school acts (i.e., face-to-face bullying, physical violence, and sexual harassment) were investigated in order to determine whether various aggressive acts were related to one another.

**Research Question Two: To what extent does student cyberbullying status (i.e., cyberbully, cybervictim, cyberbully/victim, and not involved) contribute to student problems, such as (a) school belonging and (b) social anxiety?**

To answer research question two, a series of one-factor analysis of variance (ANOVA) models were used to examine mean level changes on the dependent variables (a) school belonging and (b) social anxiety. The independent variable is cyberbullying status, which had three levels: (a) cybervictim, (b) cyberbully/victim, and (d) not involved. This method of analysis is appropriate given that there is only a single categorical factor. Appropriate post hoc analyses were conducted to determine which variables contributed to the significant results found.

**Research Question Three: What is the effect of each of the following variables on teacher attitudes toward the seriousness of cyberbullying: (a) teacher comfort with technology, (b) their interaction with technology, and (c) their perception of the importance of technology?**

To answer Research Question 3, a multiple regression model for teachers was computed to assess the relationship of the independent variables of (a) comfort with technology, (b) interaction with technology, and (c) the perception of the importance technology. Multiple regression is an appropriate technique for examining the relationship between categorical and/or continuous variables and a continuous dependent variable. The dependent variable is the seriousness question, which is on a 4-point Likert scale (1 = strongly disagree to 4 = strongly agree). The independent variables were entered as a block, because their collective relationship is sought and there is no a priori assumption about the order of the relationship.

**Research Question Four: What is the effect of each of the following variables on student attitudes toward the seriousness of cyberbullying: (a) their comfort with technology, (b) their interaction with technology, and (c) their perception of the importance of technology?**

To answer Research Question 4, a multiple regression model for students was computed to assess the relationship of the independent variables of (a) comfort with technology, (b) interaction with technology, and (c) the perception of the importance technology. Multiple regression is an appropriate technique for examining the relationship between categorical and/or continuous variables and a continuous dependent variable. The dependent variable is the seriousness question, which is on a 4-point Likert scale (1 = strongly disagree to 4 = strongly agree). The independent variables were entered as a block, because their collective relationship is sought and there is no a priori assumption about the order of the relationship.

**Research Question Five: (a) What is the relationship between teacher technology “immigrant” status (i.e., digital immigrant and digital native) and the extent to which they believe schools are using appropriate methods to address cyberbullying effectively? (b) What is the relationship between student cyberbullying status and the extent to which they believe schools are using appropriate methods to address cyberbullying effectively? (c) Is there a difference between teachers’ and students’ perception of the extent to which they believe schools are using appropriate methods to address cyberbullying effectively?**

A two-step process was used to answer research questions 5 (a), (b), and (c). First, the perceived effectiveness of each method by students and teachers was determined by averaging the ranks of each method, with more effective methods having a higher average. Next, t-tests, and an ANOVA for question 5(b), were conducted to compare the responses of students and teachers on all methods of addressing cyberbullying. These analyses are appropriate because it compares the means of groups.



## **Chapter 4: Results**

In this chapter, results of the quantitative analyses are presented. First, descriptive results are provided to better understand the nature of the sample evaluated. In order to answer research question correlational analyses were utilized. A one-factor analysis of variance (ANOVA) was then utilized to answer research question two. Research questions three and four were answered by the use of multiple regression analyses for each dependent variable. Next, the perceived effectiveness of each intervention method was averaged and ranked followed by two *t*-tests and a one-way ANOVA to answer research questions 5 (a), (b), and (c). Finally, open-ended responses from students and teachers are provided throughout to augment the quantitative analyses.

### **Descriptive statistics**

#### **Prevalence and forms of cyberbullying**

To examine the prevalence of cyberbullying and its varying forms, the researcher computed frequencies for students' responses related to whether they had been involved with cyberbullying (as a victim or cyberbully/victim) and each form of cyberbullying that occurred (e.g., text message cyberbullying, email cyberbullying, etc.). As shown in Table 3, a cross-tabulation of respondent's cyberbullying status revealed that all students who identified as a cyberbully also identified as a cybervictim. Thus, no frequencies were calculated for the cyberbullying status of "cyberbully". The majority of students indicated they had not been cyberbullied or cyberbullied others in the past 30 days (see Table 4).

Responses from students who had been involved with cyberbullying indicated that the occurrence was only seldom (Cybervictim = 17.0%, Cyberbully/victim = 11.3%). As such, students were classified as a cybervictim and cyberbully/victim if they seldom experienced cyberbullying in the past 30 days (N = 15). These cybervictim, cyberbully/victim, and non-victim groups were used for comparisons in subsequent analyses.

Table 3

*Cross-tabulation of Cyberbullies and Cybervictims*

		Have you ever told anyone that you were cyberbullied?		Total
		Yes	No	
How often have you been cyberbullied in the past 30 days?	Never	44	0	44
	Seldom	3	6	9
Total		47	6	53

Table 4

*Percentages of Students Reporting Cyberbullying Status*

	Never	Seldom
How often have you <u>been cyberbullied</u> in the past 30 days?	83.0	17.0
How often have you <u>cyberbullied others</u> in the past 30 days?	88.7	11.3

Note:  $n = 53$ .

Table 5 further demonstrates that students were mostly cyberbullied (though seldom) via text message (66.7%), email (50 %), and individuals setting up a negative website about the individual or revealing personal information about their life (44.4%). However, cell phone pictures and/or video clips (12.5%) and instant messaging (11.1%) were the only forms where students indicated they had been cyberbullied frequently.

Cybervictims were additionally given the opportunity to provide an open-ended response as to which form of cyberbullying they found the worst and why. For example, one student wrote, “I think the worst is when someone picks a fight with you to look ‘cool’ and posts it on Facebook or Worldstar. I believe people should not be humiliated that way.” Another student stated, “A negative website because it leaves the victim wide open for insults and he cannot do anything about it because it was not created by him.” In contrast, other students felt all forms of cyberbullying were equally as bad as they reported, “All of them are bad” or “It’s all the same to me.”

Table 5

*Percentages of Forms of Cybervictimization*

I have <i>been</i> cyberbullied by...	Never	Seldom	Frequently	Constantly
Text message (n = 9)	33.3	66.7	-	-
Cell phone pictures and/or video clips (n = 8)	62.5	25.0	12.5	-
Phone call (n = 9)	77.8	22.2	-	-
Email (n = 8)	50.0	50.0	-	-
Chat room (n = 9)	77.8	22.2	-	-
Instant messaging, such as Facebook chat or Gmail chat (n = 9)	55.6	33.3	11.1	-
Individuals setting up a negative website about you or revealing personal information about your life (n = 9)	55.6	44.4	-	-

Cyberbully/victims, as shown in Table 6, reported an overall lower frequency of cyberbullying across the various forms presented. Cell phone pictures and/or video clips was once again the only form of cyberbullying that had been rated as occurring frequently (16.7%) while text messages (33.3%) and setting up a negative website about an individual and revealing personal information about their life (33.3%) were the next highest forms of cyberbully perpetration.

Table 6

*Percentages of Forms of Cyberbully Perpetration*

I have cyberbullied others by...	Never	Seldom	Frequently
Text message (n = 6)	66.7	33.3	-
Cell phone pictures and/or video clips (n = 6)	66.7	16.7	16.7
Phone call (n = 6)	83.3	16.7	-
Email (n = 6)	83.3	16.7	-
Chat room (n = 6)	83.3	16.7	-
Instant messaging, such as Facebook chat or Gmail chat (n = 6)	83.3	16.7	-
Setting up a negative website about an individual or revealing personal information about their life (n = 6)	66.7	33.3	-

Teachers additionally rated the frequency of which they heard cyberbullying occurring in the past 30 days (Table 7). In contrast to student's self-reports, more teachers reported they had heard of cyberbullying occurring (Seldom = 36.2%, Frequently = 17%) than not (46.8%).

Table 7

<i>Percentages of Teachers Who Heard of Cyberbullying Occurrences at School</i>			
	Never	Seldom	Frequently
How often have you heard the past 30 days? (n = 47)	46.8	36.2	17.0

### **Reporting cyberbullying**

Frequencies were additionally calculated to determine the percentage of students that told someone they were cyberbullied or witnessed or heard of cyberbullying and whether or not they found the act of reporting helpful. Few students told someone they had been cyberbullied (11.5%; see Table 9). Further, a cross-tabulation, displayed in Table 8, revealed that seven of the nine students (78%) who indicated they had been cyberbullied in the past 30 days did not report the instance(s) in which they were cyberbullied to another individual. Thus, four additional students in the student sample (N= 53) had been a cybervictim, just not within the past 30 days. Students who reported to someone that they had been cyberbullied were most likely to tell a friend (71.4%) and least likely to tell a teacher (28.6%). The majority of students found telling an individual, regardless of who it was, very helpful with the exception of telling another adult at school (somewhat helpful, 75%).

Cybervictims additionally provided explanations as to why they found reporting instances of cyberbullying to certain individuals helpful. For example, one respondent stated, "They (teachers) talked to other teachers at other schools to find out who it was."

