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LOYOLA MARYMOUNT UNIVERSITY

Fighting Fire With Fire: The Use of A Multimedia WebQuest in Increasing Middle-School Students' Understandings of Cyberbullying

by

Elizabeth A. Brewer

A dissertation presented to the Faculty of the School of Education,

Loyola Marymount University,

in partial satisfaction of the requirements for the degree of

Doctorate of Education

2011

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This dissertation written by Elizabeth Brewer, under the direction of the Dissertation Committee, is approved and accepted by all committee members, in partial fulfillment of requirements for the degree of Doctor of Education.

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ACKNOWLEDGEMENTS

This dissertation is the product of a phenomenal support system that sustains me personally and professionally. It is with immeasurable gratitude, and great humility that I offer special thanks to:

Dr. Edmundo Litton, for your vision, faith, support, guidance, and belief in me. You are both the law and the order in this document and I thank you.

Dr. Marta Baltodano, because without you, I would not challenge myself to be better, work harder, and dive deeper.

Dr. Karie Huchting, for your unending professional help and personal support. I feel honored to be in your sphere and am grateful to you.

The participants in this study and the administration of the district – your encouragement helped change the face of cyberbullying research.

Drs. Jill Bickett and Shane Martin, whose leadership and guidance provide structure to the doctoral program and help send forth transformational leaders.

My family, especially Kim and Jim, who instilled in me a sense of self-confidence and who have supported each step of this journey with love and kindness.

Dr. Casandra Harper, who acted not only as a sounding board, but as a life raft, offering encouragement and advice when I needed it most.

My friends, especially the BethRicks, who never tired of listening to me talk about the process, the data, the trials and the tribulations and still managed to love me.

Jennifer Keany, who inspires me every single day to be the best version of myself that I can be. Your love and support humble me and I thank God daily for you.

DEDICATION

I dedicate this work and its achievement to my Mom and Dad, Elaine and Jim Brewer.

My Mom's beauty, intelligence, humor, kindness, spunk, and drive are the ideals I strive for and without her grace and presence, this achievement would not have been possible.

My Dad is the most incredible man I know. His hard work, dedication, willingness to go without, and professional and personal successes have led me to this point and I thank him for everything. We love you.

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ABSTRACT

Fighting Fire With Fire: The Use of A Multimedia WebQuest in Increasing Middle-School Students' Understandings of Cyberbullying

By

Elizabeth A. Brewer

Cyberbullying, the use of personal and information and communication technologies to harass or intimidate others, is an increasingly pervasive problem in schools. This mixed-methods study explored the effectiveness of a multimedia WebQuest in teaching 156 middle-school students about the dangers of cyberbullying and examined the role of gender in learning about cyber-harassment. Set within a constructivist framework, the study provides an innovative, technological intervention for cyberbullying education for use with adolescents and is instrumental in reshaping public policy surrounding cyberbullying education and prevention. The dissertation study occurred in two phases. Phase I, WebQuest Construction, was qualitative in nature and employed stakeholder focus groups to assess middle-school students' knowledge and awareness surrounding cyberbullying. Data from the focus groups informed the construction of the WebQuest.

The second phase, Data Collection from Students, was quantitative in nature and was composed of a pre-test, WebQuest treatment, and post-test. Data analyses for Phase II included paired-sample *t* tests, repeated-measures analyses of variance, and descriptive statistics that focused on three dependent variables, namely awareness, safety, and knowledge. Findings indicated statistically significant increases in awareness and knowledge from the pre-test to post-test among the middle-school aged participants, while the slight increase in safety from pre to post-test was not significant. The findings support the need for school communities to begin engaging in conversation surrounding the best ways to teach students about cyberbullying's dangers through the use of technology and issue a call for a re-examination of constructivist learning theory.

CHAPTER 1

BACKGROUND OF THE STUDY

Introduction

When eighth grader Amanda Marcuson reported classmates for stealing her make-up bag, she never anticipated the deluge of hateful messages she would soon receive through email and instant messaging. After logging onto the Internet upon arriving home, the hateful messages began appearing—called a tattletale and a liar over instant messaging, she defended herself, typing, "You stole my stuff!" (Harmon, 2004, para. 2). Her assaulters called her a "…stuck up bitch" and other names and continued harassing her via her cell phone and email account. Terrified of her attackers, Amanda never spoke to her cyberbullies again, transferred to a new school, and like many adolescents, felt both the unfair and stinging impact of cyberbullying and its effect on her socio-emotional development. This instance of cyberbullying, like all others, raises a warning flag for the educational community: it signifies a distress call for greater and more effective interventions to online harassment.

As the global community connects digitally at an increasing rate, school leaders and other educators face a challenge unlike any other. The advances made in technology over the last several decades make student contact with the world much simpler—students can access information in real time, connect with peers around the world, research and share information with others electronically, and participate in social networking with people they will never meet face-to-face. Access to the Internet and other forms of information and communication technologies (ICTs), when used properly,

provide students with opportunities to increase their cultural capital, a form of highly valued conceptual currency consisting of experiences, skills, and knowledge, which can help them attain higher positioning in society (Bordieu, 1986) and interact with the world (Bottino, Forcheri, & Molfino, 1998; Carmichael & Procter, 2006; Pearlman, 2006). Social networks are replacing traditional communities by redefining them based on interests rather than location or geography, resulting in the formation of network capital (Acevedo, 2007). Defined as "a measure of the differentiated value in the Information Age that communities structured as social networks generate on the basis of electronic (digital) networks for themselves, for others and for society as a whole" (Acevedo, 2007, para. 9), network capital is one expression of social capital in a digital age. This new expression reconstructs how individuals communicate with one another in these new "digital publics" (boyd [lowercase intended] & Jenkins, 2006, para. 7) and begins to explain the power dynamic formed by cyberbullying.

Facilitated by easy access to ICTs, today's students have more options in how and when they communicate with each other (Kowalski, Limber, & Agatston, 2008). Smart phones, personal computers, the Internet, hand-held computing devices, and other tools allow students to remain in constant contact with peers, parents, and the global community from their choice of location, in their own time frame, and in any identity of their choosing (Juvonen & Gross, 2008). The positive uses and outcomes of technology should be lauded, but schools and educational leaders must be vigilant about, and address, the negative uses of technology that occur. One such negative use of technology is the growing phenomenon of cyberbullying, an offshoot of traditional bullying.

Bullying affects all members of a school community, including aggressors, victims, and onlookers. It differs from many forms of aggression because it involves all of the following three factors: a) the intentional infliction of pain or suffering on a victim, b) repeated actions that do not occur in single instances, and c) an imbalance of power between the aggressor(s) and the victim (Bauman & Hurley, 2005; Hazler, Miller, Carney, & Green, 2001). In their qualitative study of students' perceived definitions of cyberbullying, Vandebosch and Van Cleemput (2008) identified three main characteristics of this cyber-harassment: a) it is intended as hurtful by the perpetrator (and is perceived as hurtful by the victim), b) it is repeated, and c) a power balance exists. This repetitive aggression targeted at a peer who is unable to defend himself or herself (Smith et al., 1999) is experienced by nearly 77% of students in schools (Espelage & Swearer, 2003) and may result in depression, anxiety, loneliness, and even suicidal ideation (Bhat, 2008).

Cyberbullying occurs when aggressors use personal communication technologies such as computers, cell phones, websites, email, instant messaging, and blogging, to assault their victims (Beale & Hall, 2007; Juvonen & Gross, 2008; Li, 2006; Smith et al., 2008). Cyberbullying, much like traditional bullying, can be either indirect or direct in nature (Chibbaro, 2007). Direct cyberbullying might consist of emails, instant messages, or text messages of a mean or harassing nature, sent directly to a victim, while indirect cyberbullying may include flaming (posting derogatory comments about a person to a website), forwarding inappropriate photos to others, participating in teasing online, or excluding or isolating users (Willard, 2007).

Some experts consider online harassment more insidious than traditional bullying because students cannot escape their aggressors by avoiding them or leaving particular areas (Beale & Hall, 2007; Bhat, 2008; Keith & Martin, 2005). In fact, victims of online harassment expose themselves to danger each time they access technology, which often allows cyberbullies to follow victims into their homes (Keith & Martin, 2005). Additionally, feelings of disinhibition make the harassing acts much more damaging for victims both emotionally and socially (Beale & Hall, 2007; Li, 2006; Smith et al., 2008; Suler, 2004, 2005).

The online disinhibition effect (Suler, 2004) allows technology users to interact with others in ways that promote and "amplify" (p. 322) vulnerability. Suler (2004, 2005) asserted that online disinhibition might be either benign or toxic. Benign disinhibition occurs when users share personal information about themselves, including fears, dreams, wishes, or emotions, or when they "show unusual acts of kindness and generosity" (p. 321). Cyberbullying, however, is more commonly associated with toxic disinhibition, characterized by threats, anger, hatred, and criticism directed at one person or a group in a digital environment (p. 321).

A particularly damaging aspect of online disinhibition is dissociative anonymity (Suler, 2004). It allows cyberbullies to separate their online words and actions from their face-to-face interactions, reducing the need for them to "own their behavior by acknowledging it within the full context of an integrated online/offline identity" (Suler, 2004, p. 322). When dissociation and the anonymity offered by the Internet intersect,

cyberbullies become especially vicious as they are freed from having to witness the effects of their words and actions.

According to Suler (2004), online disinhibition also minimizes status and authority (p. 324), thus changing the dynamics of negative interactions. Bullying and cyberbullying are sometimes rooted in power struggles between dichotomous groups: athletes versus scholars, boys versus girls, different racial groups, class groups, and the dominant group and "the other." Historically, covert and overt racist, sexist, classist, and abilist remarks reified the struggle between these binary groups (Sandoval, 2000). As technology changes interpersonal dynamics, however (Duffy & Nesdale, 2009), these traditional power struggles are less frequently to blame for cyberbullying behavior. Instead, the behavior may originate from a conflict or even arbitrarily because a child or adolescent is bored. Further, a new power dynamic emerges through cyberbullying behaviors: Students with more frequent access to technology and with greater network capital are better able to navigate the world of online harassment. This navigation ability increases the chances that the students will be adept at harassing others or will be able to escape online harassment perpetrated against them by others.

Despite cyberbullying's nascence as a problem and the recent rash of cyberbullying-related suicides widely discussed by the media, many schools and districts do not have policies in place to actively educate and inform students about the dangers and consequences of cyberbullying. Instead, most schools enact policies that are punitive in nature, addressing the sanctions to be taken against offenders (Shariff, 2009) and failing to identify mechanisms for assisting the victims. Furthermore, the prevention

programs that do exist are typically large assemblies where students passively listen to a speaker describe the dangers of cyberbullying (Shariff, 2009).

To help students better understand the hazards and consequences of cyberbullying, Bhat (2008) suggested that students be exposed to modeling programs or scenarios where they are invited to construct meaning about cyberbullying. By using constructivist learning theory as the foundation for instruction about cyberbullying, schools can create learning environments that support students' cognitive and emotional growth. Constructivism encourages students to relate new information to existing personal knowledge and experiences resulting in newly formed meanings of the objects and world around them (Jonassen, 1991). Thus, students supplement and challenge their knowledge of cyberbullying through constructing new meanings about the behavior and its consequences. Using a constructivist approach to instruction engages students in the content being presented, making them more than passive receptacles of knowledge.

As school administrators and teachers seek to educate students about the emotional, psychological, and physical dangers of cyberbullying, they must first educate themselves about the problem facing the students in today's schools.

Statement of the Problem

Technological advances continue expanding the horizons of educators and students throughout the world. However, as the academic community struggles to adapt and implement meaningful technology for use in classrooms and schools, an increasing number of students experience the deleterious effects of cyberbullying. The increase in teasing, taunts, and threats of violence via information communication technologies

(ICTs) seemingly outpaces society's ability to address the problem. The phenomenon has received extensive attention in popular media and news outlets over the last few years, following the 2006 suicide of Megan Meier, a 13 year old student harassed online by an adult neighbor pretending to be a teenaged boy (Beckstrom, 2008). While some scholarly writing and empirical research on the topic is available, much less writing addresses methods of educating students about the dangers and consequences of these aggressive and oppressive behaviors.

It is important to research the role that constructivist learning can play in mitigating the prevalence of online harassment and in changing students' attitudes and perceptions of cyberbullying (Diamanduros, Downs, & Jenkins, 2008) as well as the role gender plays in these attitudes. Constructivist learning theory (Jonassen, 1991, 1994, 1999; Piaget & Inhelder, 1969; Vygotsky, 1978) encourages using students' prior knowledge and experiences to construct meaning in new situations and environments. Activating students' schemata about technology use and cyberbullying while introducing new information about its dangers and consequences will offer learners an opportunity to construct new meaning around online harassment.

It is generally understood by researchers that intervention and prevention strategies must be collaboratively designed by school technology specialists, administrators, teachers, parents, and students to be truly effective (e.g., Bhat, 2008; Diamanduros et al., 2008). Despite these findings, many schools currently use small group discussions, large school assemblies, or lecture workshops to address the problem of cyberbullying with students and these methods are often ineffective (Beale & Hall,

2007; Diamanduros et al., 2008; Keith & Martin, 2005). Studying the use of constructivist technological approaches to educating students about cyberbullying fills the gap in strategies for addressing the problem. Although the intervention used in this study created meaningful opportunities for students to construct knowledge about the topic as a means toward understanding its dangers, further researcher and development in this area is needed.

Research shows measurable differences in cyberbullying behavior across gender lines. Results from Ybarra and Mitchell's (2004a) cross-sectional Youth Internet Safety Survey reported that boys who used the Internet regularly and who reported major depressive symptoms based on the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) definition[1] were three times more likely than other male youth to report having been harassed through cyber technologies. The same was not found for female users of the Internet and ICT. In fact, a study of 264 Canadian students by Li (2006) found boys more likely to be involved in cyberbullying activity but less likely than girls to report cyber abuse to an adult, a finding supported in a web-based study of 1,500 American students (i-SAFE, 2004).

The findings from these studies highlight how different communication styles complicate students' approaches to cyberbullying. Societal ideas about masculine and

[1] According to the DSM-IV (1994, p. 732) depression includes feelings of gloominess, cheerlessness, or unhappiness, brooding, negativity, and feelings of guilt and remorse. One's self-concept centers on feelings of inadequacy and inferiority when experiencing depression.

feminine communication affect how students engage in cyberspace and consequently influence students' experiences and attitudes of cyberbullying.

While girls are taught overtly and covertly to use communication for cooperation, addressing emotions, and assisting others, boys often learn to be assertive, hold attention, and establish their identities through communication (Maltz & Borker, 1982; Speer, 2002). These different approaches may help illuminate how students communicate through ICTs:

> The Internet may be conducive to Internet aggression for some who feel constrained by social expectations in traditional communication, but freed from these constraints in online conversations where the user cannot be seen nor the impact of his or her words on the other person be experienced. (Ybarra & Mitchell, 2004a, p. 320)

The removal of constraints for girls may influence their attitudes and dealings with cyberbullying. Online disinhibition frees individuals to act and speak in ways they typically would not in face-to-face environments (Suler, 2004), often leading to more aggressive online speech. Further, culpability is likely experienced less frequently when aggressors do not witness the effect his or her words have on another, making cyberbullying seem less dangerous than traditional bullying, a perception that highlights the urgency of this study and the usefulness of its findings.

The study and its methodology address the need for greater attention to social justice education for students.