Another student indicated that it was very helpful to tell their parent they were being cyberbullied because “I didn’t have to worry about stressing out so I told them right away.” Peers were also indicated as helpful. This was indicated via comments, such as, “They were very supportive and helped to calm me down” and “Because they helped me get them blocked and to get them to stop.” Alternately, cybervictims who didn’t find reporting helpful made statements, such as “Other teachers that had found out in my school did not believe the people I had blamed had done this to me, so they went on ignoring the subject” and “My parents just got mad because I was online.”

Table 8

*Cross-tabulation of Cybervictims in the Past 30 Days and Students who Told Someone they were Cyberbullied*

		Have you ever told anyone that you were <u>cyberbullied</u> ?		<u>Total</u>
		Yes	No	
How often have you been cyberbullied in the past 30 days?	Never	4	39	43
	Seldom	2	7	9
Total		6	46	52

Table 9

*Percentages of Students who Reported Cyberbullying to Someone and if it was Helpful*

	Have you every told anyone that you were cyberbullied?		If yes, were they helpful?		
	Yes (11.5)	No (88.5)	Not Helpful	Somewhat Helpful	Very Helpful
I told a teacher	28.6	71.4	-	-	100.0
I told another adult at school	57.1	42.9	-	75.0	25.0
I told my parent/guardian	57.1	42.9	-	25.0	75.0
I told a friend(s)	71.4	28.6	-	40.0	60.0

Note:  $n = 6$ ; (Percentage of students who told someone they were cyberbullied).

As displayed in Table 10, students who witnessed or heard of cyberbullying were more likely to report a cyberbullying occurrence (56.7%) to an individual than students who had been cyberbullied (11.5%). A greater spread of the level of helpfulness was found in comparison to students who reported they had been cyberbullied to someone. Additionally, students indicated that telling friends was least helpful (not helpful, 30.4%) while telling another adult at school (very helpful, 45.5%) and a parent (very helpful, 41.2) were generally helpful. A number of students reported that it was helpful to report cyberbullying to an individual because they provided useful advice or helped to get the appropriate people involved. However, one student respondent stated, “They (parent) gave me advice on how to deal with it and how to stand up for people, but I feel like it’s hard for them to fully understand it because they don’t deal with it everyday and they don’t see it as often as teenagers do.” In addition, students indicated that telling a friend was not always helpful because “When I talk to my friends about other people being



bullied they shrug it off as if it is not their problem. They don't want to be involved with something like that if it's for someone they don't associate with" and "They don't really care and it comes to a point where it's normal in everyday life."

Table 10

*Percentages of Bystanders who Reported Cyberbullying to Someone and if it was Helpful*

	If you witnessed or heard about cyberbullying occurring, did you tell anyone?		If yes, were they helpful?		
	Yes (56.6)	No (43.4)	Not Helpful	Somewhat Helpful	Very Helpful
I told a teacher	43.3	56.7	7.7	53.8	38.5
I told another adult at school	36.7	63.3	9.1	45.5	45.5
I told my parent/guardian	56.7	43.3	5.9	52.9	41.2
I told a friend(s)	76.7	23.3	30.4	52.2	17.4

Note:  $n = 30$ ; (Percentage of students who told someone they witnessed or heard about cyberbullying)

### Reliability of subscales

Averaged scales were used in the survey instruments to probe underlying constructs that the researcher wanted to measure. This included the Sense of School Belonging Scale (student survey), Social Anxiety Scale (student survey), Technology Comfort Scale (student and teacher survey), Technology Accessibility Scale (student and teacher survey), and Technology Importance Scale (student and teacher survey). Each of these scales were set up in a Likert format and later averaged to arrive a resultant score

for the respondent. In order to measure the internal consistency of these subscales Chronbach's alpha was calculated.

Within the student survey, there appeared to be good internal consistency for the School Belonging ( $\alpha = .88$ ), Social Anxiety ( $\alpha = .71$ ), Technology Comfort ( $\alpha = .81$ ), and Technology Importance ( $\alpha = .70$ ) subscales (see Table 11). The Technology Comfort subscale of the teacher survey also appeared to have good internal consistency ( $\alpha = .76$ ). However, the Technology Importance subscale of the teacher survey only displayed moderate internal consistency ( $\alpha = .57$ ).

Table 11

<i>Internal Consistency of Teacher and Student Survey Subscales</i>								
Scale	Items; (Description)	Teacher			Student			
		$\bar{X}$	s	$\alpha$	$\bar{X}$	s	$\alpha$	
School Belonging	5; Higher = More Belonging	-	-	-	4.02	.80	.88	
Social Anxiety	3; Higher = More Anxiety	-	-	-	2.17	.94	.71	
Technology Comfort	11; Higher = More Technological Comfort	2.84	.49	.76	2.87	.59	.81	
Technology Accessibility*	5; Higher = More Access	4.23	.87	-	4.04	.91	-	
Technology Importance	5; Higher = Greater Importance	2.70	.43	.57	2.60	.56	.70	

Note: \*Reliability data not available due to binary response.

### Correlations between Subscales

The correlations between subscales in the teacher and student surveys are presented. The correlations on the student survey subscales (Table 12) overall have

positive trends with the exception of Social Anxiety, which has a negative trend. A significant relationship was found between Technology Importance and Comfort Overall ( $r = .378, p = .006$ ) Access to Technology and Technology Importance ( $r = .404, p = .003$ ), School Belonging and Comfort Overall ( $r = .405, p = .003$ ), and Access to Technology and Social Anxiety ( $r = -.368, p = .007$ ).

Table 12

<i>Pearson Product Moment Correlations of Student Survey Subscales</i>					
	1	2	3	4	5
1. School Belonging	-				
2. Social Anxiety	-.094	-			
3. Comfort Overall	.405**	.081	-		
4. Technology Importance	.175	-.154	.378**	-	
5. Access to Technology	.199	-.368**	.087	.404**	-

Note: \*\* Significant at the .01 level.

The correlations on the teacher survey subscales (Table 13) displayed positive trends with Importance of Technology and Comfort Overall subscales being significantly related ( $r = .482, p = .001$ ).

Table 13

<i>Pearson Product Moment Correlations for Teacher Survey Subscales</i>			
	1	2	3
1. Comfort Overall	-		
2. Technology Importance	.482**	-	
3. Access to Technology	.273	.175	-

Note: \*\* Significant at the .01 level.

### **Perceived Seriousness of Aggressive Acts at School**

The Cramer's V correlation between students' and teacher's perception of the seriousness of cyberbullying was used to answer research question one. Table 14, indicates the result was statistically significant ( $\chi^2 = 22.30, p = .001$ ) with a moderate effect size (Cramer's V = .472). As can be seen in Table 13, teachers were more likely to perceive cyberbullying as a significant issue at school than students. That is, 74.4% of teachers agreed or strongly agreed that cyberbullying is a serious problem while only 30.1% of students agreed or strongly agreed that it was a serious problem. Similarly, a significant difference was found with the perception of the seriousness of face-to-face bullying ( $\chi^2 = 14.35, p = .002$ ) and sexual harassment ( $\chi^2 = 16.94, p = .001$ ) among teachers and students. Once again, teachers viewed each of these acts of aggression as a more serious problem at school than students.

Table 14

*Percentages and Cramer's V Correlations of Perceived Seriousness of Aggressive Acts at School*

	Strongly Disagree		Disagree		Agree		Strongly Agree		Chi-Square	Cramer's V
	T	S	T	S	T	S	T	S	$\chi^2$	V
Cyberbullying	2.1	22.6	23.4	47.2	63.8	22.6	10.6	7.5	22.30*	.472**
Face-to-face bullying	2.1	17.0	25.5	45.3	63.8	30.2	8.5	7.5	14.35*	.379**
School violence	27.7	24.5	51.1	43.4	17.0	24.5	4.3	7.5	1.52	.123
Sexual harassment	4.3	37.7	40.4	32.1	42.6	22.6	12.8	7.5	16.94*	.412**

Note:  $df = 3$ ; \* $p < .05$ , \*\* $p < .01$ . ;  $n$ : Teacher = 47, Student = 52

### Cyberbullying and School Problems

A one-way ANOVA was used to investigate the extent to which student cyberbullying status (i.e., cyberbully, cybervictim, cyberbully/victim, and not involved) contributed to feelings of school belonging and social anxiety (research question two). A cross-tabulation of respondent's cyberbullying status revealed that all students who identified as a cyberbully also identified as a cybervictim. Thus, the cyberbullying status of "cyberbully" was not examined. As shown in Table 15, cyberbullying status did not significantly influence the sense of school belonging in the schools sampled ( $F = 2.15$ ,  $p > .05$ ). However, the means indicate a downward trend with cybervictims feeling the least sense of belonging overall. In addition, cyberbullying status did not significantly affect student's feelings of social anxiety.

Table 15

*One-way ANOVA of the Extent to Which Cyberbullying Status Contributes to Student Problems.*

	Not Involved		Cybervictim		Cyberbully/victim		F	p-value
	$\bar{X}$	s	$\bar{X}$	s	$\bar{X}$	s		
School Belonging	4.11	.79	3.20	.85	3.63	.72	2.15	.13
Social Anxiety	2.16	.86	2.17	.71	2.28	1.62	.04	.96

Note: *n*: Not Involved = 44, Cybervictim = 2, Cyberbully/victim = 6

### **Attitudes Toward the Seriousness of Cyberbullying**

Multiple regression analysis was used to test the effect of (a) comfort with technology, (b) interaction with technology, and (c) perception of the importance of technology on teachers attitudes toward the seriousness of cyberbullying. Table 16 indicates the independent variables explained 7% of the variance. Counter to the researcher's hypothesis, comfort with technology, interaction with technology, or perception of the importance of technology did not predict teachers' attitudes toward the seriousness of cyberbullying.

Table 16

*Multiple Regression of the Effect of (a) Comfort with Technology, (b) Interaction with Technology, and (c) Perception of the Importance of Technology on Teacher Attitudes toward the Seriousness of Cyberbullying*

	Unstandardized Coefficient		Standardized Coefficient		
	B	Std. Error	Beta	t-value	p-value
Intercept	.82	.90		.93	.36
Gender	.14	.20	.10	.68	.50
8 <sup>th</sup> Grade	.50	.31	.26	1.62	.11
9 <sup>th</sup> Grade	.33	.20	.26	1.65	.11
Caucasian	.20	.38	.08	.53	.60
Overall Comfort	.35	.23	.27	1.57	.13
Tech Importance	.11	.26	.08	.43	.67
Interaction with Technology	.01	.01	.14	.89	.38

Note:  $n = 45$ ,  $R^2 = .07$ ; Male is reference variable; 10<sup>th</sup> Grade is reference variable; All other races is reference variable.

In addition, it was hypothesized that the same independent variables would predict students' attitudes toward the seriousness of cyberbullying. However, no significant relationships were found with 6% of the variance being explained by the independent variables (see Table 17)

Table 17

*Multiple Regression of the Effect of (a) Comfort with Technology, (b) Interaction with Technology, and (c) Perception of the Importance of Technology on Student Attitudes Toward the Seriousness of Cyberbullying*

	Unstandardized Coefficient		Standardized Coefficient		
	B	Std. Error	Beta	t-value	p-value
Intercept	2.52	.81		3.13	.01
Gender	.18	.27	.11	.70	.50
8 <sup>th</sup> Grade	-.14	.67	-.03	-.21	.83
9 <sup>th</sup> Grade	-.14	.27	-.08	-.54	.60
Caucasian	.43	.33	.20	1.31	.20
Overall Comfort	-.22	.24	-.16	-.93	.36
Tech Importance	-.01	.24	-.01	-.03	.97
Interaction with Technology	-.01	.01	-.10	-.55	.60

Notes:  $n = 51$ ;  $R^2 = .063$ ; Male is reference variable; 10<sup>th</sup> Grade is reference variable; All other races is reference variable.

### **Perception of Effective Methods to Address Cyberbullying**

Independent *t*-tests were conducted to investigate whether there were significant mean differences between the following variables: digital status (i.e., digital native vs. digital immigrant) and perceived effectiveness of methods to address cyberbullying and students versus teacher's ratings of perceived effective methods to address cyberbullying. In addition, a one-way ANOVA was used to investigate the extent to which student cyberbullying status (i.e., cyberbully, cyberbully/victim, and not involved) contributed to



perceived effectiveness of methods to address cyberbullying. The results from the analyses are outlined below.

### **Digital Immigrants vs. Digital Natives**

Counter to what the researcher hypothesized, there were no significant mean differences between teachers who were considered digital immigrants and teachers who were considered digital natives ratings of perceived effective methods to address cyberbullying. While a difference in rating Self-Monitoring as an effective form of intervention was bordering on significance (see Table 18), such findings are interpreted with caution due to the number of t-tests run, thereby increasing the likelihood of obtaining a significant finding by chance.

Table 18

*Independent t-test Comparisons of Digital Immigrants and Digital Natives Ratings of Effective Methods to Address Cyberbullying*

	Teachers				t	df	p-value
	Digital Immigrant		Digital Native				
	$\bar{X}$	s	$\bar{X}$	s			
Outside-Monitoring	.24	.63	.36	.66	-.64	41	.525
Self-Monitoring	.43	.95	1.09	1.23	-2.00	39	.053
Anonymous Reporting	.71	1.10	.86	1.17	-.43	41	.67
Peer Mentors	1.19	1.37	.68	1.04	1.37	37	.179
Education on Cyberbullying	1.00	1.18	1.39	1.34	-1.02	42	.312
Talking to Parents	1.14	1.32	1.00	1.20	.37	41	.711
School Administrator or Teachers	.19	.60	.05	.21	1.04	25	.307
School Rules	.57	.81	.32	.84	1.01	41	.320
Enforcing Laws	.10	.44	.32	.78	-1.15	33	.192
No Technology	-	-	-	-	-	-	-

Note: *n*: Digital Immigrant = 22, Digital Native = 24

### **Teachers vs. Students**

To investigate whether there were significant mean differences between student and teacher ratings of perceived effective methods to address cyberbullying Levene's test of homogeneity of variance was conducted and resulted in significance across all t-tests (see Table 19). Therefore, the assumption that the variances were homogeneous was rejected. Consequently, the results of the "Equal variances not assumed", or Welch  $t'$ , were interpreted. Results indicated that teachers were more likely to select Peer Mentors ( $t(67) = 3.15, p = .002$ ) and Education on Cyberbullying ( $t(80) = 2.39, p = .019$ ) as preferred methods for addressing cyberbullying while students were more likely to select Talking to School Administrators or Teachers ( $t(53) = -2.26, p = .028$ ), and Enforcing Laws ( $t(63) = -2.23, p = .029$ ) as preferred methods for addressing cyberbullying.

Table 19

*Independent t-test Comparisons of Teacher and Students Ratings of Effective Methods to Address Cyberbullying*

	Respondent				t	df	p-value
	Teacher		Student				
	$\bar{X}$	s	$\bar{X}$	s			
Outside-Monitoring	.30	.63	.45	.92	-.86	64	.394
Self-Monitoring	.75	1.12	.84	1.29	-.34	74	.733
Anonymous Reporting	.77	1.12	.84	1.29	-.28	78	.781
Peer Mentors	.91	1.22	.24	.64	3.15	67	.002
Education on Cyberbullying	1.18	1.27	.57	1.04	2.39	80	.019
Talking to Parents	1.07	1.23	1.03	1.22	.16	78	.878
School Administrators or Teachers	.11	.44	.46	.84	-2.26	52	.028
School Rules	.50	.90	.50	1.01	.01	75	1.00
Enforcing Laws	.25	.69	.68	1.02	-2.23	63	.029
No Technology	-	-	.19	.70	-1.64	36	.109

Note: n: Teacher = 47, Student = 52

Students and teachers were additionally given the opportunity to respond via an open-ended question as to why they thought a particular method of addressing cyberbullying was most effective. The following are some of the responses that students provided:

- “Anonymous! Because if someone is hurting you I am often too scared and shy to tell anyone, but if it’s anonymous no one will know I was the one to tell.”
- “...people need to realize they’re actions are wrong. That’s why self-monitoring is important because they might not realize there are bullying someone.”
- “I believe that some people do not have the confidence, courage, and/or strength to stand up for themselves when they are being cyberbullied because it can break someone down mentally. Parents and administrators can help people deal with cyberbullying and anonymous reporting can help people feel safe about their actions without feeling like a target.”
- “Self-monitoring is very effective for this generations youth because children today are constantly becoming more independent. This method will allow children to look over the choices they have made. With anonymous reporting, children don’t want adults hounding them or to be hurt by their peers. If they keep their identity a secret they will have a more sound mind. A child’s parents are the most important people they can have in their lives, but if parents are not there for the child, then who will be there for them.”

Examples of teacher responses are as follows:

- “Educate students early on about what cyberbullying is and its detrimental effects. They need to self-monitor that they do not participate in it and they need to know what to do if they become victims. A strong message should be sent from student leaders that cyberbullying isn’t cool.”
- I think students need to know the consequences for cyberbullying. Many times they just think that they might get in trouble at school, but they are unaware of the

legal ramifications. This especially applies to “sexting” since the laws have not caught up with the technology.”

- “There is probably no way to prevent cyberbullying. We have not been able to come up with a way to prevent face-to-face bullying in all these years. It is easier to hurt someone you don’t have to look in the eyes and therefore harder to prevent.”
- “Peer mentors – once they’re educated, peer pressure to do the right thing is more powerful, at this age, than nearly everything else.”
- “Creating lessons and experiences that reinforce personal responsibility and give students strategies and role playing experiences for how to deal with cyberbullying (interrupting it, reporting, etc.).”

### **Cyberbullying Status**

Finally, an analysis of variance (see Table 20) showed that cyberbullying status significantly contributed to the manner in which Outside-Monitoring was perceived as an effective measure to address cyberbullying ( $F(2,49) = 4.01, p = .024$ ). Post hoc analyses using the Tukey’s HSD post hoc criterion for significance indicated that students who weren’t involved with cyberbullying ( $M = 3.27, SD = .62$ ) were significantly more likely to rate Outside-Monitoring as an effective method to address cyberbullying than cyberbully/victims ( $M = 2.50, SD = .84, p = .041$ ). In addition, it was trending on significance that cyberbullying status contributed to perceived effectiveness of School Administrators or Teachers intervening with cyberbullying. That is, students who were not involved with cyberbullying ( $M = 2.89, SD = .72$ ) rated Talking to School

Administrators or Teachers as a more effective method to address cyberbullying than cybervictims ( $M = 2.00$ ,  $SD = .01$ ) and cyberbully/victims ( $M = 2.33$ ,  $SD = .52$ ).