A Cry for Social Justice

At its post-militaristic inception as a tool for the public, the Internet showed promise of being a space of equality and egality, much like the society captured by Thomas More's *Utopia*. The virtual utopia envisioned by scholars and users alike represented a hope for a digital community that was "everywhere and nowhere" (Barlow, 1996, p. 366) in which race, ethnicity, age, gender, sexual orientation, and other characteristics no longer played a fundamental role in how individuals constructed their ideas about others (Has, 2007; Morrison, 2009; Postigo, 2008). As time and technology advanced, however, this idealistic vision slowly decayed, exposing beneath it the reality that the Internet and its digital spaces, more often than not, simply mirror the power structures and divisions existing in the physical spaces its users inhabit (Davis, 2003). Despite the rapidly changing restrictions and codes of conduct put in place by technology sites like Facebook and Twitter (boyd, 2006), users continue to "…bring repressive systems to bear on [them]selves in the absent presence of the usual regulatory systems, in virtual interactions that continue to be informed and structured by specific codes, norms, expectations, and fears" (Sharpe, 1999, p. 1090).

The nature of the Internet and cyberbullying behaviors calls into question the dialogue surrounding these online spaces and the educational community's approach to school safety. Paradoxically, the Internet is engulfed in rhetoric that espouses free and unlimited access to information, equality and freedom for all (Postigo, 2008), and civil rights protections for its users who, in real-life environments, fight daily for these same rights. It is impossible to combat this reality when physical society is merely reproduced

in the virtual world: in-groups and out-groups dominate both environments marred by "inequities and social stratification" (LMU Conceptual Framework, 2009, p. 1).

One cannot deny that theorists and practitioners in Education expend considerable energy working to create and support notions of socially just education (Freire, 1970; Giroux, 1997; hooks, 1994), often with great success, but their efforts fall short in online, virtual communities. Cyberbullying presents a challenge and proverbial wake-up call to the field, igniting in educators a desire to begin examining the role of social justice in online spaces. In the online world, definitions of social justice expand to fill a void often found in traditional descriptions of the term by including the basic need for emotional and physical safety as one of its tenets. Students who experience the anxiety and terror associated with aggressive online behaviors cannot participate fully in their educational communities because they are victims of unjust practices that educators must begin to address in order to assure online social justice.

The current study introduces an intervention usable by middle-school teachers for helping students construct meaning about cyberbullying. By facilitating moments of learning surrounding the topic of online aggression, teachers can help students learn the importance of civility and fairness in digital public spaces, thus reducing the frequency of technological harassment. Three basic beliefs about social justice undergird this dissertation study:

- Social justice is a term commonly used by dominant groups to refer to work done in the physical world. In order to achieve equity, the term itself must be re-

conceptualized to apply to online communities and spaces, thus supporting the development and growth of digital citizens.

- A socially just education is holistic and intended to address the needs of world citizens marginalized in real life and over technology. As such, online aggression and violence should be accorded the same weight and gravity as their physical world counterparts.
- Social justice is not something to be merely talked about in institutions of higher learning or churches. Instead, it should be lived, acted on, and modeled in pre-K-12 classrooms through netagogical practices. To be most meaningful, social justice should be organic and intended to help without the expectation of compensation or praise.

Research Questions

In light of these beliefs about social justice, and with the understanding that the problem of cyberbullying in schools and among adolescents is a persistent one that shapes students' cognitive and emotional experiences, the current quasi-experimental, mixed-methods study addressed the following research questions:

1. To what extent can a multimedia WebQuest increase middle-school students' awareness of the dangers of cyberbullying?
2. What role does gender play in middle-school students' perceptions of cyberbullying?

Purpose of the Study

Bhat (2008) argued that protecting young people from relational and technological aggression is becoming an increasingly important and essential responsibility for schools. Despite school efforts to intervene in incidents of cyberbullying, a recent study (Li, 2006) found that only 61% of students believed that adults with knowledge of ongoing instances of cyberbullying would take action to stop them. This adult inaction (Bhat, 2008) creates a policy void (Shariff, 2009) resulting in severely limited and vague instruction about cyberbullying.

The purpose of this quasi-experimental, mixed-methods study was to contribute to the field of instructional tools available about cyberbullying. Bullying and the use of information communication technologies peak during early adolescence (Nansel et al., 2001) and as such, the current study measured the effectiveness of a constructivist, multimedia WebQuest in changing middle-school students' awareness of cyberbullying. A WebQuest is "a computer-based teaching and learning model in which learners are actively involved in an activity or situation and use the Internet as a resource" (Halat, 2008, p. 109).

Jonassen, Howland, Moore, and Marra (2003) contended that WebQuests are excellent entry-level tools for teachers new to technological training. For this study, the researcher created a WebQuest, and then measured its effectiveness in changing students' awareness of cyberbullying. The findings demonstrated the tool's success and supported the notion that all teachers, regardless of their technological comfort level, can use this tool.

This dissertation study occurred in two phases. The first phase, WebQuest construction, used data collected through focus groups comprised of middle-school parents, teachers, staff, technology experts, and students to inform the selection of media for the WebQuest treatment. After analyzing the data collected through the focus groups, the researcher then constructed the WebQuest, finalizing its content and design.

The study's second phase, data collection from students, consisted of web-based questionnaires and a WebQuest treatment. Participants in the study completed an online, anonymous pre-test questionnaire designed to collect data about demographics, experiences with cyberbullying, and students' attitudes toward this behavior. Students then underwent a WebQuest treatment containing information about the dangers and consequences of cyberbullying designed to challenge students to activate existing prior knowledge. Following the treatment, participants completed a second online questionnaire that collected information about students' perceptions of cyberbullying.

In addition to examining the effectiveness of a multimedia WebQuest in changing middle-school students' attitudes about cyberbullying, this study also sought to understand the role of gender in students' attitudes towards cyberbullying. Viewing this new form of harassment from a socio-cultural perspective helped explain the power struggles between, and within, groups and shed light on the emergence of online harassment as a problem in schools (Rigby, 2004).

This study contributes to the limited scholarly research available on effective school-based instruction and intervention for cyberbullying incidents. Additionally, this research on the use of a technology based WebQuest as an instructional tool helped

students articulate and reflect on what they already knew while augmenting their existing knowledge about cyberbullying (Jonassen, Peck, & Wilson, 1999).

Significance of the Study

Over 90% of students studied by Juvonen and Gross (2008) think that cyberbullying is a rite of passage, and simply a part of their lives while Li's (2006) quantitative study of students' experiences with cyberbullying found nearly 50% of students had been bullied during school.

In the general-dynamic theory of the Hierarchy of Needs (1943), Maslow asserted that the foundations for human motivation are progressive: In order to achieve self-actualization, one must first have his/her basic needs met. Among these fundamental necessities are the safety needs that, when met, guarantee physical and psychological safety. A continued passive approach to cyberbullying and school personnel's refusal to act quickly and publicly will lead to further academic failure, psychological damage, suicidal ideation, eating disorders, and physical harm in students affected by cyberbullying (Bhat, 2008). Correcting this failure to act is essential for students to feel safe and secure. As Christie-Mizell (2003) found, children who do well in school are less likely to bully, and that being bullied leads to decreased achievement.

This study's significance is rooted in its ability to help students increase their understandings and awareness of cyberbullying and its dangers and consequences. Although the hazards associated with cyberbullying are frequently featured in news reports (e.g., Balona, 2010; Bazelon, 2010; Calefati, 2009; Lampert, 2006; Slatalla, 2007; Wilkinson, 2009), the harassing behavior also appears on popular television shows that

often make light of its effects (e.g., Law & Order: SVU, Modern Family, The Office, The Simpsons). By measuring the effectiveness of a multimedia WebQuest to help change students' attitudes towards cyberbullying, this study produced an instructional tool to help educate students and change their experiences with cyberbullying.

The study is also significant because its data will assist the Clover Unified School District in developing more comprehensive policies for addressing direct and indirect cyberbullying (Nansel et al., 2001; Rigby, 2004) through existing disciplinary measures and additions to the curriculum. As the district continues examining the effectiveness of its current policies addressing cyberbullying behaviors, it will use the findings from this study to determine the severity and extent of cyberbullying in its middle-school.

The district is in the third year of an anti-bullying initiative and the data produced by this research will illuminate their work. Officials can review and revise existing policies designed to curtail the negative behaviors by developing curriculum that, as with the WebQuest, allows students to construct meaning about the dangers and consequences of cyberbullying based on their own knowledge and experiences. These resources will enable district and school officials to respond more effectively to the needs of their diverse student population. Using the data in a functional manner helps fill the policy void surrounding the topic (Beale & Hall, 2007; Diamanduros et al., 2008) while prompting discussion of the topic between students and teachers, students and students, students and parents, and parents and schools.

Currently, the educational community is caught in a web of technopositivism, insisting that all technology is good for students and that access to these tools will

certainly improve student achievement (Robertson, 2003). This simplistic and flawed view fails to acknowledge the dangers associated with technology when it is not introduced in structured and meaningful ways. Adults often view restricting student access, or refusing maximum access to ICT, as "tantamount to child abuse, or at least education abuse" (Robertson, 2003, p. 282) and therefore are hesitant to restrict access or begin a dialogue about the negative effects of these technologies. By using a technology-based learning tool, this study produced a body of research that can be used to shape a dialogue in school communities about how to approach technology in ways that are meaningful and positive while still acknowledging the hazards of certain communication tools.

This study is also significant because it produced a tool that indirectly helps students construct meanings around ICT and how it is used in their lived experiences. By helping students develop a more comprehensive understanding of how they use technology and the impact it has on their relationships and communication with others, they can begin to critically reconsider how they use these tools (Jonassen, 1991).

The prevalence of cyberbullying and the failure of many schools to address the problem reinforce the power struggle between traditionally disenfranchised students, "the other," and the more dominant group. In alignment with the Loyola Marymount University School of Education's Conceptual Framework (2009) and Paolo Freire's belief that education is an act meant to empower all people, this study provides a body of research that helps teachers, faculty, and staff support both the students who are marginalized and the adolescents who marginalize them. Teaching students about the

power struggles between groups and within divergent race, gender, class, ability, orientation, and body shape groups will help them achieve academically and address instances of injustice in their experiences.

Using Giroux's (1997) definition of critical pedagogy embodying notions of how one teaches, what is taught, and how people learn, this study and the WebQuest used reinvented approaches to cyberbullying education in a more socially just light. The findings of the study point toward the need for a new approach to education rooted in netagogies. Netagogies, systems of teaching and instructing by using the Internet and networking as primary tools, help develop learners who are able to engage not only in physical environments but in digital ones as well.

Theoretical Framework

This mixed-methods study examining the role of a multimedia WebQuest to change students' attitudes about cyberbullying drew heavily from constructivist learning theory, particularly as articulated by Piaget and Inhelder (1969), Vygotsky (1978), and Jonassen (1991, 1994, 1999). Husserl's phenomenological view of reality, which asserts that no reality exists apart from the person who knows it (Stones, 1988), aligns with the constructivist belief that reality is individually constructed (Levorato, 2008).

Constructivist learning theory is used widely as a means to help students construct meaning and knowledge around the content they encounter in schools (Gordon, 2009), and is rooted in the work of Vygotsky and Piaget (Altun & Büyükduman, 2007; Lyle, 2000). Constructing one's own knowledge adds meaning to concepts; by working through a multimedia, constructivist WebQuest as part of this study, students constructed

meaning about cyberbullying, its dangers, and consequences through the Internet as more knowledgeable other.

Social and Cognitive Constructivism

Piaget and Inhelder (1969) asserted that children learn through a process of assimilation and accommodation. Schemata, the cognitive or mental structures individuals use to organize reality, are challenged when new information is presented, when students first encounter a new idea or concept, they attempt to reconcile it with what they already know. Put differently, learners examine their preexisting understandings of the world and try to make sense of the new concept being learned. For example, a student who has experienced dirt and soil will most likely be able to assimilate information about sand into his or her soil schema, as the two substances are similar. This process is known as assimilation.

Accommodation, however, occurs when the new idea or information presented does not fit neatly into an existing schema. In this instance, learners must either create a new schema to house the concept or must adapt an existing schema to accommodate it. Often, when a child learns to call his/her mother "mommy," all women become "mommy." Accommodation occurs when the child learns that the woman is in fact the librarian, and not mommy. Piaget and Inhelder (1969) subscribed to the notion that learning occurs within the individual's mind.

Vygotsky's work (1978) furthered the Piagetian notion of cognitive constructivism and incorporated social aspects into learning. He asserted that learning is a social process and that knowledge is co-constructed with others and through historical

and social contexts. The learner, Vygotsky believed, cannot be studied in a laboratory. Instead, one must study learners as they construct knowledge in natural environments because the process is influenced by their situational context.

Constructivists seek to create meaningful learning opportunities for students by challenging them to question and think critically. Classrooms that use constructivist learning theory as the foundation of instruction are student-centered and focus on inquiry and activity (Boghossian, 2006; Jonassen, 1991; Wadsworth, 2004). They resist using lecture and memory drills in teaching tasks.

Brooks and Brooks (2001), offered five principles of constructivist teaching:

- Problems relevant to students' interests are posed.
- Learning is structured around primary concepts.
- Students' points of view are actively sought and valued.
- Curriculum addresses students' suppositions.
- Student learning is assessed in the context of teaching.

Teachers seeking to help students learn via inquiry rather than memorization use these five principles at the heart of constructivist learning.

Technology and Constructivism

Jonassen (1991, 1994) suggested that educators design learning environments to provide learners with meaningful, interesting, engaging, and relevant problems to explore and solve. He argued this could be easily accomplished through the integration of technology in the classroom. Technology fosters learning by supporting knowledge

construction and providing an information vehicle as a context to support learning through doing (Jonassen, Peck, & Wilson, 1999).

Some teachers who use technology in the classroom fall into the habit of using it as a passive teaching tool, however (Diamond, 1998; Jonassen et al., 1999). These teachers simply have students retrieve information from the Internet rather than establishing meaningful learning environments. Jonassen's (1999) framework for learning environments includes the following five components: (a) conception of the problem, (b) interpretation, (c) information sources supporting the understanding of the problem, (d) cognitive tools, and (e) conversation and collaboration tools. Neo and Neo (2009) recommended this environment be established using the Internet as a resource and as the primary construction base, allowing students to build and communicate within cyber communities to construct knowledge. Through mediating interactions, the Internet "…allows young people to interact with each other in new ways not possible in a face-to-face setting" (Maher, 2008, p. 52).

WebQuests serve as constructivist instructional tools (Dodge, 1995). They use relevant information and the Internet as resources to challenge student thinking and promote knowledge construction. By addressing students' suppositions and presenting new information to students, WebQuests can activate students' schemata. These web-based tools offer information sources that support the understanding of the problem posed, allowing students to use a variety of cognitive skills.

Limitations of Constructivism

Constructivism, like any other educational theory, has limitations that concern researchers. Davis and Sumara (2002) contended that the broad base of literature about constructivism opens the theory up to an "anything goes" approach. Constructivist activities can be easily planned for class but are often set aside when time constraints prohibit creativity. Gagnon and Collay (2001) argued that teachers can have the best intentions in planning lessons but they often fall flat when they feel hurried, resorting instead to lecturing, worksheets, and question and answer drills that require one word responses.

Another critique of constructivist learning theory is the silence of classroom teachers in the scholarly literature available on the topic. Researchers write extensively about the role of constructivism in classroom but, sadly, accounts from teachers are often anecdotal afterthoughts. This void in the literature leads the researcher to wonder if the application of constructivist methodologies is less frequent than purported.

Constructivist learning theory rests on the belief that learners come to learning environments with preexisting schemata (Piaget & Inhelder, 1969). These schemata can be considered cultural capital (Bourdieu, 1986) when students use them to construct new knowledge. Students lacking cultural capital are at an academic disadvantage when compared to their peers. They will experience more cognitive conflict and thus will spend more of their instructional time seeking equilibrium.