Table 20

*One-way ANOVA of the Extent to which Cyberbullying Status Contributes to Perceived Effectiveness of Methods to Address Cyberbullying*

	Not Involved		Cybervictim		Cyberbully/victim		F	p-value
	$\bar{X}$	s	$\bar{X}$	s	$\bar{X}$	s		
Outside-Monitoring	3.27	.62	2.50	2.12	2.50	.84	4.01	.024
Self-Monitoring	2.84	.71	2.50	2.12	2.33	.82	1.25	.297
Anonymous Reporting	3.00	.78	2.50	.71	2.50	1.05	1.30	.283
Peer Mentors	2.75	.719	3.00	1.41	2.83	.753	.13	.875
Education on Cyberbullying	2.55	.90	2.50	.71	2.50	.84	.01	.991
Talking to Parents	2.91	.77	2.00	.01	2.83	.41	1.47	.24
School Administrator or Teachers	2.89	.72	2.00	.01	2.33	.52	2.99	.059
School Rules	2.73	.76	1.5	.71	2.67	1.03	2.31	.110
Enforcing Laws	2.98	.76	2.00	.01	2.67	1.03	1.76	.18
No Technology	1.61	.84	1.50	.71	1.83	.75	.21	.81

Notes:  $n$ : Not Involved = 44, Cybervictim = 2, Cyberbully/victim = 6

## **Chapter 5: Discussion**

The purpose of this study was to examine students' and teachers' perceptions and reactions toward cyberbullying and technology. This study contributes to the existing research on cyberbullying in terms of describing the characteristics of cyberbullying and its possible contributions to school problems. Because cyberbullying is a relatively recent phenomenon, however, there are still many areas that have yet to be addressed. As such, the researcher sought to deepen knowledge about cyberbullying intervention and examine whether the manner in which technology is understood, utilized, and accessed impacts teachers' and students' perception of the way cyberbullying can best be addressed. The following is a discussion of the results found from the study and what their implications may be.

### **Descriptive Characteristics of Cyberbullying**

#### **Prevalence of Cyberbullying**

Students in this study reported only seldom involvement with cyberbullying (Cybervictim = 17.0%, Cyberbully/victim = 11.3%). Teachers, however, reported hearing of cyberbullying among students with a higher frequency (Seldom = 36.2%, Frequently = 17%), which indicates that it may be occurring at a greater rate than students are self-reporting or that teachers perceive cyberbullying occurring at a greater rate than it actually is. It was further revealed that all students in the study who identified as a cyberbully also identified as a cybervictim. Therefore, an adolescent may be more



comfortable self-disclosing that they have cyberbullied others if they have been cyberbullied themselves. Additionally, it is reasonable to assume that there may have been a greater prevalence of cyberbullies than were indicated in the sample who simply chose not to report the act. Particularly, because past research indicates upwards of 29% of youth have disclosed they cyberbullied others (Berson, Berson, & Ferron, 2002; Hinduja & Patchin, 2009; Ybarra & Mitchell, 2007).

As found in previous research, text messaging, email, and individuals setting up a negative website were the most frequent forms of cyberbullying identified (Smith et al., 2008). However, cell phone picture and/or video clips and instant messaging were the only forms that students indicated they had been cyberbullied by frequently. According to Patchin and Hinduja (2006), cell phone pictures and/or video clips may be used as a more frequent medium to cyberbully someone with because they allow for covert use in places where individuals typically expect privacy thereby making it easy to hurt and embarrass somebody. In addition, instant messaging may also have been designated as a frequently used form of cyberbullying because direct messages can be sent to targeted victims while they are online at the same time with cyberbullies knowing that those messages are received by the target (because instant messages are sent and received in real time) (Hinduja & Patchin, 2009). Therefore, cyberbullies may feel a greater amount of certainty that they are able to target a victim without a message immediately being deleted before it's looked at.

Cyberbully/victims indicated they engaged in similar forms of cyberbullying, though to a lesser extent. These findings are expected given the large overlap between victims and bullies in the study.

Varying responses were provided when students were given the opportunity to discuss which forms of cyberbullying they found the most detrimental and why. Some students discussed how posting negative information on a social networking site is humiliating while others felt all forms of cyberbullying were equally as bad. Though there was a lack of consistency between comments it does imply that the impact of cyberbullying is wide reaching and hurtful. It is important to keep in mind, however, that given the ever-changing status of technology, it is likely that there will be changes in the frequency of different forms of cyberbullying utilized and the impact they could potentially have.

### **Reporting Cyberbullying**

Consistent with previous literature, few students reported they had been cyberbullied to another individual (Juvonen & Gross, 2008; Slonje & Smith, 2008; Smith et al., 2008). In particular, 78% of students who indicated they had been cyberbullied within in the past 30 days did not report the instance(s) to anybody. Students who reported to someone they had been cyberbullied were most likely to tell a friend and least likely to tell a teacher. Though they found the act of telling someone generally helpful, cybervictims did not always have positive experiences when reporting they had been cyberbullied as exemplified by teachers not believing a student's claim and a parent simply becoming upset because their child was online. Therefore, even while the act of reporting appears to be more helpful than not, there still is a great amount of underreporting occurring. As has been hypothesized in the past, adults may seem less informed about cyberbullying issues and as a result less likely to be consulted (Smith et al., 2008). Students may also hesitate to report due to the nature of cyberbullying. For

example, because cyberbullying can be anonymous a student may be unwilling to report the act because they feel nothing can be done to help. Further, students may be reluctant to show the evidence that they've been cyberbullied to another adult because they are frequently targeted with pictures or videos, which can be embarrassing or place them in a compromising position.

It is heartening, however, that over 50% of the student sample reported they had witnessed or heard about cyberbullying to someone. Many bystanders found the act of telling an adult helpful because they received useful advice or were supported in getting the appropriate people involved. Despite these reports, bystanders most frequently reported an instance of cyberbullying to a friend (though they found friends least helpful). Adolescents may be more likely to confide in a friend because they can more easily relate to the cyberbullying situation than an adult. As one student stated, "...I feel like it's hard for them (parents) to fully understand it (cyberbullying) because they don't deal with it everyday and they don't see it as often as teenagers do." However, friends may feel less inclined to step in, particularly when they're hearing about cyberbullying second hand. Also, as noted in traditional bullying literature, fellow peers may be hesitant to help or intervene because of the possibility of becoming the target of cyberbullying themselves (Olweus, 1993). In addition, there is the possibility that adolescents have become desensitized to cyberbullying, thus making friends less likely to intervene if it's perceived as a "normal part of everyday life." Nevertheless, these findings call for the need for greater adult involvement and intervention.

## **Inferential Findings**

### **Correlations between Subscales**

Interestingly, students that had greater access to various forms of technology (e.g., smart phone, internet at home, tablets, etc.) were significantly less likely to experience feelings of social anxiety. This finding speaks to the social importance that technology plays in adolescent's lives. As noted in the literature, technology has become an integral part of how adolescents develop their social identity (Palfrey and Gasser, 2008). For example, adolescents often use technology as a social medium to disclose personal information, hold significant conversations with peers, or display pieces of their lives via pictures, videos or personal blogs in order to gain social approval, intimacy, or relief of distress (Berson et al., 2002). Therefore, a greater sense of social anxiety is possibly felt because students are unable to engage in a primary form of social interaction with their peers. Students also may be perseverating on what they're "missing out on" socially because they do not have access to technology, which, in turn, could increase feelings of social anxiety.

In addition, it was found that as students comfort with technology increased so did their sense of school belonging. Within recent years, the use of technology in school has become a necessary part of both teachers' and students' lives. It is now required as a means to complete and turn-in homework, check grades, research important topics, and communicate with teachers. Further, teachers are utilizing sites, such as youtube.com or wiki pages to supplement their teaching (Qualman, 2013). Thus, requiring students to engage with technology in a variety of manners. As such, a student who has high comfort with using various modes of technology as well as feelings of discomfort when they have

to go without technology for an extended period of time may feel a higher sense of belonging in school because technology is an important means, which enables their success in school both socially and academically.

Finally, many of the technology subscales (i.e., Comfort Overall, Technology Importance, and Access to Technology) were significantly and positively correlated with one another on the student and teacher surveys. This helps to support the researcher's hypothesis that these constructs are related and may help to identify an individual's digital status (i.e., digital immigrant vs. digital native).