Research Design and Methodology

The research questions were answered using a quasi-experimental, mixed-methods approach of quantitative and qualitative data collection and analyses within a constructivist paradigm in which the objects of inquiry are constructions of reality and individual perspectives (Hatch, 2002). Because realities are understood through abstract mental constructions that are experientially based, local, and specific (Guba & Lincoln, 1994, as cited in Hatch, 2002), the research sought to understand how students construct meaning around cyberbullying, its dangers, and consequences.

The research occurred in Clover Unified School District (a pseudonym), located in a large, West Coast metropolitan area. Because research has shown that cyberbullying occurs most frequently among adolescents (Nansel et al., 2001), the study was conducted with 162 participants in the 1,500 student middle-school. The school's population is racially and socioeconomically diverse and is an accurate demographic representation of Clover City.

The Clover Unified School District is in the third year of its anti-bullying initiative. The findings from this study were presented to the district and can help inform their efforts as they seek to reduce the frequency of bullying and cyberbullying in their schools.

The study employed original instruments designed by the researcher, with pre-test and post-test questions based on a variety of existing tools, including the Higher Education Research Institute's (HERI) Cooperative Institutional Research Project (CIRP) Freshman Survey, and i-SAFE. To measure the effectiveness and viability of the

WebQuest treatment, middle-school aged participants took part in the within and between groups study that was entirely web-based and used Qualtrics™, an online survey creation tool.

Quantitative data was collected electronically and statistical analyses, including frequencies, cross tabulations, Pearson *r* correlations, and repeated-measures of analysis of variance (ANOVAs) were conducted using SPSS Graduate Student v.16.0. The quantitative data collected through the pre and post-tests included demographic information (e.g., age, grade level, ethnicity, etc.), computer use information (e.g., access to technology and the Internet, number of hours spent online, online activities), awareness and perceptions of cyberbullying (e.g., self-reported definitions, observation of incidences, adults' attitudes toward cyberbullying), and behaviors related to cyberbullying (e.g., willingness to talk to a responsible adult, retaliation).

Additional survey data was collected through qualitative research methods in an open-ended item that appeared on the pre and post-tests. Further, focus groups were conducted with teachers, school staff, administrators, technology experts, parents/guardians, and middle-school students to determine the content included in the cyberbullying WebQuest treatment. The knowledge that a collaborative approach to planning remedies and prevention for cyberbullying is highly effective (Bhat, 2008; Diamanduros et al., 2008) led to the decision to use focus groups in this study. Inductive analysis of the qualitative data helped to select the content that was included in the WebQuest and the format of the study's implementation.

Assumptions

Several assumptions underlie the work in this study. The researcher assumed that collecting data through anonymous, web-based surveys would result in honest and open self-reporting. By providing participants with an anonymous vehicle through which to report their experiences, perceptions, and attitudes, the researcher hoped to gather candid and accurate responses. It was further assumed that participants in the study held particular perceptions of cyberbullying. Based on findings in the literature (Bhat, 2008; Juvonen & Gross, 2008; Li, 2006), it was also assumed that middle-school students were the most appropriate demographic for a study on cyberbullying and the use of a multimedia WebQuest, as incidences of cyber harassment tend to peak in middle-school aged students (Li, 2006).

Limitations

Limitations are factors out of the researcher's control that may affect the significance of the study; open and honest discussion of a study's limitations is essential in allowing readers to determine the value of the proposed research (Gay, Mills, & Airasian, 2009).

The first limitation in the study was the possibility of experimenter bias. Experimenter bias occurs when the behavior or attitude of the researcher affects participants' responses (Gay et al., 2009). To control for this bias, the researcher used scripts when moderating both the focus groups and the WebQuest intervention. For students participating in the WebQuest, the use of scripted directions mimicked testing procedures used in school standardized testing and consequently added legitimacy to the

research by replicating a classroom situation and leading to students responding more seriously than they might have otherwise.

The second limitation to the study resulted from self-reported data. **A**sking students to self-report about their attitudes and behaviors regarding cyberbullying may have led to more honest and open answers, but it might also have produced inaccuracy in responses according to Social Desirability Theory (Edwards, 1957). The theory posits that the more negatively perceived a behavior is, the less likely someone is to admit to it. As cyberbullying has become more publicly stigmatized through popular media, students may have been less inclined to admit to participating in the behavior. Although the data was collected in the spring of 2010, prior to the highly publicized cyberbullying and suicide of Tyler Clementi, the researcher still controlled for this limitation. Data was collected anonymously, therefore eliminating the possibility of connecting responses to individual respondents.

The administration of online, anonymous questionnaires may also lead to incomplete responses or an increased non-response rate (Healey, 2007). Students who know their survey responses, or lack thereof, cannot be linked to their identity may choose to respond to only parts of questionnaires. By establishing a protocol for the intervention that is similar to a school setting, the researcher hoped to minimize this possibility. Additionally, the scripted directions included language indicating the seriousness of the research and implored participants for their best efforts.

The use of non-validated survey instruments may also be a limitation for the study. To mitigate this limitation, the researcher piloted the instrument with students

matching the age and demographics of the sample used in the actual study, and based the questions on pre-existing measures. This method highlighted deficiencies in the instruments, and changes to wording and formatting were made accordingly.

A final limitation presented by the study's design, the testing effect, is a threat to internal validity. Testing effects, or pretest sensitization, "refers to the threat of improved performance on a posttest that results from a pretest" (Gay et al., 2009, p. 244). Put another way, participants who take and retake tests within a relatively short period of time likely will perform better on the second test. Understanding that the testing effect is "most likely to occur in studies that measure factual information that can be recalled" (Gay et al., 2009, p. 244), its limiting effects were diminished in this study because non-factual information (e.g., perceptions and behaviors) was being measured.

Delimitations

This study is delimited to middle-school students in one large West Coast metropolitan area based on findings reporting that cyberbullying incidences peak in middle-school (Bhat, 2008; Juvonen & Gross, 2008; Li, 2006). Additionally, by delimiting the study to the use of a constructivist WebQuest, other forms of information conveyance were omitted from the research.

A final delimitation influencing this study was the use of research studies from primarily English speaking countries, including the United States, England, Australia, and Sweden as foundations for the literature review. Although a significant amount of anecdotal evidence about cyberbullying in non-English speaking countries exists, very

little empirical research on cyberbullying is available and as such, the researcher chose to use studies conducted in the previously mentioned countries.

Definitions of Terms

Many terms found in this dissertation may be unfamiliar or have multiple meanings that need comprehending for the paper to be understood. Those terms are defined and explained in this section.

Acceptable use policies (AUPs) are written policies, offered by schools, to explain the guidelines and responsibilities of technology users within the school. They can apply to students, staff, faculty, and school personnel and are "…usually explicit statements about the required procedures, rights, and responsibilities…" of school community members (Hummell, 2007, p. 27).

Attitudes are defined by Fazio and Powell (1997) as "evaluations of objects, people, or issues [that] facilitate 'movement' through the diverse array of objects and people that are encountered daily" (p. 430). In other words, attitudes are the thoughts, positive and negative, that one has about people, objects, or events.

Bricoleurs is a term used to refer to Internet and technology users who craft multiple identities for themselves in different contexts and settings. It is derived from the French word bricolage, which refers to constructing art from a variety of mediums (Merchant, 2005).

Cultural capital is defined as the experiences, tools, resources, and knowledge one gains through living that give one advantage over others from less privileged backgrounds (Bourdieu, 1986).

Cyberbullying is the use of personal technologies and ICT to harass or intimidate others, either directly or indirectly (Beale & Hall, 2007; Juvonen & Gross, 2008; Li, 2006; Smith et al., 2008).

The digital divide is "…the gap between those individuals and communities that have, and do not have, access to the information technologies that are transforming our lives (Dickard & Schneider, 2002, as cited in Fernandez, 2008, p. 2).

Disinhibition is the feeling of playfulness or the absence of responsibility associated with anonymity on the Internet. Users experience this feeling as they engage anonymously in relationships and communication with others over the Web (Chisholm, 2006).

Flaming is the practice of sending hostile or aggressive messages ("flames") to users on the Internet. This can be done through email messages, discussion boards, chat rooms, or blog comments. The messages are typically short and abrasive and are designed to sting rather than convey information (Willard, 2007).

Formspring is an online forum originally designed to allow users to learn more about their friends. In recent years, it has been co-opted as a tool to abuse, harass, and intimidate others through sexually suggestive, aggressive, mean-spirited, and inappropriate comments and posts.

Happy slapping is a new trend in aggressive behavior connected to ICT use. It occurs when aggressors choose someone to slap or hit at random, while friends record the abuse on cell phone video cameras (Watt, 2006) with the intention of posting the video to an online video sharing site (e.g., YouTube).

Information and Communication Technologies (ICT) may include computers, the Internet, hand-held computing devices, cell phones, and other various technologies.

Instant Messaging (IM) is the process of sending messages via electronic chat software (e.g., AOL Instant Messenger, iChat, MSN Messenger) or web-based chat programs (e.g., Gmail chat). Users of instant messaging can send "IMs" to one another in real time, can send photos, and emoticons.

Network capital is the online equivalent to social capital that is developed through relationships and online communities (Acevedo, 2007). Through experiential growth in online social networks, individuals are able to increase their social and cultural capital as it relates to their navigation and use of ICT.

Sexting is a form of text messaging that includes sending sexually explicit or suggestive text messages, picture messages, or video messages to one or multiple cell phone users. Sexting received significant media attention in 2009 and 2010 and is increasing in popularity among adolescents and teens.

Social networking sites (e.g., MySpace, Facebook, Friendster, Bebo) are spaces designed for people to communicate, share information, and befriend others. They can serve many purposes but are mainly used by students as a way to maintain contact with friends and disseminate information. Social networking sites require users to register, although sign-up information is rarely checked for honesty or accuracy. Users can update their page on the site as frequently as they choose and can upload pictures, post comments, or write about experiences, their moods, or other ideas of interest to them. Many social networking sites are accessible from cell phones and allow users to post to

their sites from there. The most commonly used terms in social networking are "friend," "wall," and "poke."

"Friends" in social networking sites are people the user has accepted an invitation of friendship from and can include acquaintances, friends, work colleagues, relatives, and others.

A "wall" in a social networking site is a common space where "friends" can leave messages and small images. All "friends" of a user can see the "wall" and responses can be sent through it to others.

A "poke" is a virtual acknowledgment of someone on Facebook. Pokes may be flirtations, tools for saying hello, or a way to indicate one is thinking of another. They are highly subjective in meaning and Facebook members use them differently.

Technopositivism is the belief held by educators that the introduction of technology, and specifically computers, into the classroom can change student achievement for the better. As an ideology, "[t]echnopositivism taps into the human psyche, into our optimism and our desire to find external, mechanical solutions to complex, very human problems" (Robertson, 2003, p. 284).

Texting (also known as short message service or SMS) is the slang word for sending text messages (160 character messages) via cell phone or smart phone from one user to another, or from one user to multiple users. Recent advances in text messaging allow users to send pictures and videos via cell phone through picture messaging.

Twitter.com is a website founded in 2006 which offers "…a real-time short messaging service that works over multiple networks and devices" (Twitter, 2009).

A WebQuest is "a computer-based teaching and learning model in which learners are actively involved in an activity or situation and use the Internet as a resource" (Halat, 2008, p. 109). Many teachers liken WebQuests to electronic choose-your-own-adventure stories.

Weblogs (blogs) are Internet based diaries, journals, or forums where users can regularly post and update short features about anything. Blogs are user defined and can be subscribed to using RSS feed services. Celebrities, teachers, students, corporations, government agencies, and political leaders, among others, use blogs to share opinions, information, and news with the public.

Zero-tolerance policies, in the context of education, are policies designed to promote safety in schools. As their name implies, there is no tolerance for the violation of specific, identified school policies (e.g., bringing weapons to school) and violators are commonly expelled (Henault, 2001).

Organization of the Study

As this study examines the usefulness of a constructivist, multimedia WebQuest in measuring students' perceptions of cyberbullying, it takes on the following organization. Chapter 1 introduced the study, offering background to the reader; a statement of the problem; the purpose and significance of the study; research questions; an overview of the methodology employed; assumptions, limitations, and delimitations that will frame the work; definitions of key terms; and the organization of the study. Chapter 2 then examines the literature relevant to the topic, providing a rationale for the study. The review of the literature includes an examination of the role of traditional

bullying and cyberbullying, their characteristics, legal considerations, and school interventions and policies. Chapter 3 offers the research design for the study's mixed-methods approach, including the research questions and hypotheses, the design of the study, and the procedures in two phases: WebQuest construction and data collection from students. Chapter 3 also provides the methods used for quantitative and qualitative data analysis. In Chapter 4, the data and findings of the mixed-methods study are presented, including explanations of the inductive analysis of qualitative data and the statistical analyses of the quantitative data based on three variables: awareness, safety, and knowledge. The study concludes with Chapter 5, which offers a discussion of the implications of the study's findings and suggestions for future research and policy changes.

CHAPTER 2

REVIEW OF THE LITERATURE

Introduction

This mixed-methods study explored the effectiveness of a multimedia WebQuest in increasing middle-school students' awareness of the dangers and consequences of cyberbullying while examining the role of gender in students' understandings of cyber harassment. Students experience cyberbullying, the use of personal communication technologies and information communication technologies (ICTs) to harass or intimidate others (Beale & Hall, 2007; Juvonen & Gross, 2008; Li, 2006; Smith et al., 2008) in increasing numbers today.

Diamanduros, Downs, and Jenkins (2008) argued the importance of researching the role of constructivist learning in mitigating the prevalence of online harassment and in changing students' attitudes and perceptions of cyberbullying. Researchers concur that intervention and prevention strategies must be collaboratively designed by school technology specialists, administrators, teachers, parents, and students to be effective (Bhat, 2008; Diamanduros et al., 2008). Working collaboratively to design constructivist learning models for cyberbullying prevention, school leaders can begin to address the problems associated with cyberbullying, including academic failure, psychological harm, eating disorders, physical harm, and suicidal ideation (Bhat, 2008).

In an effort to reduce the risks associated with cyberbullying through educating students, the following research questions were posed:

1. To what extent can a multimedia WebQuest increase middle-school students' awareness of the dangers of cyberbullying?

2. What role does gender play in middle-school students' perceptions of cyberbullying?

This review of literature examined the history of cyberbullying, constructivist learning theory, and WebQuests and was instrumental in enlightening the research questions.

Chapter Design

The definition and classification of cyberbullying emerged from the writing and studies available about traditional bullying and its effects, and thus, this chapter begins with an exploration of scholarly literature about traditional bullying, its frequency, gender's role within the behavior, and bullying interventions, laws, and policies. By presenting an overview of traditional bullying, the researcher offers readers a foundation for understanding cyberbullying as a problem. To understand how a WebQuest can be used to educate students about cyberbullying, one must first understand the history and characteristics of cyberharassment. It is appropriate, then, to follow this section with an examination of the writing offered on cyberbullying, its definition, its frequency, gender, and the laws, policies, and interventions currently available to address the topic. Because the second research question seeks to address the role of gender in middle-school students' attitudes toward cyberbullying, a review of the literature available on the social development of boys and girls is provided. Next, the researcher's theoretical framework is offered to support and underscore the suitability of the use of a WebQuest, a constructivist learning tool, as an intervention among middle-school students in this

study. Finally, to illuminate the rationale for using a multimedia WebQuest as the remedy for increasing awareness of the dangers of cyberbullying in this study, a background of the origins, construction, understanding, and application of WebQuests is offered.