### **Perceived Seriousness of Cyberbullying and Other Aggressive Acts at School**

Given that students typically underreport cyberbullying, it was expected that students would perceive cyberbullying as more serious at school than teachers (Slonje & Smith, 2008; Smith et al., 2008). Counter to the researchers hypothesis, however, teachers were more likely to perceive cyberbullying, face-to-face bullying, and sexual harassment as serious at school when compared to students. This finding could be possible for a number of reasons. First, student respondents may perceive school as less relevant, given that much cyberbullying happens outside of school (Smith et al., 2008). Students may also feel that aggressive acts, such as cyberbullying and traditional bullying are fairly commonplace and simply a part of growing up (Hinduja & Patchin, 2009). In addition, students may be more prone to view such aggressive acts as joking or teasing (particularly if this helps them to cope with the event) while teachers may more easily differentiate between a serious aggressive act and a less serious problem.

Alternately, teachers likely observe the majority of student perpetrated aggressive acts at school (as opposed to at home or other public places) making it perceived as a more

significant problem. Teachers additionally may not be aware of aggressive acts until they occur at a more severe level, therefore, creating the perception that it is a serious problem.

It is further interesting to consider that teachers appear to be taking cyberbullying just as seriously as other aggressive acts that have a tendency to be more overt at school. As the literature states, cyberbullying can often go unnoticed particularly because the majority of incidents happen off school grounds and because adults often aren't effectively monitoring adolescent's technology use (Hinduju & Patchin, 2009; i-Safe, 2003). Therefore, this finding of a heightened awareness cyberbullying may imply that teachers have gained a better understanding of how to monitor cyberbullying.

### **Cyberbullying and School Belonging**

While cyberbullying status did not significantly contribute to students' sense of school belonging (perhaps due to the low sample size) a downward trend was found with cybervictims feeling the least sense of school belonging overall. This is not surprising given that sense of school belonging has been found to be negatively associated with traditional bullying behavior. That is, a students' sense of school belonging decreased as involvement with traditional bullying increased (Bosworth, Espelage & Simon, 1999). Though not examined in this study, it is also important to consider that schools, which foster a high sense of school belonging overall, may serve as a protective factor for those involved with cyberbullying. For example, a recent study by Hinduja and Patchin (2012) noted that fewer students reported experiencing (either as a victim or bully) cyberbullying as the quality of their school climate increased (a similar construct to school belonging).

### **Technology and Attitude Toward the Seriousness of Cyberbullying**

Comfort with technology, interaction with technology, and the perception of the importance of technology were not predictive of neither teacher nor student attitudes toward the seriousness of cyberbullying. Due to the experimental nature of testing this hypothesis it is difficult to say whether this was an accurate finding or not. For example, on the teacher survey the Technology Importance subscale was only found to have moderate internal consistency ( $\alpha = .57$ ) thus decreasing correlations associated with that scale. In addition, because cyberbullying has had so much recent exposure in the media this may impact teachers understanding of the phenomenon and therefore make all teachers aware of the seriousness of the topic.

### **Addressing Cyberbullying**

Significant differences were found among teachers and students ratings of perceived effective methods to address cyberbullying. That is, teachers were significantly more likely to select peer mentors and education on cyberbullying as preferred methods for addressing cyberbullying while students were more likely to select talking to school administrators or teachers and enforcing laws. The dichotomy between teachers' and students' perceptions of effective methods to address cyberbullying is interesting in that students feel that adult help would be the best way to address cyberbullying while teachers would prefer that students be given the tools and take responsibility for addressing cyberbullying amongst themselves. This, therefore, calls for increased efforts to have both students and teachers involved with cyberbullying intervention.

In addition, it was found that cyberbullying status significantly contributed to the manner in which outside monitoring was perceived as an effective measure to address

cyberbullying. In particular, students who weren't involved with cyberbullying were significantly more likely to rate outside monitoring as an effective measure to address cyberbullying than cyberbully/victims. As found earlier, those who are not directly involved with cyberbullying (i.e., bystanders) display a greater likelihood of reporting an instance of cyberbullying to another individual than those who are directly involved. However, many of the student respondents indicated that it was not helpful or only somewhat helpful when they informed someone they had witnessed or heard of an act of cyberbullying. Therefore, students may find some comfort in knowing that they have a designated individual that they can go to who can provide sound advice and know how to intervene effectively.

Finally, no significant differences were found between digital immigrants and digital natives ratings of effective methods to address cyberbullying. This lack of significance could be for a variety of reasons. The examiner was trying to measure the difference between digital immigrants and digital natives with the assumption that a digital immigrant would have access to multiple means of technology, display a high level of comfort with technology, frequently interact with technology, and perceive technology as important. However, it is possible that a different line of questioning may more accurately differentiate between digital natives and digital immigrants. For example, it might make sense to ask about the purpose of individual's technological use (e.g., to socialize with friends versus researching information) or to establish comfort levels based on the social aspects of technology. In addition, there were far fewer digital native teacher respondents (based on age) versus digital immigrant respondents, which may have skewed the results. There is also the consideration that the digital divide may



not be as apparent among teachers because they are required to stay up-to-date with technology in order to enhance their teaching. Further, because teachers are exposed to the manner in which adolescents interact with technology on almost a daily basis, they may have a better idea of the importance that technology plays in their social lives thus making their ratings of effective methods to address cyberbullying similar.

### **Limitations**

Several limitations lend caution to the interpretation of the researcher's findings. First, the use of a non-random, convenience sample limits the generalizability of the results, calling for replication of this study with larger and more diverse samples. Second, victims and perpetrators only rated that they had seldom engaged in cyberbullying behaviors. As such, results may not generalize to more aggressive cybervictims and cyberbullies. Third, the data presented in this study were cross-sectional, only allowing for a snapshot of these behaviors and thus prohibiting any statement about the stability or instability of cyberbullying behavior over time. Fourth, cyberbullying was measured in terms of behavior in the past 30 days. Thus, the systematic or chronic nature of cyberbullying behaviors was not assessed. Another limitation is the use of self-report data for cyberbully and cybervictim status. Traditional bullying research indicates that bullies and victims often underreport the problem of bullying (Raskauskas & Stoltz, 2008). Although the survey was entirely anonymous and was taken outside of the school setting, interpretation of the findings should take this into account. However, corroborating data from other informants (i.e., teachers and not involved students) was used thus aiding in making the findings more robust. Fifth, the participation rate was less than 50% due, in part, to the need to secure parental consent.

An additional consideration, however, is that, as technology changes so should methods of surveying individuals online. For example, it is possible that email may not be the most efficient way to recruit participants to participate in online surveys. As New York Times columnist, David Pogue, noted (2013), “The next generation feels voicemail and email are obsolete, replaced by the instant communication of texts and social media like Twitter and Facebook.” Therefore, a more effective way to recruit participants may be through text messages. Participants may additionally be more willing to complete online surveys if given the opportunity to respond via mobile devices, such as with smart phones or tablets. Finally, the researcher constructed the measure related to the digital divide, though seemingly face valid, it still awaits construct validation.

### **Implications and Future Directions**

Despite these limitations, there are many important implications from this study. First, cyberbullying remains a critical problem that is largely underreported. This points to the need for increased awareness among adults. As pointed out in prior studies, there can be a large discrepancy between adults’ perception of student technology use and what students report as their reality (Hinduja & Patchin, 2009; i-SAFE, 2003). Therefore, increased vigilance of student technology use on behalf of adults in the school building will help to heighten awareness of cyberbullying as well as add an additional protective layer for students who may be too shy or embarrassed to report they have been cyberbullied. Further, it becomes exceptionally important that students know what cyberbullying looks like and what to do if it occurs particularly because adolescents are most likely to report an instance of cyberbullying to their friends. Therefore, if trained on useful and basic skills, peers may better be able to serve as a resource.

Second, producing a culture of inclusiveness and belonging school wide may benefit youth who have potential to become involved with cyberbullying. Though the researcher examined sense of school belonging as an outcome variable, an initial study by Hinduja and Patchin (2012) noted that fewer students reported experiencing (either as a victim or bully) cyberbullying as the quality of their school climate increased. Thus, indicating a systems-wide level intervention that could prove useful for schools. One technique that schools may want to consider when attempting to create a sense of belonging is training on technology use. As was found in the current study, there was a significant positive correlation with students overall comfort with technology and sense of school belonging. Therefore, students who feel that they are successfully able to navigate various forms of technology as well as recognize the importance of the regular use of technology may feel more integrated into the school building, particularly because technology provides a means for success academically and with peers.

Third, a number of significant differences were found among students' and teacher's perception of effective methods to address cyberbullying. Overall, this indicates the need for increased training on methods of intervention on behalf of the student and other adults in the school. This may include establishing anti-cyberbullying policies and providing anti-cyberbullying materials as well as giving trainings on practical interventions, such as simply knowing when to talk to a teacher or administrator or creating a peer mentor program which helps to empower students as well as interrupt and prevent such incidents.

Though no significant differences were found among digital immigrants and digital natives this is still an area in which there should be continued research. As noted,

much of the research in this area was largely exploratory, therefore, leaving room for many questions to be answered. Replication with a larger and more diverse sample may provide for more robust findings. In addition, the consideration that this divide may be more apparent among parents is worth investigating especially because their interaction with technology may be less consistent than with the teacher population.

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## Appendix A: Cyberbullying Student Survey

Cyberbullying Student Survey
---------------------------------

**These questions ask for some general information about you. Please answer them by filling in the blanks or by checking the answer that best describes you.**

1. Are you?

☐ Male

☐ Female

2. How old are you? \_\_\_\_\_

3. What grade level are you in?

☐ 8<sup>th</sup>  
☐ 9<sup>th</sup>

☐ 10<sup>th</sup>

4. How do you describe yourself:

☐ Caucasian

☐ Black/African-American

☐ Latino/a

☐ Asian

☐ Bi-racial

☐ Multiracial

☐ Other

\_\_\_\_\_

Most of the questions are about **your life in and out of school in the past 30 days**. So when you answer, you should think of how it has been during the past 30 days and **not only how it is just now**.

Before we start with questions about cyberbullying, we will first define or explain the word cyberbullying.

**Cyberbullying is the intentional and repeated harm done through the use of computers, cell phones, and other electronic devices.**

When we talk about bullying, these things happen repeatedly, and it is difficult for the student being cyberbullied to defend himself or herself. We also call it cyberbullying, when a student is teased repeatedly in a mean and hurtful way. But we don't call it cyberbullying when the teasing is done in a friendly and playful way.

Cyberbullying can happen in the following ways:

**Text message bullying.** Receiving abusive text messages (SMS) on your cell phone.

**Cellular phone pictures and/or video-clip bullying.** Nasty pictures/photos or video-clips, sent to you, or nasty pictures/photos or video-clips sent to others about you.

**Phone call bullying.** Receiving nasty/upsetting on your cell phone (can be silent).

**Email bullying:** Receiving abusive emails.

**Chat-room bullying.** Being bullied in a chat room through abusive messages.

**Instant messaging bullying.** Bullying through messages on MSN messenger, Yahoo messenger, Gmail chat, Facebook chat, or similar messaging services.

**Website bullying.** Bullying that involves actions, such as setting up a negative website about someone, revealing personal details, etc.

**For the remaining questions, please select only ONE answer for each statement.**  
**There are no right or wrong answers, so please be as honest as possible.**

How serious do you think the following are at school?	Strongly Disagree	Disagree	Agree	Strongly Agree
5. Cyberbullying	1	2	3	4
6. Face-to-face bullying	1	2	3	4
7. School violence (e.g., physical fights that include, hitting, kicking, and slapping)	1	2	3	4
8. Sexual harassment	1	2	3	4

	Never	Seldom	Frequently	Constantly
9. How often have you <u>been cyberbullied</u> in the past 30 days?	1	2	3	4

<p><b>The following questions refer to how often you have <u>been cyberbullied</u> in the past 30 days.</b></p> <p><b>I have <u>been cyberbullied</u> by...</b></p> <p><b>If <u>YOU</u> have not been cyberbullied please skip to question 18.</b></p>	Never	Seldom	Frequently	Constantly
10. Text message	1	2	3	4
11. Cell phone pictures and/or video clips	1	2	3	4
12. Phone call	1	2	3	4
13. Email	1	2	3	4
14. Chat room	1	2	3	4
15. Instant messaging, such as Facebook chat or Gmail chat	1	2	3	4
16. Individuals setting up a negative website about you or revealing personal information about your life	1	2	3	4
17. Which form of cyberbullying (e.g., text message, negative website, pictures and video clips) do you think is the worst? Why? Please provide your response in the blank to the right.				

	Never	Seldom	Frequently	Constantly
18. How often have you <u>cyberbullied others</u> in the past 30 days?	1	2	3	4

<b>The following questions refer to how often you have <u>cyberbullied others</u> in the past 30 days.</b>  <b>I have <u>cyberbullied others</u> by...</b>  <b>If you have never cyberbullied someone else or have never been cyberbullied please skip to question 26.</b>	<b>Never</b>	<b>Seldom</b>	<b>Frequently</b>	<b>Constantly</b>
19. Text message	1	2	3	4
20. Cell phone pictures and/or video clips	1	2	3	4
21. Phone call	1	2	3	4
22. Email	1	2	3	4
23. Chat room	1	2	3	4
24. Instant messaging, such as Facebook chat or Gmail chat	1	2	3	4
25. Setting up a negative website about someone or revealing personal information about someone	1	2	3	4

<b>Have you ever told anyone that you were cyberbullied?</b>	<b>Yes</b>	<b>No</b>
26. I told nobody (answer “no” skip to question #35)	1	2
27. I told a teacher	1	2
28. I told another adult at school	1	2
29. I told my parent/guardian	1	2
30. I told a friend(s)	1	2

<b>Was telling any of the following individuals about being cyberbullied helpful?</b>	<b>Not Helpful</b>	<b>Somewhat Helpful</b>	<b>Very Helpful</b>
31. Telling a teacher was... Why?	1	2	3
32. Telling another adult at school was... Why?	1	2	3
33. Telling my parent or guardian was... Why?	1	2	3
34. Telling a friend(s) was... Why?	1	2	3

<b>If you witnessed or heard about cyberbullying occurring, did you tell anyone?</b>	<b>Yes</b>	<b>No</b>
35. I told nobody (answer "no" skip to question # 44)	1	2
36. I told a teacher	1	2
37. I told another adult at school	1	2
38. I told my parent/guardian	1	2
39. I told a friend(s)	1	2

<b>Was telling any of the following individuals about witnessing or hearing about cyberbullying helpful?</b>	<b>Not Helpful</b>	<b>Somewhat Helpful</b>	<b>Very Helpful</b>
40. Telling a teacher was... Why?	1	2	3
41. Telling another adult at school was... Why?	1	2	3
42. Telling my parent or guardian was... Why?	1	2	3
43. Telling a friend(s) was... Why?	1	2	3

Do you think the following are useful ways to prevent cyberbullying?	Strongly Disagree	Disagree	Agree	Strongly Agree
44. <b>Self-monitoring:</b> The ability to observe yourself and know when you are taking part in appropriate or inappropriate behaviors	1	2	3	4
45. <b>Outside-monitoring:</b> Identifying individuals who check for students who abuse or are abused by technology	1	2	3	4
46. <b>Anonymous reporting:</b> (e.g., anonymous email system set up at school or placing a message in a comment box)	1	2	3	4
47. <b>Peer mentors:</b> Using fellow classmates as leaders and mentors	1	2	3	4
48. <b>Education</b> on cyberbullying and technology (e.g., school assemblies and classroom lessons)	1	2	3	4
49. Talking to parents	1	2	3	4
50. Talking to school administrators and teachers.	1	2	3	4
51. Enforcing school rules	1	2	3	4
52. Enforcing laws	1	2	3	4
53. Not allowing technology use	1	2	3	4
54. Of the methods mentioned above, rank your top three choices for addressing cyberbullying? Please provide your response in the box to your right.	1. _____ 2. _____ 3. _____			
55. What makes these methods the most effective? What might be done to make them better? Please provide your answer in the box to the right.				

	Strongly Disagree	Disagree	Agree	Strongly Agree	My school is not addressing cyberbullying
56. I think my school is prepared to address cyberbullying.	SD	D	A	SA	DA

These questions are about how you feel toward school.	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
57. I feel like I am a part of this school.	1	2	3	4	5
58. I am happy to be at this school.	1	2	3	4	5
59. I feel close to people at this school.	1	2	3	4	5
60. I feel safe in my school.	1	2	3	4	5
61. The teachers at this school treat students fairly.	1	2	3	4	5

Please indicate how much the following problems have bothered you during the past week. Mark only one box for each problem, and be sure to answer all the items.	Not at all	A little bit	Somewhat	Very Much	Extremely
62. Fear of embarrassment causes me to avoid doing things or speaking to people.	1	2	3	4	5
63. I avoid activities in which I am the center of attention.	1	2	3	4	5
64. Being embarrassed or looking stupid are among my worse fears.	1	2	3	4	5

**The following questions will ask you about your comfort and experience with technology.**

<b>Do you have ...</b>	<b>Yes</b>	<b>No</b>
65. ... a computer with the internet at home?	1	2
66. ... a smart phone (e.g., iPhone, Droid, Blackberry)?	1	2
67. ... a tablet (e.g., iPad, Kindle Fire)?	1	2
68. ... a social networking account (e.g., Facebook, Twitter, Google+)?	1	2
69. ... an email account?	1	2

<b>How comfortable are you using the following...</b>	<b>Very Uncomfortable</b>	<b>Uncomfortable</b>	<b>Comfortable</b>	<b>Very Comfortable</b>
70. A computer?	1	2	3	4
71. A smart phone (e.g., iPhone, Droid, Blackberry)?	1	2	3	4
72. Text messaging?	1	2	3	4
73. A social networking site (e.g., Facebook, Twitter, Google+)?	1	2	3	4
74. Chat formats (e.g., Skype, Facebook chat, MSN messenger, Gmail chat)?	1	2	3	4



<b>If you were without any of the following for three days how would it make you feel?</b>	<b>Very Uncomfortable</b>	<b>Uncomfortable</b>	<b>Comfortable</b>	<b>Very Comfortable</b>
75. Smart phone or cell phone	1	2	3	4
76. Email	1	2	3	4
77. Text message	1	2	3	4
78. Social networking site	1	2	3	4
79. Chat format (e.g., Skype, Facebook chat, MSN messenger, Gmail chat)?	1	2	3	4
80. The Internet	1	2	3	4