Traditional Bullying

Traditional bullying, its implications, and available interventions must be examined to understand the context for cyberbullying. Although traditional bullying has existed in many forms for centuries, it was not until the late seventies that it was systematically researched (Kowalski et al., 2008). Studies first conducted in Sweden and Norway by Olweus (1978) identified student victimization and aggression in school settings and called for additional research to understand bullying behavior among students. Heeding this call, researchers in many large, developed nations, including Sweden, Australia, the United Kingdom, and the United States (Ellis & Shute, 2007) carried out studies about bullying and its effects on students. It is important to note, however, that although some cross-national, empirical research from smaller countries does exist (Currie et al., 2004), it was supported largely with funding from the World Health Organization, demonstrating the universality of bullying as a problem. Funding alone does not address the seriousness or occurrence of cyberbullying in non-English speaking nations. The current study and its literature review focus on qualitative and quantitative studies conducted in primarily English speaking nations.

Definition of Bullying

Bullying is defined as an aggression with an imbalance of power between the aggressor and victim, marked by repeated and intentional acts (Farrington, 1993; Olweus, 1993). The power imbalance that characterizes bullying can include physical strength differences, but more typically abuses include differences of social power or status (Kowalski et al., 2008). Students with a perceived social advantage may wield power over their victims who lack "resources, status, skill, or ability, to counteract or stop the harmful behaviour" (Maines & Robinson, 1994, p. 2). The terms bully and victim appear frequently in academic literature (e.g., Olweus, 1993; Rigby, 2004; Shariff, 2009) but Maines and Robinson (1994) warn against labeling in this way with the intention of minimizing emotional scarring in students involved in bullying incidents.

The term bully typically connotes aggression and demonizes students who bully (Pikas, 2002), projecting an image of the aggressor as an enemy. By the same token, the term victim may affect a young person's self-image and may alienate families (Maines & Robinson, 1994). Thus, a student labeled as victim might perceive him or herself as weak or powerless in the situation, and the connotation can potentially disrupt families whose pride rejects the victim stereotype. Despite these valid concerns, the terms still dominate scholarly literature about bullying and cyberbullying and are therefore used in this dissertation study. It is important, however, to acknowledge the use of these labels and their continued use merits further research.

The research literature described two main types of bullying. Direct bullying is defined as physical in nature, while indirect bullying is more relational (Nansel et al.,

2001; Rigby, 2004). Direct bullying, typically marked by more physicality, may include hitting, punching, kicking, slapping, pushing, tripping, stabbing, or even shooting (Kowalski et al., 2008; Nansel et al., 2001; Shariff, 2009). In contrast, relational interests indicate indirect bullying through gossiping, verbal taunts, name-calling, social exclusion, and the manipulation of friendships (Kowalski et al., 2008; Willard, 2007). Because researchers do not divide studies on traditional bullying into categories of direct and indirect incidents, no definitive answer has coalesced as to which type of bullying harms students more. Both physical and relational bullying may result in psychological damage, including reduced self-confidence, paranoia, fear, and suicidal ideation and possibly physical damage, including stomach and headaches, bed wetting, or self-harm (Finkelhor, Ormrod, Turner, & Hamby, 2005; Kowalski et al., 2008; Olweus, 1993).

The differentiation between types of bullying is important because it mirrors the two types of bullying which occur in the virtual world and over information communication technologies (ICTs) and highlights the easy transition from face-to-face to cyber interactions. Students who engage in cyberbullying behavior also participate in direct and indirect forms of aggression, which are discussed later in this review.

Direct and indirect bullying arise from overt or covert interactions, and may include indiscriminate or discriminatory behavior (Shariff, 2009). Discriminate bullying focuses on race, religion, socio-economic status, age, body type, sexual orientation, gender, or being differently-abled as catalysts for teasing or attacking. Conversely, factors other than race, religion, age, orientation, or body type sometimes result in bullying; the behavior may stem from a disagreement, a perceived insult, or at random

(Shariff, 2009). Discriminant and indiscriminant bullying is either covert or overt. Olweus (1993) noted that overt physical bullying emerges as public, open attacks on victims often worsened by an audience's attention, much like the emerging forms of cyberbullying in social networking sites.

Covert physical bullying, however, occurs away from the supervision of teachers or supervisors (Shariff, 2009). One extreme example of covert bullying retold by Jiwani (2006), described a teenage girl, Reena Virk, who was lured to a local supermarket by her peers and subsequently beaten to death. The indiscriminate act originated not from race or other personal characteristics, but rather the because she allegedly violated a friend's trust by taking a diary and telephoning the boys listed in its contents.

Maines and Robinson (1994) differentiated between discriminate bullying and "'war-like' behaviours, where opposing groups confront each other because they have different belief systems or territorial claims" (p. 2) that resist change and survive across generations. These same belief systems may be rooted in gender socialization, influencing students' perceptions of cyberbullying.

Gender's Role in Bullying

Although researchers have debated gender's role in direct and indirect bullying, both boys and girls engage in bullying as aggressors, victims, and/or both. Large-scale studies (Nansel et al., 2001; Olweus, 1993; Rigby, 2002) show that boys are more likely to be physically, or directly, bullied than girls whereas girls are more likely to be bullied through indirect attacks (Nansel et al., 2001; Olweus, 1993). The indirect attacks, commonly referred to as relational bullying, for girls include being gossiped about,

teased, or sexually harassed through comments. Boys typically experience victimization at the hands of other boys; both boys and girls victimize girls (Nansel et al., 2001; Olweus, 1993; Rigby, 2002).

Along with gender, grouping plays a significant role in bullying. Although bullying may sometimes occur in a one-on-one environment, it always constitutes a group act (Maines & Robinson, 1994; Pikas, 2002). Bullying aggression, while perpetrated against an individual, does not occur in a void; others may witness it, condone it, or even ignore it. Peer group interaction, a fear of alienation or exclusion from the in-group, and the diffusion of responsibility often prevent observers from intervening in instances of bullying (Duffy & Nesdale, 2009) even though all group members share the onus for these behaviors.

In a series of Scandinavian studies, Salmivalli (1999, 2001) discovered six participant roles in bullying situations: bully, victim, assistant, reenforcer, defender, and outsider. According to Salmivalli, an assistant helps the bully, possibly by physically restraining a victim or by identifying possible victims. Likewise, a reenforcer may also support the bullying by rewarding the negative behavior with laughter, cheering, or emotional support. Children who assist the victim or seek adult intervention commonly assume the label of defender and those children, knowingly or unknowingly unaware of the on-going aggression, are known as outsiders. Each of these six participant roles underscores the ownership all children take in bullying and capture the essence of how bullying is, in fact, a group activity. Salmivalli's work highlighted the reality that

bullying exists outside the relationship between bully and victim; students or adults who observe, assist, condone, or ignore the act allow it to occur again and again.

In order to understand student involvement in, and exposure to, cyberbullying behavior, the pre-test and post-test used in the current study contained questions about students' interactions with cyberbullying based on Salmivalli's (1999, 2001) six participant roles. For example, questions asked students if they had engaged in bullying behaviors as bullies, victims, or onlookers. Furthermore, the WebQuest treatment offered examples of many of these roles as they relate to cyberbullying. Currently, no scholarly literature addresses the possible connections between these six participant roles and cyberbullying.

The Frequency of Bullying

Considered a rite of passage by many adults and children (Shariff, 2009), bullying occurs frequently in all aspects of life. The most widely discussed form of bullying, traditional bullying of school children, appears more frequently in academic research today than a decade ago due to a national awareness created by the 1999 shootings at Columbine High School in Colorado.

In an attempt to measure the frequency of bullying among school-aged children, Olweus (1993) administered an anonymous survey to 150,000 European children. Almost 15% of participants admitted involvement in some way with bullying behaviors with some regularity. Of the respondents, 9% reported having been bullied by peers, 7% admitted to bullying others, and 2% indicated being bully-victims.

Ten years after Olweus' study, Nansel and her research team (2001) conducted the first American study with a national sample of children. The study measured the frequency of bullying among American school children with a sample of 15,000 students in grades six through 10. Participants completed a self-reporting questionnaire with questions addressing a time period of one school term, and nearly 17% of respondents indicated being bullied "sometimes" or more frequently. Nineteen percent of participants reported bullying a peer "sometimes" or more often, while only 6% indicated both with a frequency of "sometimes" or more. Using the data collected from these responses, the researchers projected a national average of "…1,681,030 youth [involved] in frequent bullying" (Nansel et al., 2001, p. 2096). Additionally, the study asked participants about five specific bullying methods, including (a) being teased about looks or speech, (b) being oppressed on the basis of race or religion, (c) being hit or slapped, (d) being the subject of rumors or gossip, or (e) being the subject of sexual comments. Of the five, participants most frequently selected looks and speech as the root of their bullying experiences (Nansel et al., 2001). While the study contributed significantly to the knowledge about bullying, the data was collected through self-reporting and thus may not accurately reflect reality. The researchers (Nansel et al., 2001) acknowledged that while self-reporting is a commonly accepted data collection practice (e.g., Patten, 2005), individual ideas about bullying may vary and influence the data. As such, incident rates may be under or over reported based on students' understandings of the terms used in the study's questions and their individual comfort levels with the research study.

This reporting effect directly informed the collection of data in the dissertation study discussed here—students self-reported on both the pre-test and post-test to allow the researcher to collect information about their individual ideas, knowledge, and awareness of cyberbullying. Furthermore, anonymous data reporting occurred to encourage participants to answer openly and honestly about bullying traits considered to be socially undesirable. To mitigate the effects of self-reporting, the researcher read to each participant group scripted directions with common language, and the pre- and post-tests also contained common language that was thought to be easily accessible for the participants.

More recently, Finkelhor et al. (2005) sought to measure childhood victimizations through the Developmental Victimization Survey (DVS). The data from the study used the Juvenile Victimization Questionnaire (JVQ) and was collected through telephone interviews of children and their caregivers, conducted by experienced employees from a survey research firm who were trained to talk sensitively with children and their parents. Nearly half (n=983) of the nationally representative sample, composed of 2,030 children ranging in age from two to 17 years old, reported being victims of assault over the course of one year. In addition, over a fifth of the sample (21%) reported being physically bullied or psychologically bullied (24%) during the one-year study.

The study (Finkelhor et al., 2005) sought to identify interrelationships among adolescent and teenage victimization experiences to assist educators and families in treating all aspects of assault. In other words, the researchers sought to establish links between types of victimization so "the child who is being bullied at school and abused at

home [will not] be poorly served by a clinician who simply intervenes with the bullying" (Finkelhor et al., 2005, p. 6). By studying the interrelationships between assault types and openly recognizing the possibility of at-home victimization, Finkelhor et al. (2005) paved the way for new researchers to examine the relationship between traditional bullying and cyberbullying incidents. Researchers can redefine and expand at-home incidents from being family driven to peer driven by including cyberbullying attacks that occur outside of school hours.

Bullying Interventions, Laws, and Policies

Historically, educators viewed bullying not as a social problem needing a remedy, but rather, as a part of childhood and growing up (Campbell, 2005; Limber & Small, 2003, as cited in Shariff, 2009). In the past decade, however, researchers (e.g., Bauman & Hurley, 2005; Beran, Tutty, & Steinrath, 2004; Ellis & Schute, 2007; Rigby, 2002, 2004) have increasingly turned their attention to evaluating bullying intervention programs, laws, and policies designed to limit the negative behaviors and protect victims. Many of the bullying intervention programs used today focus on remediating these problems at group rather than individual levels. This group approach may take many different forms and, depending on the theoretical perspectives at play in a school's approach, can be effective or ineffective.

Rigby (2004) identified five contrasting theoretical perspectives, and their implications, common in approaching traditional bullying. The perspectives identified include (a) bullying as the outcome of individual differences, (b) bullying as a developmental process, (c) bullying as a socio-cultural phenomenon, (d) bullying as a

response to peer pressures within the school, and (e) bullying as restorative justice. This dissertation study is framed by viewing cyberbullying as a socio-cultural phenomenon, one that occurs in the social setting of the Internet. Rigby (2004) argued that persons attempting to intervene in instances of bullying viewed from the socio-cultural approach must focus their efforts on learning how the school curriculum can influence children to respect differences. More importantly, though, "…the mode of delivery of the curricula should indirectly address bullying, through the stimulus it provides to cooperative problem-solving, emotional sensitivity and independent critical thinking" (p. 294). The use of a WebQuest in this study helped to develop independent critical thinking with students. Rigby (2002) also identified two general approaches to bullying policy: a rules-sanction approach and a problem-solving approach.

The rules-sanction approach. Schools use the rules-sanction approach, identified by Rigby (2002), to establish rules against bullying and impose sanctions on students considered to be in violation. For example, students who violate school rules regarding bullying may face detention, the withholding of privileges, suspension, or even expulsion (Ellis & Shute, 2007). Aligned closely to a justice approach to moral education (Kohlberg, 1984) in which one's concerns focus on fairness, the rule-sanction approach appears frequently in schools despite its focus on rationality, a markedly masculine characteristic. One highly debated example of the rules-sanction approach is zero tolerance policies that became popular when the National Educational Goals of 2000 asserted that all school campuses would be safe and free of violence and drugs (Gold & Chamberlin, 1996) by the end of the last millennium.

Zero tolerance (ZT) policies, first used by the United States Drug Enforcement Agency in the early 1980s, imposed harsh punishments for criminals convicted of major or minor legal infractions (Henault, 2001) in an effort to curtail drug dealing and smuggling. These controversial policies, first introduced into public schools in 1994 when President Clinton signed the Improving America's Schools Act of 1994 into law, met with vocal support and opposition. Opponents of ZT policies in schools argued that such regulations have negative, unintended consequences: they punish offenses not explicitly addressed by the policy and school administrators overuse them as a rationale for suspension (Martinez, 2009). Because ZT policies intend to reduce and prevent school violence (Martinez, 2009), many administrators apply the policy in instances of bullying, leading to suspension or expulsion of the aggressor. Zero tolerance policies are an extreme example of the rules-sanction approach; however, some schools have taken less stringent approaches to policing bullying in schools, including using students as enforcement officers.

Schools have used student tribunals, commonly known as bully courts (Mahdavi & Smith, 2002), with varying degrees of success. One study of a school's bully court program, conducted by Mahdavi and Smith (2002), addressed the components of the judicial process used and found it to be successful according to student reports. The setting for the research was a large, public secondary school in England, with a population of over 1,800 students and 100 teachers. The school offered the researchers an already established system for addressing bullying which included (a) an anti-bullying code that was displayed throughout the school, (b) a positive discipline system in which

positive behaviors were rewarded while negative behaviors were punished, (c) a bully register where all bullying offenses observed by teachers or heard by the bully court were recorded, (d) a bully court and council, composed of students, to hear the cases of the offenses, and (e) a mentoring program that matched year 12 students with year 7 students. As part of the school's anti-bullying program, aggressors were tried by their peers and held accountable for the rules they broke.

The results of the study indicated "strong support" (Mahdavi & Smith, 2002, p. 337) for the program and bully court by students, staff, and the students accused of bullying. Among those students accused, "many approved and most said it would stop them bullying again" (Mahdavi & Smith, 2002, p. 338). Although the results of the study generally indicated support for the program and its effectiveness, the bully court system does not identify a method to prevent victim switching. Namely, victim switching occurs when bullies and cyberbullies focus on a new victim to avoid detection and weakens many bullying intervention programs.