<b>On a typical day what percentage of time do you spend interacting with your friends?</b>	<b>Percent (must sum to 100%)</b>
81. Text messages	_____
82. Phone calls with your smart phone or cell phone	_____
83. Chat formats	_____
84. Social networking site	_____
85. Face-to-face	_____

<b>How important are the following to you?</b>	<b>Very Unimportant</b>	<b>Unimportant</b>	<b>Important</b>	<b>Very Important</b>
86. Text messaging	1	2	3	4
87. Using a smart phone or cell phone	1	2	3	4
88. Using email	1	2	3	4
89. Using a social networking site	1	2	3	4
90. Using chat formats	1	2	3	4

## Appendix B: Cyberbullying Teacher Survey

Cyberbullying Teacher Survey
---------------------------------

**These questions ask for some general information about you. Please answer them by filling in the blanks or by checking the answer that best describes you.**

1. Are you?

☐ Male

☐ Female

2. How old are you? \_\_\_\_\_

3. How many years have you taught? \_\_\_\_\_

4. What grade level do you teach?

☐ 8<sup>th</sup>

☐ 9<sup>th</sup>

☐ 10<sup>th</sup>

5. How do you describe yourself:

☐ Caucasian

☐ Black/African-American

☐ Latino/a

☐ Asian

☐ Bi-racial

☐ Multiracial

☐ Other

\_\_\_\_\_

Before we start with questions about cyberbullying, we will first define or explain the word cyberbullying.

**Cyberbullying is the willful and repeated harm inflicted through the use of computers, cell phones, and other electronic devices.**

When we talk about bullying, these things happen repeatedly, and it is difficult for the student being cyberbullied to defend himself or herself. We also call it cyberbullying, when a student is teased repeatedly in a mean and hurtful way. But we don't call it cyberbullying when the teasing is done in a friendly and playful way.

Cyberbullying can happen in the following ways:

**Text message bullying.** Receiving abusive text messages (SMS) on your cell phone.

**Cellular phone pictures and/or video-clip bullying.** Nasty pictures/photos or video-clips, sent to you, or nasty pictures/photos or video-clips sent to others about you.

**Phone call bullying.** Receiving nasty/upsetting on your cell phone (can be silent).

**Email bullying:** Receiving abusive emails.

**Chat-room bullying.** Being bullied in a chat room through abusive messages.

**Instant messaging bullying.** Bullying through messages on MSN messenger, Yahoo messenger, Gmail chat, Facebook chat, or similar messaging services.

**Website bullying.** Bullying that involves actions, such as setting up a negative website about someone, revealing personal details, etc.

**For the remaining questions, please select only ONE answer for each statement.**  
**There are no right or wrong answers, so please be as honest as possible.**

Now just thinking about cyberbullying	Never	Seldom	Frequently	Always
6. How often have you heard about cyberbullying occurring with students at your school in the past 30 days?	1	2	3	4

How serious do you think the following are at school?	Strongly Disagree	Disagree	Agree	Strongly Agree
7. Cyberbullying	1	2	3	4
8. Face-to-face bullying	1	2	3	4
9. School violence (e.g., physical fights that include, hitting, kicking, and slapping)	1	2	3	4
10. Sexual harassment	1	2	3	4

Do you think the following are useful ways to prevent cyberbullying?	Strongly Disagree	Disagree	Agree	Strongly Agree
11. <b>Self-monitoring:</b> The ability to observe yourself and know when you are taking part in appropriate or inappropriate behaviors	1	2	3	4
12. <b>Outside-monitoring:</b> Identifying individuals who check for students who abuse or are abused by technology	1	2	3	4
13. <b>Anonymous reporting:</b> (e.g., anonymous email system set up at school or placing a message in a comment box)	1	2	3	4
14. <b>Peer mentors:</b> Using fellow classmates as leaders and mentors	1	2	3	4
15. <b>Education</b> on cyberbullying and technology (e.g., school assemblies and classroom lessons)	1	2	3	4
16. Talking to parents	1	2	3	4
17. Talking to school administrators and teachers.	1	2	3	4
18. Enforcing school rules	1	2	3	4
19. Enforcing laws	1	2	3	4
20. Not allowing technology use	1	2	3	4
21. Of the methods mentioned above, rank your top three choices for addressing cyberbullying? Please provide your response in the box to your right.	1. _____ 2. _____ 3. _____			
22. What makes these methods the most effective? What might be done to make them better? Please provide your answer in the box to the right.				

	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Agree</b>	<b>Strongly Agree</b>	<b>My school is not addressing cyberbullying</b>
23. I think my school is prepared to address cyberbullying?	SD	D	A	SA	DNA

**The following questions will ask you about your comfort and experience with technology.**

<b>Do you have ...</b>	<b>Yes</b>	<b>No</b>
24. ... a computer with the internet at home?	1	2
25. ... a smart phone (e.g., iPhone, Droid, Blackberry)?	1	2
26. ... a tablet (e.g., iPad, Kindle Fire)?	1	2
27. ... a social networking site account (e.g., Facebook, Twitter, Google+)?	1	2
28. ... an email account?	1	2

<b>How comfortable are you using the following...</b>	<b>Very Uncomfortable</b>	<b>Uncomfortable</b>	<b>Comfortable</b>	<b>Very Comfortable</b>
29. A computer?	1	2	3	4
30. A smart phone (e.g., iPhone, Droid, Blackberry)?	1	2	3	4
31. Text messaging?	1	2	3	4
32. A social networking site (e.g., Facebook, Twitter, Google+)?	1	2	3	4
33. Chat formats (e.g., Skype, Facebook chat, MSN messenger, Gmail chat)?	1	2	3	4

<b>If you were without any of the following for three days how would it make you feel?</b>	<b>Very Uncomfortable</b>	<b>Uncomfortable</b>	<b>Comfortable</b>	<b>Very Comfortable</b>
34. Smart phone or cell phone	1	2	3	4
35. Email	1	2	3	4
36. Text message	1	2	3	4
37. Social networking site	1	2	3	4
38. Chat format (e.g., Skype, Facebook chat, MSN messenger, Gmail chat)?	1	2	3	4
39. The Internet	1	2	3	4

<b>On a typical day what percentage of time do you spend interacting with your friends?</b>	<b>Percent (must sum to 100%)</b>
40. Text messages	_____
41. Phone calls with your smart phone or cell phone	_____
42. Chat formats	_____
43. Social networking site	_____
44. Face-to-face	_____

<b>How important are the following to you?</b>	<b>Very Unimportant</b>	<b>Unimportant</b>	<b>Important</b>	<b>Very Important</b>
45. Text messaging	1	2	3	4
46. Using a smart phone or cell phone	1	2	3	4
47. Using email	1	2	3	4
48. Using a social networking site	1	2	3	4
49. Using chat formats	1	2	3	4



## Appendix C: Parent Letter

Dear Parent,

Ohio State University (OSU), in partnership with *[Insert School]*, is inviting 8<sup>th</sup>-10<sup>th</sup> grade adolescents to participate in an online survey study. The goal is to extend knowledge of cyberbullying, to ascertain how cyberbullying relates to students sense of school belonging and social anxiety, understand the manner in which cyberbullying is addressed in schools, and understand the nature and extent to which technology is used. Please know that we will do our best to keep all information confidential and no one except the research team will have access to the research data. I am inviting your child to participate in this study to help me understand how cyberbullying influences adolescences and schools and to develop prevention and intervention programs related to cyberbullying in schools.

The study includes having your child complete an online survey (10-15 minutes) at their convenience. Your child's responses will NOT be discussed with you. Every effort will be made to keep your (or your child's) information confidential.

If you would like your child to participate in this study, please complete the online parental permission form by going to:

[https://eheosu.qualtrics.com/SE/?SID=SV\\_74KsqJu7i7PZOMR](https://eheosu.qualtrics.com/SE/?SID=SV_74KsqJu7i7PZOMR)

Upon agreement, you will be asked to provide your child's email address so they may be sent a link to complete the survey. Please do so within the next two weeks.

Thank you very much for considering this request. I believe that much can be learned from this project. I encourage you to help me learn more about cyberbullying and what can be done to address it in schools. Please contact me if you have questions.

Sincerely,

Jennifer Steinmetz, M.A.  
Primary Researcher

## **Appendix D: Parental Permission**

### **The Ohio State University Parental Permission For Child's Participation in Research**

**Study Title:** Teacher and Student Perspectives of Cyberbullying

**Researcher:** Jennifer Steinmetz, M.A.

**Purpose:** Jennifer Steinmetz is conducting an online survey study to examine students' and teachers' perceptions and reactions toward cyberbullying. The goal is to extend knowledge of cyberbullying, to ascertain how cyberbullying relates to students sense of school belonging and social anxiety, understand the manner in which cyberbullying is addressed in schools, and understand the nature and extent to which technology is used. The information obtained from this study will help develop prevention and intervention programs related to cyberbullying in schools.

**Procedures/Tasks:** If you agree to allow your child to participate in this study, you must complete and select the agree button at the bottom of this form, provide your child's email address, and your child must agree to the terms on the first page of the online survey before they will be allowed to proceed. When the researcher, Jennifer Steinmetz, receives parental permission and your child's email address she will send a url link for the survey to their email account. Your child will be provided the opportunity to complete the online survey at his/her convenience (outside of the school day).