The problem-solving approach. Marked by its non-punitive nature, the problem-solving approach to bullying focuses on providing counseling for bullies, victims, and bystanders impacted by the aggressive act (Rigby, 2002). This approach seeks to elicit sympathy from the bullies for the victims they target in an attempt to rectify the problematic behaviors. As such, it is considered closely aligned to Gilligan's care orientation in which the problem-solving approach focuses on the needs of others during moral decision-making (Ellis & Shute, 2007). Its apparent focus on an ethic of care (Noddings, 2002) places this approach at the center of many bullying intervention

programs used in schools today, including the Shared Concern method (Pikas, 1989) and the No Blame approach (Maines & Robinson, 1991).

The Shared Concern method. The Shared Concern method (SCm), conceived by Pikas (1989) is intended for use when intervening in instances of group bullying. Group bullying or mobbing, according to Pikas, engenders illegal group violence of a mental or physical nature, driven by a group interaction marked by two distinct characteristics. The first common denominator binding together a group of bullies manifests itself as a shared "pleasure in tormenting…victims" (Pikas, 2002, p. 308). The second characteristic, the effect of group relations on bullying behavior, emerged when Pikas (2002) argued that individuals act under pressure from the group, fear exclusion, and experience feelings of guilt. After considering these characteristics, Pikas created a five-phase program that is subdivided into steps within each phase:

Phase I – Individual talks with the suspected bullies

Step 1 – Build up confidence

Step 2 – Transform the bullying into shared concern

Step 3 – Reach a turning point

Step 4 – Stimulate constructive solutions

Step 5 – Prepare for a group meeting

Phase II – Individual talk with the victim

Phase III – Preparatory group meeting with the former bullies exclusively

Phase IV – Summit meeting: the victim and the former bullies meet with an adult as a mediator

Phase V – Follow-up of the results

At the conclusion of the five-phase program, interventionists determined its effectiveness by interviewing the persons involved. If the results of interviews indicated an unresolved problem, meetings with bullies and victims began anew. Although the system appears thorough and attempts to resolve the problem by eliminating bullying behavior, its true effectiveness cannot be easily measured.

The difficulty in measuring effectiveness arises from the challenge of openly observing students in order to compare their behaviors after the intervention with their prior behaviors. In other words, students treated for their bullying behaviors likely will not continue to demonstrate these behaviors when observed by school officials. To overcome this obstacle, Pikas and the research team developed a system of "casual visitors' observations" (2002, p. 318), which placed team members in the school environments, often disguised as workers or other personnel not directly affiliated with the school. By obscuring the true identity of the observers, researchers collected more accurate data about bullying behaviors and found that none of the bullying students treated through the SCm demonstrated aggressive behavior during the two-week observation period. While these results are encouraging, critics raise questions about the sustainability of reduced aggression (Pikas, 2002) due to a lack of data collected beyond the initial two-week observation period.

The No Blame approach. First introduced by Maines and Robinson in 1991, the No Blame approach (NBa) sought to address instances of bullying among groups by removing blame from particular parties and asking all persons involved to assume

responsibility for the acts. Much like the SCm, the NBa uses a series of meetings with students to address the problem behaviors but Maines and Robinson explicitly advise against punishing students, while Pikas (1989) only alludes to this. Asserting that punishment will only worsen bullying when the aggressor takes his or her frustration out on the victim, the researchers argued that avoiding punitive action encourages disclosure and positive engagement from students (Maines & Robinson, 1994).

Similar to the SCm, the NBa uses interviews to establish contact with bullies and victims after the observation of aggressive behavior. In the first of seven steps, the teacher interviews the victim. While the teacher does not need to know specific details about the incident, the name of the aggressor(s) must be revealed. Following the initial conversation with the victim, a meeting with all people involved occurs. This may include bystanders, participants, victims, or assistants but should, according to Maines and Robinson (1994) include no more than six to eight students. In the third step, the teacher explains the problem to the group by describing the victim's feelings or using a drawing, poem, or piece of writing to depict the feelings. At this point in the intervention, the teacher still has not explicitly discussed the incident although in step four he or she asks all participants to share responsibility for the incident that occurred.

By asking for collective responsibility, the teacher places the onus for solving the problem on the members of the group and can then, in step five, ask for their ideas about solving the problem. In this step, "each member of the group is encouraged to suggest a way in which the victim could be helped to feel happier" (Maines & Robinson, 1994, p. 6). Following the open-ended discussion of ways to help the victim feel happier, the

teacher closes the meeting, encourages them to solve the problem, and sets another time to meet. Students are then left on their own until the next meeting, which typically occurs after one week, where they debrief the week with the teacher in the final step. The debriefing session serves to help the teacher monitor bullying behavior while keeping the students involved in the process.

The initial evaluations of the approach demonstrated a high success rate with 100% success in both primary and further education settings, and 96% of cases successfully solved in secondary schools. In the evaluations, "success is defined by the teacher, [who] having discussed the outcome with the victim, reports that the intervention was helpful or very helpful" (Maines & Robinson, 1994, p. 6). Several problems may arise from this method of defining success. For example, after the intervention the victim may hesitate to report additional bullying for fear of disappointing the teacher who invested time in working toward resolution. Additionally, the bullying may have covertly persisted during the course of the intervention, rendering the mediation attempt ineffective. To avoid additional aggression or retaliation, the victim may falsely report the abatement of the problem. Finally, the teacher is, in essence, asked to report on his or her own effectiveness in solving the problem and, as such, may perceive the resolution more optimistically than another observer would.

Additional evaluation of the effectiveness of the program showed its potential to be effective, even though many consider it a soft approach to bullying because of its rejection of punishment (Maines & Robinson, 1994). Schools can purchase the rights to use the No Blame approach and its supporting video and workbooks. Of 100 schools

asked to evaluate the program, 11 responses were collected and reactions were positive, including "very good [3], positive [4], incredibly successful [1], very effective [1], very useful [2]" (p. 7). Despite these reports of its success, additional consideration must occur. In addition to consuming school time and resources, the program places blame on all students involved based on the report of a single victim who may do so seeking retribution for earlier incidences of bullying. This possibility, coupled with the fact that teachers never learn the full details of the incident, raises questions among critics. Maines and Robinson (1994) addressed these concerns, asserting that any attempts to collect accounts of bullying would consume time and could potentially increase hostility toward the victim. Furthermore, any accounts collected might also reflect inaccuracies, placing blame on uninvolved parties when the goal is to remove blame.

Reactionary intervention programs such as the SCm and NBa wait for problems to occur and then attempt to repair the damage done. Although considered successful by many school community members, these programs disregard the role of curriculum and early intervention in ending bullying behavior before it begins. Educating students early about bullying, its dangers, and consequences provides the opportunity for discussion and empathy building within the school.

In fact, programs such as Bully Proofing Your School (Garrity, 1997) promote the use of curriculum about bullying and open discussions to educate students. Based on Olweus' core intervention program's four steps (1978) which include (a) training school staff, (b) creating a discipline policy, (c) informing parents, and (d) teaching students pro-social values, Garrity's (1997) program sought to provide an early approach to bullying

intervention. By creating and providing a WebQuest as an early-intervention tool for cyberbullying, this dissertation study offered students an opportunity to learn about online forms of aggression, or cyberbullying. The following section defines and describes cyberbullying behaviors.

Cyberbullying

Considered by many researchers to be a significantly more insidious version of traditional bullying (Beale & Hall, 2007; Bhat, 2008; Keith & Martin, 2005; Patchin & Hinduja, 2010), cyberbullying is difficult to define. Even though it shares many characteristics with traditional bullying, cyberbullying occurs through dynamic electronic mediums that make providing one concrete definition of cyberbullying difficult. Unique characteristics such as anonymity, infinite audience size, permanence of information, and sexually harassing commentary highlight the difference between traditional and online aggression (Kowalski et al., 2008). Similarities between the two forms of bullying are evident, however; both forms can be direct or indirect, are perpetrated through multiple modalities, negatively harm victims, and appear frequently in educational research. This section provides an overview of cyberbullying, its forms and modalities, its frequency, the legal ramifications of cyberbullying, and interventions for the act.

Definition of Cyberbullying

Cyberbullying occurs when aggressors use personal communication technologies such as computers, cell phone text messaging, websites, email, instant messaging, social networking sites, and blogging, to assault their victims (Beale & Hall, 2007; Juvonen & Gross, 2008; Li, 2006; Smith et al., 2008). An abundance of definitions of cyberbullying

appear in research for many different reasons, but they all share a focus on information and communication technologies (ICTs) as the mediums for aggression. The difficulty in finding a shared and commonly accepted definition of cyberbullying arises primarily because of the many methods of cyberbullying, the ambiguity surrounding the act, the variation in age ranges of bullies and victims, and the differences in contexts and users (Shariff, 2009).

Technological advances over the last decade have changed the way cyberbullying is defined. Previously defined by Willard as speech that is "defamatory, constitutes bullying, harassment, or discrimination, discloses personal information, or contains offensive, vulgar or derogatory comments" (as cited by Shariff, 2008, p. 29), definitions have been expanded to include ICTs like email, cell phone text messages, web sites, and more recently, social networking sites (Beale & Hall, 2007; Hinduja & Patchin, 2010; Patchin & Hindjua, 2010; Smith et al., 2008). As new technologies arise and become more accessible, the definitions will change again to encompass these new modes of harassment further complicating cyberbullying's ambiguity (Kowalski et al., 2008). Further confusion stems from determining what may be considered cyberbullying or simply online teasing. For example, a student might receive a teasing text message from a friend one day and consider it funny but might receive a nearly identical text message after a fight and consider it harassing language. While the need exists for additional research into the role of language on the Internet, the topic is not part of the scope of this dissertation study.

Online harassment or technological aggression between children most commonly typifies cyberbullying, and determining the participants involved further complicates the definition of cyberbullying. Aftab (2006) asserted firmly on her website that cyberbullying occurs solely between children, preteens, and teens. In other words, harassing or aggressive speech sent via ICTs between adults is not considered cyberbullying; she labels this behavior cyber-stalking or cyber harassment. These labels extend to instances where adults prey upon adolescents via ICTs, students harass teachers electronically, or when adults harass each other. Other researchers (e.g., Kowalski et al., 2008; Shariff, 2009) disagree and consider all forms of cyber harassment bullying behavior. In fact, online aggression occurs frequently between adults as found in a 2007 study of educators (Smith, 2007) when 17% of teachers surveyed reported having been cyberbullied. Websites such as www.ratemyteacher.com provide forums for students to anonymously post messages about teachers' attitudes, appearances, and abilities and often turn menacing when students encourage each other to post negative comments. Although studies have demonstrated cyber harassment is a growing problem (Smith, 2007), it moves outside the scope of this dissertation research project.

A final concern obfuscating a clear definition is the variety of contexts in which cyberbullying occurs. Shariff (2009) urged readers seeking to define cyberbullying to apply a caveat that the aggression must be "…understood in the specific paradigmatic context in which it is presented" (p. 40) rather than approaching it from a static perspective. The "fluidity" (p. 39) with which users can move from one form of ICT to the next, the opportunity for millions of readers or viewers to access information, the

influences exerted on the aggressor, and the timing of the attack all present difficulty in solidifying one definition of cyberbullying. It is possible, Shariff stated, to use words and definitions to change how people perceive a problem or situation differently as evidenced by Soloyon's description of the Internet as a "Gift from the Devil" (as cited in Shariff, 2009). Using language out of context may assign a negative connotation to a word or phrase and thus influence people's perceptions of cyberbullying.

Unique characteristics of cyberbullying. Traditional forms of bullying take on characteristics specific to cyberspace through the dynamic and evolving nature of electronic media (Shariff, 2009) that further complicate attempts to define cyberbullying. Characteristics such as anonymity, an infinite audience, and permanence of expression apply primarily to cyberbullying, and thus many perceive it to be more menacing than traditional bullying.

For example, anonymity provides a sense of disinhibition for many adolescents who actively bully peers through ICT. Internet based disinhibition, defined as behaviors characterized by a perceived reduction in concerns for self-presentation and the judgment of others (Joinson, 1998), allows aggressors to be harsher and more aggressive toward their peers as their virtual identities replace their real ones. In fact, the illusion of invisibility allows children to say things they might not otherwise say because they feel exempt from punishment or discovery (Grigg, 2010; Mason, 2008; Suler, 2004; Willard, 2005). Socially accepted roles are transcended through computer-mediated communication (CMC), creating an environment where the Internet fosters aggression (Ybarra & Mitchell, 2004b) with limited consequences for aggressors. Gross theorized

that children and teens use the Internet for "anonymous identity experimentation" (2004, p. 634) which aligns with Erikson's (1963) finding that one crucial task of adolescent development is the exploration and resolution of identity crises. By assuming different identities, students explore new roles (Gross, 2004) in an environment perceived as safe but which is often replete with dangers. According to Willard (2005, 2007) the absence of social cues and clues, such as facial expressions, tone of voice, and body language, is one such danger. In face-to-face interactions, students observe social and context cues that offer feedback about the negative effects of their aggressive words and actions; online interactions reduce this feedback, thus reducing the chance of an empathetic response from the bully and increasing the likelihood that information will be spread online.

Traditional bullying places victims at risk of physical or psychological harm alone or in front of a small group; cyberbullying offers the same dangers but provides an infinite audience to bullies (Shariff, 2009). One of the greatest threats of online aggression is the breadth of the potential audience in peer harassment (Grigg, 2010; Kowalski et al., 2008; Salmivalli, Kaukiainen, & Voeten, 2005; Shariff, 2009; Slonje & Smith, 2008). When harassing photos or information are posted online, they can be downloaded instantly, saved to one's computer, and forwarded at a later time, potentially reaching thousands of people. A classic example of this practice involves Ghyslain Raza, dubbed the "Star Wars Kid," a Québec teen whose instant Internet stardom was unwanted and damaging. In 2002, Raza's classmates found a home video he made of himself dancing to the score of the Star Wars films with a golf club light saber, and posted it to an

Internet site where it received 15 million hits. In 2004, a second web site featuring the original video and modified clips went live, or opened, and received 76 million hits (Lampert, 2006). Raza changed schools to escape the taunting and teasing he constantly faced. By posting the video to the Internet, Raza's classmates exposed him to global humiliation and notoriety, illustrating how cyberbullying can be inescapable and detrimental.

More recently, Tyler Clementi, a student at New Jersey's Rutgers University, jumped to his death from the George Washington Bridge after his roommate secretly filmed Clementi making out with another male student (Spaulding, 2010). The roommate, Dharun Ravi, live streamed the video to Twitter, exposing the act to potentially thousands of students. Although some media outlets (e.g., The Los Angeles Times) claim that depression was to blame in the suicide, one must acknowledge the role this wide distribution of the video played in the young man's death.

Permanence of expression, a third unique characteristic of cyberbullying, aso affected Raza. Information posted online is difficult to remove permanently and, once downloaded by a user, cannot be recalled and removed (Shariff, 2009). In fact, in the last two decades researchers have actively sought to increase the reliability of electronic permanence through designing "archive retrieval keys" (Kunze, 2001, p. 1) that would decrease the likelihood of taking anything down permanently. This permanence of electronic information results in victims' experiencing anxiety and apprehension when they access ICTs (Hummell, 2007; Shariff, 2009; Slonje & Smith, 2008), an inescapable reality in today's technologically driven environment. Stated another way, most people

rely heavily on ICTs for access to information, communication with peers and colleagues, and for work purposes (Kowalski et al., 2008) and it is unrealistic to avoid them entirely. Thus, when connecting to email accounts, turning on cell phones, or logging on to social networking sites, victims fear they will see the harassing messages sent by their bullies.

The act of cyberbullying. In seeking to define cyberbullying, a distinction must be made between the methods for carrying out the act (e.g., email, text messaging, social networking sites) and the behaviors being transmitted via those specific methods (Kowalski et al., 2008). The distinction outlined here helps educators, parents, and lawmakers understand the importance of assisting students in controlling and mediating the behaviors used in cyberbullying rather than attempting to control the technology. Willard (2007), executive director of the Center for Safe and Responsible Internet Use, suggested several behaviors associated with cyberbullying that are echoed in research findings (e.g., Agatston & Carpenter, 2006; Kowalski & Limber, 2007; Smith et al., 2008). The behaviors most widely acknowledged include flaming, harassment, denigration, impersonation, outing and trickery, exclusion, cyberstalking, and most recently, happy slapping (Watt, 2006). The current study's pre-test questionnaire referenced these behaviors to determine the extent of cyberbullying in the Clover Unified Schools.

Behaviors. Flaming, "directing angry and vulgar language against another" (Willard, 2006, p. 56), may occur directly between a victim and aggressor through posts to social networking sites (e.g., MySpace, Facebook, and Orkut), blogs, or other forms of ICTs that are increasingly considered public (Kowalski et al., 2008). boyd [lowercase

intended] and Jenkins (2006) consider social networking sites "digital publics" (para. 7) which have replaced previously accessible common public sites like malls, community centers, and parks and Acevedo (2007) concurred, asserting that communities are no longer defined by space, but rather by interest. Social networks thus organize these newly defined digital communities. Angry written exchanges through ICTs, or flame wars (Willard, 2007), typically occur in such public spaces on the Internet rather than through email or text messaging and include threats, insults, and unpredictable language.

Another behavior, harassment, is conceptually similar to flaming, but the terms differ in two main ways: harassment persists longer than flaming and is typically more one-sided, with a clearly identifiable victim and perpetrator (Kowalski et al., 2008). Although cyber harassment is not physical, it is psychologically damaging and, according to Herring (2002), constitutes one of four forms of cyber violence that leads to emotional distress and fear. One participant in focus groups held by Kowalski et al. (2008) described the cyber harassment she suffered after breaking up with her boyfriend, saying:

> He started e-mailing me and saying that he was gonna come to my house and kill me and stuff like he was watching [my] sister. I knew he wouldn't do anything but I went ahead and told my mom because he was like a freak. So, it was getting kind of scary. Yeah, he would say stuff to my friends online too so I kind of freaked out. (p. 13)

Cyber harassment, when taken to extremes, may also be called cyberstalking and is centered more on threats than insults.

Defined as "information about another that is derogatory and untrue" (Kowalski et al., 2008, p. 48), denigration commonly occurs in cyberbullying. Denigration includes the posting of information that is known to be untrue, posting or forwarding modified pictures of students, and online slam books. Slam books first experienced a wave of popularity in the 1980s. Consisting of spiral bound notebooks with students' names at the tops of pages, classmates and peers encouraged each other to write mean comments about the students on the appropriate pages and then read the comments. Eventually, the slam book evolved into a forum in which people could slam their opinions about particular topics (e.g., which type of car is better – hybrid or gasoline?) but since have been co-opted by cyberbullies. Polling sites and web sites (e.g., Formspring) are created with students' names and their peers write mean and nasty comments about them (Kowalski et al., 2008; Smith et al., 2008) much like they did in the case of David Knight, a Canadian teenager who was mercilessly cyberbullied. After being physically bullied for years, his bullies escalated to cyberbullying when they created a web site about him that contained threats, insults, and homophobic gossip (Shariff, 2009). Ultimately, the defamation went global when students in Thailand created a site designed to make fun of Knight despite the fact he had neither travelled to their country nor met the Thai students.

Cyberbullies seeking to embarrass their victims beyond denigration might also impersonate their targets. Impersonation entails an aggressor posing as the victim and spreading inappropriate, cruel, or negative information to others as if the victim were sharing these thoughts (Kowalski et al., 2008). By stealing passwords, aggressors may

have access to changing profiles on social networking sites or to sending out emails directly from the victim's account, adding an air of authenticity to the information. Unlike impersonation, outing and trickery are overt attempts to share a victim's personal information with others. In other words, a bully might receive a personal email with information intended solely for him or her, and then forward it to a wider audience without the sender's permission or knowledge, as is often the case in sexting. Sexting, the sending of sexually suggestive or explicit text messages or photographs, occasionally ends when one participant forwards information from another to third parties.

Another behavior commonly associated with cyberbullying is the exclusion and ostracism of victims. Group identity theory posits that people associate value with being a member of a group (Duffy & Nesdale, 2009) and this holds true in cyber communities (Kowalski et al., 2008). Children often perceive themselves to be part of an in-group or out-group and fear social death (Sudnow, 1967) resulting from exclusion. Sudnow studied social death by examining the treatment provided to dying patients and found that patients who exhibited more socially accepted behaviors received better care. The term has been applied to several situations since then, including exclusionary practices.

Online exclusion may include being removed from instant messaging buddy lists or being blocked in a chat room and often is perceived rather than real (Kowalski et al., 2008). To say it another way, even a slightly delayed response from a friend might be perceived as exclusion in electronic media that allow for synchronous, or instant, communication. In a study of cyber-ostracism conducted by Williams, Cheung, and Choi (2000), the researchers measured the self-esteem of individuals while they participated in

a game with what they believed were two other players. In reality, the additional two opponents were computer generated and programmed to periodically exclude the human player. Findings from the study showed a positive correlation between exclusion rates and drops in self-esteem and self-worth, which led to a second study examining the relationship between exclusion from an online ball-tossing game and a desire to rejoin another social group to reestablish broken connections. The second study, like the first, found a positive correlation between exclusion rates and the desire to join another online social group (e.g., chat room or discussion board), which highlights students' desires to be included in online social communications (Kowalski et al., 2008) and may explain students' willingness to live with cyberbullying.

The newest behavior observed and associated with cyberbullying is happy slapping (Kowalski et al., 2008; Watt, 2006). Ostensibly begun on subway trains in London, happy slapping occurs when aggressors select an individual to slap or hit at random, while friends record the abuse on cell phone video cameras. Posted to Internet video sites such as YouTube or Vimeo, the recorded attacks are then viewed by the public. A recent search of the phrase "happy slapping" on YouTube resulted in approximately 4,038 hits for videos, many of which had been viewed over 250,000 times. The attacks, intended to be funny, can turn dangerous and even deadly, as evidenced by the death of Triston Christmas (Watt, 2006). Hit so brutally, Christmas fell backward, struck his head on a concrete floor, and died one week later. His killer and the killer's friends posted the video on the Internet from a party within hours of the attack while Christmas suffered. Acts like these demonstrate the possible connection between

cyberbullying and traditional bullying and reinforce the relevance of this research study and its focus on educating students about the dangers and consequences of cyberbullying behaviors.

Communication modalities. The constant growth and advancement of the Internet and ICTs provide cyberbullies with virtually unlimited tools for assaulting their victims (Chibbaro, 2007; Grigg, 2010; Kowalski et al., 2008; Shariff, 2009; Smith et al., 2008). The most frequently used communication modalities include instant messaging, email, cell phone text messaging, social networking sites (SNS), chat rooms, blogs, websites, and online slam books (Beale & Hall, 2007; Juvonen & Gross, 2008; Kowalski et al., 2008; Li, 2006; Smith et al., 2008). This section briefly explains each modality, with special attention paid to instant messaging and social networking sites because of their increasing popularity (boyd, 2006; Li, 2006; Shariff, 2009).

Instant messaging, also known as IMing, refers to communication via instant messaging programs or software (e.g., AOL Instant Messaging, MSN Messenger, Yahoo! Messenger, iChat, Meebo, etc.) that allow for real-time communication. For instance, when one user IMs another, his or her message is received immediately once the message is sent, unlike email which often has a short delay between sending and receiving. Consequently, technology users who IM frequently and are accustomed to synchronous communication may feel excluded when they experience short delays in IMing. Identity is easy to disguise in instant messaging because users of these services create accounts that link to screen names. The screen names, customized by the individual users, are unique, and need not be based on a legal name. When a desired screen name is already

taken, the user must change the name, usually by adding a number or additional letters. Many services, including AOL Instant Messaging (AIM) allow users to have multiple screen names complicating the identification of cyberbullies and providing relative anonymity to aggressors (Bhat, 2008; Joinson, 1998; Li, 2006; Mason, 2008; Wester, 2009). Some examples of screen names include Logan21508 and CatLover1991. Although creating screen names is entirely the purview of the user, some websites do offer tips on selecting safer screen names including omitting personal information such as year of birth or zip code and avoiding threatening screen names (Wester, 2009).

Cyberbullying appears in instant messaging in a number of different ways (Aftab, 2006) that are both direct and indirect. Direct cyberbullying occurs when one sends or receives harassing, harmful, or mean messages through IM whereas the act of impersonating one through instant messaging to communicate negatively with others is considered indirect (Kowalski et al., 2008; Shariff, 2009; Willard, 2007). In order to impersonate a victim over IM, a bully must create a screen name similar to the original and can then instant message classmates and peers while posing as the victim, often going undetected.

Instant messaging is among the most common modalities for cyberbullies. In a study of 3,767 students (Kowalski & Limber, 2007), 67% of middle-school students who reported being cyberbullied selected IM as the main venue for the attacks. Findings from a related study (Agatston & Carpenter, 2006) indicated that of 52% of targets reported IM as the most common means of approach and in one of two studies conducted by Smith et al. (2008), instant messaging was the number one means of cyberbullying.

As social networking sites grow, the occurrence of cyberbullying increases as well (Shariff, 2009). Originally intended for preteens and teens, SNSs first appeared in the early 2000s and quickly gained large memberships. According to its fact sheet (MySpace, 2009b), MySpace currently has over 125 million monthly active users worldwide, a marked increase from 86 million in 2006 (boyd & Jenkins, 2006). Facebook, started in 2004 by 22 year-old Mark Zuckerberg, originally served as a social networking site for Ivy League students (Shariff, 2009) but opened to anyone with an email address in 2006. Its membership has grown steadily since going public, adding its 200 millionth member in April 2009 (Zuckerberg, 2009). Social networking sites provide users with a space to create an online profile that can be public or private and "serve as [an] individual's digital representation (similar to homepages) of their tastes, fashion, and identity" (boyd & Jenkins, 2006, para. 4). boyd & Jenkins also asserted social networking sites offer a venue for students to share their likes and dislikes, interests, and life events with wide audiences of accepted friends through posting pictures, songs, and polls. Because these sites are largely unregulated, checking the millions of individual users' content postings is difficult and places children and teens at risk for danger (Kowalski et al., 2008). Looking closely at SNS one can, "scratch the surface and…quickly uncover a culture of merciless bullying treated as sport" (Price, 2008, "Extraordinary Twist" section). Cloke, director of child protection at the National Society for the Prevention of Cruelty to Children (NSPCC), compares SNS environments to *Lord of the Flies*, the novel depicting adolescent anarchy resulting from a lack of adult presence (Price, 2008), alluding to environments of lawless danger.

Adolescents enjoy the autonomy found online and consequently, few teens friend their parents, viewing the possibility as an intrusion into a private sphere (West, Lewis, & Currie, 2009). Although relatively little research exists examining students' attitudes toward adults on Facebook and MySpace, anecdotal evidence points to their discomfort with the idea. In an article on www.nytimes.com, Slatalla (2007) recounted an instant message exchange with her daughter that occurred after Slatalla joined Facebook. Her daughter felt it was "wayyy creepy" and asked "why did you make one [Facebook page]!" (para. 27). When Slatalla asked her daughter to be her Facebook friend, she responded, "You won't get away with this…everyone in the whole world thinks its [*sic*] super creepy when adults have facebooks [*sic*]." Other students using these digital publics to explore their own identities and personalities echo the daughter's feelings about adults on SNS (Kowalski et al., 2008; Shariff, 2009; West et al., 2009).

Students hesitate to include family and parents as friends on their SNS pages due to the personal and explicit information they post to their walls. A wall is a "prominent space on the profile where the user or friends can write comments or add photographs, music or video clips" (West et al., 2009, p. 618) and can include negative or positive comments and photos that depict the user in possible illegal activity (e.g., underage drinking) (Shariff, 2009). A primary concern raised by teachers and parents is the sharing of personal information over SNS (Patchin & Hinduja, 2010).

Teenage users of SNS like Facebook and MySpace fear adult intrusion in what they perceive to be private worlds and worry that adults may misinterpret the intention behind speech posted there (boyd & Jenkins, 2006). Specifically, adults'

misinterpretations of postings may lead to punitive actions against the students in situations where they have communicated thoughts and feelings about teachers or peers to friends simply to release tension or anxiety (Kowalski et al., 2008; Shariff, 2009). These concerns are especially relevant in light of Constitutional considerations regarding free speech and victims' rights, as well as tort law focusing on libel and negligence and are addressed later in this section.

Shariff (2009) argued it is not technologies that are responsible for the spread of offending student expressions, but rather the messages the users have authored. This consideration is important to this dissertation as the study sought to increase students' awareness of the dangers and consequences of cyberbullying behaviors and language so as to limit the negative messages shared with victims through direct and indirect cyberbullying.

Direct and indirect cyberbullying. Traditional bullying and cyberbullying share many characteristics including the ability to be either direct or indirect (Chibbaro, 2007; Willard, 2006). Willard (2006) offered examples of direct cyberbullying that include harassment, denigration, cyberstalking, and exclusion. Direct cyberbullying occurs when a person is under direct attack by his or her aggressor and receives direct messages that harass or intimidate. Indirect cyberbullying, then, includes acts of impersonation, outing and trickery, flaming, and can also include denigration (Willard, 2007). Forwarding information about a person to a wide audience constitutes cyberbullying, but it is indirect in nature as in the case of Ghyslain Raza, the "Star Wars Kid."

The Frequency of Cyberbullying

Researchers have conducted several studies in the past eight years to examine the prevalence of cyberbullying among children, pre-teens, and teens (e.g., Juvonen & Gross, 2008; Kowalski & Limber, 2007; Li, 2006; Patchin & Hinduja, 2010; Smith et al., 2008). Their research builds upon the research on traditional bullying conducted at the beginning of this decade, following several highly publicized school shootings (e.g., Columbine and Virginia Tech). The studies conducted in the past several years have reflected technological advances made by expanding forums for cyberbullying from text messaging, chat rooms, and email (Smith et al., 2008) to include blogging, websites, IM, and profile sites (Aftab, 2006; Agatston & Carpenter, 2006; Juvonen & Gross, 2008; Kowalski & Limber, 2007). The studies all focused on students' experiences with cyberbullying and did not measure students' awareness of the dangers of cyberbullying.

In the first formal study conducted to examine cyberbullying (National Children's Home, 2002), 856 British school children between the ages of 11 and 19 responded to questions about whether or not they had been the victim of cyberbullying through cell phone text messaging, chat rooms, or email. Sixteen percent of respondents reported being victimized over text messaging, 7% through chat rooms, and 4% via email with girls, who were significantly more likely than boys to be cyberbullied via text messages (21% to 12%). The study's definition of cyberbullying was narrow, including only three communication modalities (e.g., IM, SNS, and blogs) available to aggressors, which may be attributed to the infancy of other technologies at the time. Of note, 69% of the participants who reported being cyberbullied reported having told an adult of the abuse.

Three years later, the NCH teamed with Tesco Mobile, one of the UK's leading mobile phone service providers, to examine the role of mobile phones in the proliferation of cyberbullying in the Mobile Bullying Survey (2005). The sample consisted of 770, 11 to 19 year olds. Nearly 20% reported cyberbullying victimization, a number up slightly from the study three years prior. The number of participants reporting they had told an adult also increased to 72% from 69% in 2002.