**Duration:** Your child's survey will take approximately 15-20 minutes for him/her to complete.

**Risks and Benefits:** It is unlikely that completing this survey will expose participants to any major risks; however, some of the questions ask participants to recall upon the times they were cyberbullied and how this impacted them. Because students will be reporting on such experiences, they may become more aware of their negative feelings. A potential benefit of this study is that findings can shed light on the impact that cyberbullying has on students. The results of the research will inform the development of prevention and intervention programs focused on cyberbullying.

**Confidentiality:** We will work to make sure that no one sees your child's survey responses without approval. But, because we are using the Internet, there is a chance that

someone could access your child's online responses without permission. In some cases, this information could be used to identify your child. The results of this study may be published, but your child WILL NOT be identified in any reports or publications. Jennifer Steinmetz will use the following procedures to maintain your child's confidentiality:

1. Your child's name will NOT be attached to the survey responses.
2. Your child's responses will NOT be discussed with you or with the school's principal, teachers, or anyone else.
3. Your data will be protected with a code to reduce the risk that other people can view the responses.
4. All data is stored in a password protected electronic format. To help protect your child's confidentiality, the survey will not contain information that will personally identify him/her.

**Participant Rights:** Your child may refuse to participate in this study without penalty or loss of benefits to which he/she is otherwise entitled.

If your child chooses to participate in the study, they may skip any question or discontinue participation at any time without penalty or loss of benefits. By signing this form, you do not give up any personal legal rights your child may have as a participant.

An Institutional Review Board responsible for human subjects research at The Ohio State University reviewed this research project and found it to be acceptable, according to applicable state and federal regulations and University policies designed to protect the rights and welfare of participants in research.

**Contacts and Questions:** For questions, concerns, or complaints, or if you feel your child has been harmed by participation, you may contact Jennifer Steinmetz at 574-596-0520. For questions about your child's rights as a participant in this study or to discuss other study-related concerns or complaints with someone who is not part of the research team, you may contact Ms. Sandra Meadows in the Office of Responsible Research Practices at 1-800-678-6251.

The following counseling resources are also available should your child require any additional support:

1. The school psychologist or school counselor is available for support should you seek services at school.
2. Free counseling services are also available at Haven Youth and Family Services. You may contact them at (847) 251-6630. If you are experiencing a crisis a 24 hour emergency line option is available through the same telephone number.

**Electronic Signing of the Parental Permission Form:** I have read (or someone has read to me) this form and I am aware that I am being asked to provide permission for my child to participate in a research study. I voluntarily agree to permit my child to participate in this study. If you do not wish to participate in the research study, please decline participation by clicking on the “disagree” button.

- ☐ Agree
- ☐ Disagree

If you agree to allow your child to participate in the study please provide an email address for your child.

Email address: \_\_\_\_\_

## **Appendix E: Child Assent**

### **The Ohio State University Assent to Participate in Research**

**Study Title:**                      **Teacher and Student Perspectives of Cyberbullying**  
**Researcher:**                      **Jennifer Steinmetz, M.A.**

**Dear Student:** You are being invited to participate in a survey study on 8<sup>th</sup> through 10<sup>th</sup> grade students. We want to learn more about your cyberbullying, your sense of school belonging and social anxiety, and better understand the manner in which cyberbullying is addressed at school. The information will help us to better understand how to address cyberbullying among adolescents.

#### **What will I need to do if I am in this study?**

If you agree to participate in this study you must agree to the terms at the bottom of the page before you will be allowed to proceed. Once you agree you will simply be requested to answer the questions asked in the survey. You will not be contacted for any additional information once you are done with the survey.

#### **How long will I be in the study?**

The entire process will take approximately 15-20 minutes.

#### **Can I stop being in the study?**

Your participation in this research study is voluntary. You do not have to answer any questions that make you uncomfortable. You may choose not to participate. If you decide to participate in this research survey, you may withdraw at any time. If you decide to stop participation in the study, there will be no penalty.

#### **Will anyone know my answers?**

We will work to make sure that no one sees your survey responses without approval (kept secret). But, because we are using the Internet, there is a chance that someone could access your online responses without permission. In some cases, this information could be used to identify you. Jennifer Steinmetz will use the following procedures to make sure that your information remains private:

Your name will NOT be attached to the survey responses.

Your responses will NOT be discussed with you or with the school's principal, teachers, or anyone else. Your data will be protected with a code to reduce the risk that other people can view responses.

1. All data is stored in a password protected electronic format. To help protect your confidentiality, the survey will not contain information that will personally identify you.

### **What bad things might happen to me if I am in the study?**

It is unlikely that completing this survey will expose you to any major problems. Some of the questions may ask you to recall upon times you were cyberbullied or cyberbullied others, which may make you feel slightly uncomfortable. However, you may skip any question or stop at any time.

### **What good things might happen to me if I am in the study?**

A potential benefit of this study is that findings can shed light on the impact that cyberbullying has on students. The results of the research will inform the development of prevention and intervention programs focused on cyberbullying.

### **Who can I talk to about the study?**

For questions about the study, or if you feel you have been harmed by participation, you may contact Jennifer Steinmetz at 574-596-0520. For questions about your rights as a participant in this study or to discuss other study-related concerns or complaints with someone who is not part of the research team, you may contact Ms. Sandra Meadows in the Office of Responsible Research Practices at 1-800-678-6251.

The following counseling resources are available should you need any additional support:

1. The school psychologist or school counselor is available for support services at school.
2. Free counseling services are also available at Haven Youth and Family Services. You may contact them at (847) 251-6630. If you are experiencing a crisis a 24 hour emergency line option is available through the same telephone number.

### **Who can take part in this study?**

You must be in 8<sup>th</sup>, 9<sup>th</sup>, or 10<sup>th</sup> grade. One of your parents must provide permission for you to partake in the study.

### **Electronic Assent**

Please select your choice below. Clicking on the “agree” button indicates that

- You have read the above information.
- You voluntarily agree to participate.
- One of your parents has signed the parental permission form.

If you do not wish to participate in the research study, please decline participation by clicking on the “disagree” button.

- ☐ Agree
- ☐ Disagree

## **Appendix F: Teacher Consent**

### **The Ohio State University Consent to Participate in Research**

**Study Title:** Teacher and Student Perspectives of Cyberbullying  
**Researcher:** Jennifer Steinmetz, M.A.

**Dear Teacher:** You are being invited to participate in a survey study on 8<sup>th</sup> through 10<sup>th</sup> grade students and teachers of those same grades. We want to learn more about what you think about technology and cyberbullying, and better understand the manner in which cyberbullying is addressed at school. The information will help us to better understand how to address cyberbullying among adolescents.

#### **What will I need to do if I am in this study?**

If you agree to participate in this study you must agree to the terms at the bottom of the page before you will be allowed to proceed. Once you agree you will simply be requested to answer the questions asked in the survey. You will not be contacted for any additional information once you are done with the survey.

#### **Duration:**

The entire process will take approximately 10-15 minutes.

#### **Can I stop being in the study?**

Your participation in this research study is voluntary. You do not have to answer any questions that make you uncomfortable. You may choose not to participate. If you decide to participate in this research survey, you may withdraw at any time. If you decide to stop participation in the study, there will be no penalty or loss of benefits to which you are otherwise entitled.

#### **Confidentiality:**

We will work to make sure that no one sees your survey responses without approval. But, because we are using the Internet, there is a chance that someone could access your online responses without permission. In some cases, this information could be used to identify you. Jennifer Steinmetz will use the following procedures to make sure that your information remains private:

1. Your name will **NOT** be attached to the survey responses.



2. Your responses will **NOT** be discussed with you or with the school's principal, teachers or anyone else
3. Your data will be protected with a code to reduce the risk that other people can view the response
4. All data is stored in a password protected electronic format. To help protect your confidentiality, the survey will not contain information that will personally identify you.

### **Risks and Benefits:**

It is unlikely that completing this survey will expose you to any major problems. Some of the questions may ask you to recall upon times students were cyberbullied, which may make you feel slightly uncomfortable. However, you may skip any question or stop at any time. A potential benefit of this study is that findings can shed light on the impact that cyberbullying has on students. The results of the research will inform the development of prevention and intervention programs focused on cyberbullying.

### **Who can I talk to about the study?**

For questions about the study, or if you felt you have been harmed by participation, you may contact Jennifer Steinmetz at 574-596-0520. For questions about your rights as a participant in this study or to discuss other study-related concerns or complaints with someone who is not part of the research team, you may contact Ms. Sandra Meadows in the Office of Responsible Research Practices at 1-800-678-6251.

### **Who can take part in this study?**

You must be a teacher of 8<sup>th</sup>, 9<sup>th</sup>, or 10<sup>th</sup> grade.

### **Electronic Consent:**

Please select your choice below. Clicking on the “agree” button indicates that:

- You have read the above information.
- You voluntarily agree to participate.
- You are at least 18 years of age.

If you do not wish to participate in the research study, please decline participation by clicking on the “disagree” button.

- Agree
- Disagree