In a much smaller 2006 study (N=92) funded by the Anti-Bullying Alliance, Smith et al. (2008) identified and measured cyberbullying across seven different media of technology including telephone, text message, email, picture/video clip, IM, website, and chat room (p. 381). The study also measured the effect of age and gender differences, as well as the venue of cyberbullying as inside or out of school. Of the students sampled, 22% reported being bullied primarily over phone, text message, or email. This study, like many others, occurred in pencil and paper format, a factor that informed this dissertation study. Student motivation is more likely to increase with computer and technology use in the classroom (Schofield, 1995; Varank, 2005) and thus, participants took the surveys employed in the pre- and post-test online via Qualtrics™, an Internet-based survey software. The use of online data collection provided efficiency in gathering data from a large sample (Couper, 2005) and guaranteed uniform collection methods.

The findings of the Patchin and Hinduja study (2006) indicated a slight increase in the number of participants reporting cyberbullying victimization (29%). Advertised as a link on a popular musician's website, the sample (N=384) composed of participants self-reporting being under the age of 18—11% of youth respondents indicated

participating in cyberbullying behaviors as aggressors while another 47% reported observing these same negative behaviors online.

Because the target population sampled in this dissertation study consisted of 6th and 7th grade students, it was important to examine the Cyberbullying Among Middle-school Children study conducted by Kowalski and Limber (2006) that focused on students in grades 6-8. A large sample (N=3,767) completed a paper and pencil survey that combined measures from Olweus' Bully/Victim Questionnaire with 23 questions explicitly about cyberbullying. In addition to these questions about bullying, the participants also completed the Interaction Anxiousness Scale and the Rosenberg Self-Esteem Scale. The study included bullying modalities similar to other studies, including email, IM, chat rooms, websites, and cell phone text messages. The study's findings showed that 18% of students surveyed had been cyberbullied, a number that seems low in comparison to reports on empirical research. The researchers (Kowalski & Limber, 2007) acknowledge this may be a result of their use of a 2-month metric rather than a one-year metric used in other studies and as such, the current study used a one year metric. In contrast to the seemingly low number of students reporting victimization, Aftab's (2006) Wired Safety Survey, administered through the Wired Safety website, found over 53% of the total sample (approximately 900 students) reported victimization.

These studies demonstrate the prevalence of cyberbullying among adolescents and reinforce the need for continued research on the topic. These findings enlightened the need for more in depth research into ways schools can educate students about cyberbullying through mediums and messages boys and girls understand.

The Role of Gender in Cyberbullying

As society increasingly establishes clear expectations of students based on gender roles, and as students' popularity and inclusion depend more upon willingness to adhere to these strictly proscribed ideas, attention must be paid to the role of gender in cyberbullying. Research shows that boys typically report bullying more often and are likely to engage in physical bullying, while girls, historically, are more likely to engage in covert, psychological bullying (Hall, 1999) which may be either traditional or cyber-based. The psychological bullying may include gossiping, exclusion, teasing, taunting, and other forms of harassment (Beale & Hall, 2007) and is equally damaging. Tremblay (1991, as cited in Shariff, 2009) suggested that the disparity in reports of boys engaging more regularly in physical bullying than girls may be a result of researchers' tendencies to focus on male aggression, effectively overlooking female tendencies toward aggression. Focusing on issues like physical aggression reifies Martin's (1998) belief that "gendered bodies create particular contexts for social relations as they signal, manage, and negotiate information about power and status" (p. 495). One common characteristic of both traditional bullying and cyberbullying is the power imbalance that tends to favor perpetrators. Peer groups often support the bully by engaging in the bullying activity or watching and doing nothing to help the victim (Salmivalli, 2001; Shariff, 2009).

In her study on cyberbullying in schools, Li (2006) explored the nature of adolescents' experiences with cyberbullying and the role gender played in those interactions. Her research questions sought to answer whether male and female students

have different experiences surrounding cyberbullying, whether gender differences exist in students' beliefs about adult intervention in cyberbullying, and if male and female students differ in rates of telling an adult when cyberbullying does occur (p. 162). The sample (N=264) of seventh to ninth grade students was predominantly white (75.4%), nearly equally split between male and female (48.5% to 51.5%), and contained average or above-average academic achievers (96.6%). The survey instrument used consisted of 26 measures drawn from one of Li's earlier studies and collected information about demographics, computer use, and experiences with cyberbullying. Data analysis showed that significantly more boys than girls self-identified as cyberbullies (22.3% to 11.6%) while boys and girls were almost identical in reporting cyberbullying victimization (25% and 25.6%). Data also showed that "no significant gender difference was found in frequencies of cyberbullying" and that "no significant gender difference was found in student beliefs about…adult involvement in stopping cyberbullying" (p. 164). There was, however, a difference in gender when rates of reporting cyberbullying were analyzed, with girls were more likely to report instances of cyberbullying.

Cyberbullying Laws, Policies, and Interventions

The quagmire surrounding defining cyberbullying extends into the courts and complicates adjudication processes in legal suits. Cyberbullying exists primarily within two legal contexts: tort law and Constitutional considerations (Shariff, 2009).

Tort law. Tort law addresses and offers remedies for civil wrongs not rooted in contractual obligation (White, 1980) and first emerged as a response to corporate negligence in the late nineteenth century. It dominates the legal landscape in

cyberbullying cases because of its focus on negligence and defamation (Shariff, 2009) and holds both perpetrators and schools liable for cyberbullying behaviors.

Defamation. Defamation is defined as the "common-law cause of action that allows those who have been defamed through words and writings to sue the publisher of the remarks for damages to the individual's reputation" (Beckstrom, 2008, p. 18). At the center of the cyber-defamation debate is the question of who is considered a distributor of information and who is a publisher (Shariff, 2009).

The Communications Decency Act (CDA) of 1996 broadly removed responsibility from Internet Service Providers (ISPs) for the materials posted on their websites (Shariff, 2009) as long as they made efforts to restrict access to indecent materials for children ages 18 and under. Opponents of the act insist that its poorly defined terms and overly broad language effectively limit most speech on the Internet (Bernstein, 1996) threatening the First Amendment rights of users. The First Amendment prohibits Congress from making laws restricting the establishment or practice of religion, the freedom of speech, the rights of the press, or the rights of the people to peacefully assemble (U.S. Constitution). The precedent used by courts in deciding Internet abuse cases, *Zeran v. America Online (AOL)* (1997), established a pattern of no accountability for anonymous postings to the Internet. In the case, an unknown user defamed Zeran by posting advertisements to an AOL bulletin board claiming that he had t-shirts for sale that capitalized on the Oklahoma City bombing, including a t-shirt that read, "Visit Oklahoma—It's a blast!" (Shariff, 2009, p. 86). The unknown user posted Zeran's home phone number after which Zeran received harassing phone calls and death threats. Both

the District Court and Court of Appeals upheld section 230 of the CDA, clearing AOL of any responsibility for the postings and subsequent request for damages. This ruling followed the *Stratton Oakmont v. Prodigy* (1995) case in which ISPs who admitted to editing or supervising the content posted to its websites were forced to accept greater responsibility in defamation cases resulting in several ISPs (e.g., AOL) blindly posting content (Shariff, 2009). This legal history helps explain the hesitancy of some ISPs to regularly check content being published by their members and may exacerbate the ease with which some people cyberbully undetected.

Negligence. Teachers in the United States are held to a standard of a "duty of care *in loco parentis"* (Shariff, 2009, p. 89). In other words, teachers and other educators are expected to care for the child in place of the parents when children attend school. This historic mandate raises the question of whether or not schools can be held accountable for the damages caused by cyberbullying if they fail to act quickly and in a timely manner and is increasingly prompting calls to determine if teachers are negligent if they do not educate students about safe ICTs and Internet use (Shariff, 2009). When determining accountability, one must determine where the act occurred—on or off campus. In states such as Delaware, cyberbullying legislation requires a sufficient nexus be established between the attack and the school campus before the school can take punitive action against the student or students involved (Beckstrom, 2008). By January 2011, 44 of 50 states have laws against bullying, but only 13 states have enacted laws addressing cyberbullying (Hinduja & Patchin, 2010) and they all vary in their suggestions about how schools handle these aggressive acts. For the purposes of this dissertation, the

review of literature addresses the anti-cyberbullying laws of the state of California. Typically, these laws dictate that when schools establish that Internet postings and abuse occurred off campus, caused a substantial disruption in school, and had a nexus between off and on-campus, the schools may take action against the student.

Constitutional considerations. The limits of students' First Amendment protection of free speech in schools have been tested by incidents of cyberbullying and harassment. The Courts historically have decided cases regarding student free speech using one of three standards from the *Tinker, Fraser,* and *Hazelwood* trilogy (Beckstrom, 2008). These three cases form the foundation of legal scholarship on student free speech though the courts currently struggle to keep pace with changing technology and the cases stemming from its misuse (Beckstrom, 2008).

In *Tinker v. Des Moines School District* (1969), several students wore black armbands to school to protest the ongoing violence in Vietnam; the school administration reacted by introducing a policy that any student unwilling to remove his or her armband would be suspended until he or she complied with the policy. In the United States Supreme Court decision, Justice Fortas argued that students and teachers do not leave their Constitutional rights outside the school. The Court's decision (1969) established the *Tinker* standard which says student speech may only be limited if it is a substantial or material disruption or invades the rights of other students (Beckstrom, 2008). The standard has been applied to off-campus cyberspeech by the courts, though not uniformly (Beckstrom, 2008).

In *Layshock v. Hermitage School District* (2006), senior Justin Layshock created a parody profile web page for the school's principal that included both vulgar comments and the principal's photograph. Several hundred students accessed the site from school during the period of one week, which led to the school's decision to suspend computer use in the school, and later to suspend Layshock. Though he created the site on his grandmother's home computer during non-school hours, the Court applied the *Tinker* standard, claiming that the students' accessing the site from school created a substantial disruption to school operations and the decision was later overturned on appeal (2007). Beckstrom (2008) noted that although the *Layshock* court, and many others, applied the standard, other cases that apply the *Tinker* standard to cyberspeech have found it did not cause a material or substantial disruption on campus, changing the intent of the first ruling.

The standard established in *Bethel School District v. Fraser* (1986) gave schools the power to prohibit lewd and vulgar speech even if it does not pose a substantial disruption, as established in *Tinker* (1969). Chief Justice Burger, in the majority opinion, argued that because students do not receive the same protections as adults under the First Amendment, "it is a highly appropriate function of public school education to prohibit the use of vulgar and offensive terms in public discourse" (para. 2). Applied in *J.S. v. Bethlehem Area School District* (2000), the *Fraser* standard often complements the standard established in *Tinker*.

In *Hazelwood School District v. Kuhlmeier* (1988) the Supreme Court ruled that schools that maintained some form of editorial control over forums of communication

(e.g., school newspapers) did not violate First Amendment rights when they censored content. The ruling stemmed from a lawsuit filed by members of the school's newspaper after the school board removed two pages of articles from its publication due to content they deemed controversial (Beckstrom, 2008). The *Hazelwood* standard is difficult to apply to cases of cyberspeech because the speech often occurs in forums on the Internet not regulated or controlled by the school.

The First Amendment is the most frequently addressed Constitutional consideration in instances of cyberbullying, but Fourth and Fourteenth Amendment protections are also of note. The Fourth Amendment, which guarantees "right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures" (U.S. Constitution) must also be extended to protect students' computers and electronic devices from unreasonable governmental intrusion (Kowalski et al., 2008). Similarly, the Fourteenth Amendment's Due Process clause must protect both victims and aggressors, providing them with an opportunity to seek out due process when making or fighting claims of cyberbullying. As "the lines between in school and outside of school have become blurred and more easily traversed due to various forms of electronic communication" (Bhat, 2008. p. 63), the courts will likely face an explosion in cases as they related to online aggression (Shariff, 2009) and educators must know the legal precedents they face and respond to them proactively.

Legislation and school policies. While several states have introduced and passed into law anti-cyberbullying measures, no federal law exists in relation to the act. In June 2008, Representative Linda Sanchez of California introduced the House Resolution 1966,

known as the "Megan Meier Cyberbullying Prevention Act." Named for a 13 year old girl who committed suicide after receiving threatening emails and instant messages, the House bill is intended to amend Chapter 41 of Title 18 of the US Code which addresses instances of extortion, threats against the President, threats mailed between states, and blackmail. The language introduced in the bill reads as follows:

> Whoever transmits in interstate or foreign commerce any communication, with the intent to coerce, intimidate, harass, or cause substantial emotional distress to a person, using electronic means to support severe, repeated, and hostile behavior, shall be fined under this title or imprisoned not more than two years, or both. (§ 881)

The bill, still under consideration in the Judiciary Committee at the time of this writing would mark the first introduction of anti-cyberbullying language into the U.S. Code, reflecting a trend among the states. Further reflecting this trend was the first-ever federal Bullying Summit, held in August 2010 and hosted by the US Department of Education.

The introduction of anti-cyberbullying legislation by the states has been more successful, with the aforementioned six states offering laws to prohibit the negative behaviors (Hinduja & Patchin, 2011). California's educational code features many provisions providing safe school environments for students. For instance, the California Student Safety and Violence Prevention Act of 2000, introduced by then State Senator Kuehl of West Los Angeles, prohibits discrimination based on sex, sexual orientation, gender identity, ethnic group identification, race, national origin, religion, or mental or physical disability in school environments to mitigate some of the anti-gay violence and

harassment found in schools (Kuehl, 2009, para. 3). Reducing bullying also served as the genesis of Assembly Bill 79 (2001), which amended the California Education Code's section 35294.2 to include wording stipulating the State Department of Education would create sample anti-bullying policies school districts could adapt to their own needs. This adaptation would provide districts with wording useful for explaining anti-bullying measures and conflict resolution systems. As cyberbullying gained notoriety in the popular media, advocates of student safety in the state legislature crafted a bill addressing cyberbullying in which AB 86 (2008) added language to the School/Law Enforcement Partnership related to "…bullying committed by means of an electronic communication device or system" (AB 86). In Assembly Bill 678 (2009) California's Educational Code was once again amended to require that all schools have policies in place to address cyberbullying and "its negative impacts" (p. 2) on students (§f) while actively using content control software in schools. In other words, the law required schools to use software designed to limit student access to particular websites and software programs. The bill additionally encouraged school districts to partner with "…information technology companies and nonprofit organizations to develop tools to supplement the existing Internet safety curriculum that addresses the educational component of the guidelines and criteria developed" (AB 678, § 2).

In response to these laws, school districts have introduced new policies addressing cyberbullying in schools. One such policy featured in the Los Angeles Unified School District's (LAUSD) 2009-2010 Parent Student Handbook includes cyberbullying in a list of bullying behaviors, defining it as "sending insulting or threatening messages by phone,

e-mail, web sites or any other electronic or written communication" (p. 16). In addition to being enumerated as an offense, it is also listed as grounds for suspension or expulsion if students are "engaged in an act of bullying, including, but not limited to, bullying committed by means of an electronic act" (p. 21).

Culver City Unified School District (CCUSD) has implemented an Anti-bullying Initiative and Task Force (2008) to address the problems faced in their schools and "create a culture of mutual respect and a safe environment for all" (CCUSD web site, n.d.). By providing information to faculty, staff, and other stakeholders, the district hopes to minimize the effects of bullying and cyberbullying.

School interventions. The aforementioned changes in access to technology require schools, and the adults in them, to take swift action to address cyberbullying. "Protecting young people from forms of relational aggression and/or verbal, social, and emotional bullying via cyberspace is becoming an essential responsibility" (Bhat, 2008, p. 60), yet in a study conducted by Li (2006) only 61.4% of junior high school students surveyed (N=264) believed adults took action to stop cyberbullying when they were informed about it. Bhat (2008) theorized that adult inaction in these cases of online aggression stems from a policy vacuum on the topic (Shariff, 2005) and leads to student unwillingness to seek out help. Research and academic writing provides tips and suggestions for school officials as they seek to fill the void and several such recommendations are presented in Chapter 5.

By clearly defining cyberbullying and talking openly about it (Bhat, 2008), schools can minimize the air of mystique that surrounds the topic while reducing

confusion between cyberbullying and cyberteasing (Vandebosch & Van Cleemput, 2008). Defining cyberbullying is also the first step in promoting awareness about the problem and "it is important for parents and teachers to educate their children on the impact that online chats, instant messaging, text messaging, and social networking sites such as MySpace can have on their social lives" (Diamanduros et al., 2008, p. 695). By defining cyberbullying, parents and educators can learn the signs and symptoms of the problem, and can gain insight into its severity. Resources are available to help schools in defining cyberbullying including state legislation, resources from technology providers such as Microsoft and Facebook (Bhat, 2008; Diamanduros et al., 2008), and articles from scholarly journals.

Once a clear definition of cyberbullying has been determined, schools should develop policies and rules to address this negative behavior (Bhat, 2008; Dyrli, 2005; Kowalski et al., 2008). The policies must contain clear and understandable language (Franek, 2006) easily accessed by all parents and students, regardless of language ability or literacy level. Additionally, the policies should be specific and prohibitive, providing examples of what constitutes cyberbullying and methods used in its execution (Bhat, 2008). To put it another way, policies should clearly explain what cyberbullying is, what it looks like, and how it is done while discouraging its use. Finally, to be effective, school policies should provide a detailed procedure for reporting incidences of cyberbullying to school officials such as coaches, teachers, and counselors (Aftab, 2006). By enacting policies and encouraging reporting, schools help legitimize the seriousness

of cyberbullying and students may be inclined to report incidences more frequently (Bhat, 2008), a change measurable through regular assessment.

Administrators and teachers should work collaboratively to assess cyberbullying in schools (Bhat, 2008; Diamanduros et al., 2008). Using anonymous surveys that measure not only the frequency of cyberbullying but also the frequency of technology use, schools will have a clearer understanding of the problem they face in addressing cyberbullying (Diamanduros et al., 2008). Further, to determine how students are using technology to bully, the measures used should address multiple modalities of cyberbullying (Bhat, 2008). Once schools collect data, it must be analyzed and examined immediately so action will be taken (Bhat, 2008). For example, if data shows that cyberbullying most frequently occurs among sixth grade girls, counselors or other adults can plan to address the dangers of cyberbullying in the fifth grade as a preventive measure, as well as with the sixth grade girls in the school. Diamanduros, Downs, and Jenkins (2008) also asserted that data should be collected from teachers and staff, measuring their knowledge of cyberbullying, its dangers, and consequences before providing staff training.

Informing faculty and staff about cyberbullying is one best practice schools can apply to help prepare their communities to overcome the problem-behaviors associated with on-line aggression (Limber, 2004). Staff training offers school community members the opportunity to learn about cyberbullying and the jargon that accompanies it. Although some school personnel may not be qualified to offer training, asserted Chibbaro (2007), they do have the ability to increase awareness among staff, students, and parents.

Sharing resources with staff and parents generates knowledge and an understanding of the problems students face at school. Internet Service Providers (ISPs) offer information about their services and technology (Bhat, 2008) and some social networking sites produce material designed to provide school adults with an understanding of how SNSs work (MySpace, 2009b). Generally speaking, these materials can be used to help parents and students understand the positive benefits of online communication and as such may allay parental fears and concerns (Juvonen & Gross, 2008). In addition to using external training materials, schools can use the resources available through school counselors to provide parent training about cyberbullying (Bhat, 2008). Above all, informing staff and parents about the dangers of cyberbullying is paramount because they otherwise "may fail to see the connection between bullying in school and in cyberspace" (Juvonen & Gross, 2008, p. 504).

Providing information and training to students is another imperative schools cannot reject (Beale & Hall, 2007; Bhat, 2008; Chibbaro, 2007; Juvonen & Gross, 2008). Helping students understand the legal and emotional consequences of cyberbullying can reduce the likelihood that students will cyberbully (Bhat, 2008). In other words, students must learn basic netiquette, the commonly accepted manners for Internet use (Shea, 1997): The first rule of netiquette is to remember that the person on the other side of an electronic communication is human and has feelings. Beyond netiquette, students should learn the legal consequences of cyberbullying, including the fact that one's identity can be traced electronically and that laws exist prohibiting aggressive online behaviors. These lessons can be shared by discussing cyberbullying in the classroom (Shariff, 2009)

and through peer mentoring systems (Bhat, 2008; Kowalski et al., 2008). A peer mentoring system consists of older students working as models and mentors to younger students in discussions about cyberbullying. Typically, older students receive training about mentoring and cyberbullying and then share this information with younger students in order to remove peer pressure as a cause of cyberbullying (Kowalski et al., 2008).

The scholarly literature clearly demonstrates the seriousness of cyberbullying as a problem. Building on the widely accepted notion that bullying endangers students by threatening their safety, health, and academic achievement, cyberbullying scholars present a valid case for further research to address and understand the problem.

Gender

The available research on traditional bullying and cyberbullying behaviors indicates that observable differences in aggressive behaviors occur along gender lines. A brief survey of literature follows on gender socialization, communication differences, perceptions of friend groups, and the transition into middle-school for girls and boys. In this review of the literature, the term gender will be used "to refer to cultural and social phenomena—divisions of labor, activity, and identity" (Thorne & Luria, 1986, p. 176) rather than biological sex.

Social Interactions

Most individuals are first introduced to societal role expectations as children or adolescents (Johnson & Young, 2002) and as such begin to construct their own personal identities as they relate to gender. Chodorow (1995) asserted that although gender is linguistically, politically, and culturally constructed, "individual psychological processes"

(p. 517) exist which assist in the construction of gender for individuals. In other words, the linguistic, cultural, and political forces at play in gender construction carry different meanings from person to person and consequently shape one's gender differently.

As children move through adolescence, a major life stage, they begin defining themselves through inner thoughts and socio-contextual influences (Erikson, 1968). For girls, attachment and connection drives the formation of identity, contributing to the notion of girls as primarily relational beings (Gilligan, 1982). An adolescent girl's image of herself emerges not only from her own self-construction, but also from the ways her peers and others perceive her. For young girls, independence and sense of oneself does not relate to leaving family and standing alone; rather, it is connected to relationship with others (Belenky, Clinchy, Goldberger, & Tarule, 1986; Gilligan, 1982).

Girls who rely on relationships in developing identity must navigate the choppy waters of adolescent socialization that include gossip, teasing, cliques, and reputations while trying to establish intimacy in their interactions (Wiseman, 2002). Situations in which a girl's thoughts or beliefs are shunned or ignored trigger moments of self-doubt and result in a collapse of intimacy (Wiseman, 2002). Intimacy, "the experiences of feeling understood, validated, and cared for that accompany disclosure" (Sullivan, 1953, as cited by Buhrmester, 1990, p. 1101), is increasingly important in the digital age when users control their identities by determining how and when to reveal oneself online (Turkle, 2000).

Boys and girls seek intimacy, comfort, support, and advice from their peer groups (Buhrmester, 1990) and often open themselves to online socialization by sharing

personal information through electronic means. This sharing, however, when met with online silence or cyberostracism (Williams, Cheung, & Choi, 2000), may negatively affect the development of the shunned child by causing him or her to revert to behaviors normalized within the group.

Cultural Messages

The social and cultural messages propagated through school, media, and personal interactions often send mixed signals to adolescents. For example, Simmons (2002) suggested that girls growing up today are told they can be anything they want to be, whereas in reality they are still expected to be thin, quiet, and giving (p. 106). Hidden school curriculum supports this practice and teaches boys and girls to discipline their bodies in gendered ways (Martin, 1998, p. 495) by offering expectations that girls sit quietly while boys are allowed to expend extra energy. Offered by parents, teacher, and society at large (Brown & Gilligan, 1992), these messages are reinforced through television advertising, according to Johnson and Young (2002).

The Television Advertising Bureau (as cited in Woodard, 1999) found that in the late 1990s, the typical child between the ages of 2 and 11 watched, on average, 2 hours and 57 minutes of television per day, an average of nearly 1,000 hours per year. During this time, children are inundated with messages about gender roles through programming and advertising (Johnson & Young, 2002) and internalize the codes found there.

These embedded messages are not exclusive to television and other forms of multimedia. Found hidden in the text of children's literature and stories used in school, gender messages influence societal values and norms. As early as pre-school, students

are exposed to the canon of fairytales that share moral messages, developed and reinforced by the dominant group, while sculpting constructions of gender that readers tend to accept as essential and normal (Parsons, 2004). The positioning of women as objects in these stories is heightened by the high value they assign to beauty, loyalty, and submissiveness, and girls are made to believe that submission is a key to popularity and success.

Failure to function within proscribed gender roles may result in depression and reduced self-confidence. In a 2007 study of 22 adolescents, both boys and girls expressed beliefs that societal expectations that girls conform to cultural standards of beauty and thinness are reinforced by media images (Wisdom, Rees, Riley, & Weis, 2007). The sample indicated that girls who do not achieve these expected norms will feel "frustrated, hopeless, and, ultimately, depressed" (p. 151). The codes and messages related to gender directly affect children and their communication and play styles, which ultimately influence their propensities for cyberbullying.

Communication Styles and Friendships

The ways in which children play directly affect how they learn to communicate with their peers and others. The separate worlds hypothesis asserts that children tend to segregate by gender (Maltz & Borker, 1982; Nakamura, 2001) when playing and favor same-sex friendships. Similarly, social identity theory posits that children group themselves with "similar others," creating the need for the differences between groups to overshadow the differences within groups (Duffy & Nesdale, 2009, p. 122). This self-selected segregation limits children's exposure to various types of communication

behaviors and styles (Nakamura, 2001) and restricts their abilities to communicate effectively.

Communication rules for boys and girls are vastly different because of their play styles. Boys tend to play competitive sports that offer proscribed rules and roles, thus limiting the need for communication and negotiation among participants (Maltz & Borker, 1982). Discussions about emotion in competitive sports have typically centered on the thrill of victory and the agony of defeat (Brustad, 1988, p. 307), restricting the opportunities and acceptability of boys discussing their feelings and emotions openly in those venues. Conversely, girls' play tends to occur in pairs or small groups, and requires cooperation, taking turns, and negotiating (Maltz & Borker, 1982).

The play styles used by children reinforce stereotypes about feminine and masculine communication styles. According to researchers (e.g., Speer, 2002; Thorne & Luria, 1986) adults passively instruct girls to use communication as a tool to cooperate, address emotions, and assist others whereas men and boys are taught to be assertive, get and hold attention, and establish their identities. Communication plays an integral role in friendship development among boys and girls as they begin to construct relationships with peers that are valued more than relationships with parents (Giordano, 2003). The higher value assigned to these relationships might stem from their egalitarian nature that contrasts with the hierarchical structure of the child-parent relationship and can influence students' understandings of themselves through direct and indirect communication processes (Giordano, 2003, p. 261). In other words, through teasing, gossip, and even

ridicule, children learn about themselves and their self-worth in the communities in which they live.

Reputations, "by-product[s] of constant gossiping" (Wiseman, 2002, p. 124), arise from teasing and affect how children view their relationships and friendships. Girls in particular, are likely to labeled with negative terms related to how peers perceive them, although their position within the social hierarchy and cliques can protect them from overly damaging terms (Kwon & Lease, 2007; Wiseman, 2002). The reputation assigned to a child, such as jock, teacher's pet, perfect girl, social climber, or slut (Wiseman, 2002), will affect how one interacts with his/her peers and will consequently alter the dynamics of communication.

The friendships adolescents develop, however, are prone to change during the transition to middle-school because of the changes taking place in the students' lives (Hardy, Bukowski, & Sippola, 2002). These changes are both developmental and environmental as students transition from smaller elementary schools into larger middle-schools, change classrooms, and are surrounded by newly formed larger peer groups (Hardy et al., 2002, p. 118) and are important in the context of the this study as 6th and 7th grade students comprised the research sample. The cognitive and social growth of children become more prominent in the transition between school levels, and peer friendship groups are influential in adolescent development (Schneider, 2000). As peer groups support cognitive development, schools must also work to assist students in developing their cognitive abilities.

Constructivism

This mixed-methods study is grounded in the belief that WebQuests represent constructivist learning for students on the Internet, an inherently social environment. The section below discusses the tenets of this theoretical framework.

Constructivist Learning Theory

Driven by the belief that learners actively construct knowledge (Bruner, 1966; Freire, 1970; Jonassen, 1991; Loyens, Rikers, & Schmidt, 2007; Piaget & Inhelder, 1969; Sener, 1997; Vygotsky, 1978), the theory of constructivist learning is employed in schools as a driving force behind curriculum instruction more frequently today than ever before (Gordon, 2009). Constructivist learning theory espouses that the "growth of mind is always growth assisted from the outside" (Bruner, 1965, p. 1007) and that what "we call 'reality' is something we construct" (Levorato, 2008, p. 102).

Piaget and Inhelder's work espoused that learning occurs through either assimilation or accommodation (1969). According to them, assimilation is the process of incorporating new information or knowledge into existing schemata, "the cognitive or mental structures by which individuals intellectually adapt to and organize the environment" (Wadsworth, 2004, p. 14). For example, upon encountering a cat for the first time a child who is familiar with dogs might first assimilate the cat into the dog schema because both animals have four legs and tails, thus resembling each other. Because the dog schema was present, the child more easily constructed an understanding of the cat. Assimilation does not result in schemata change but does affect schemata

growth (Piaget & Inhelder, 1969; Wadsworth, 2004). Schemata change, according to Piaget, results from accommodation.

Accommodation occurs when new information does not fit neatly into an existing schema. The same child who assimilated the cat into the dog schema might struggle to assimilate a fish into an existing schema because the characteristics used to define the cat (e.g., ears, tail, four legs) are absent with the fish. To cope, the child might then create a new schema within which to place the fish or might change an existing schema to accommodate the new information collected. Piaget and Inhelder (1969) contended that cognitive conflict, or disequilibrium, occur when assimilation and accommodation are out of balance, causing learners to seek equilibrium. As learners strive to attain this balance, they try to make sense of what they learned, thereby constructing knowledge.

Piaget and Inhelder (1969) also theorized that learning occurs through the fusing of subject and object. Thus, when the subject and object exist independently of each other new knowledge cannot be constructed. Learners use schemata to process and understand new ideas and thoughts that result in the construction of new knowledge. This type of learning is at odds with the instructional techniques used most commonly in teacher-centered American classrooms. Classes are laden with lectures that make the teacher the focus of attention and textbooks that break content into small pieces for students to memorize and internalize for later regurgitation on tests (Brooks & Brooks, 2001).

The constructivists' focus, instead, is on student-centered learning that is meaningfully connected to prior knowledge and experiences (Diamond, 1998). Students

are invited to become co-constructors of knowledge (Gagnon, Jr. & Collay, 2001) who are actively engaged in the learning process through individual reflection and group discussion. In a constructivist learning environment, the teacher serves more as a facilitator than a transmitter who can be imagined to be in the midst of the class rather than at the front of the class (Jonassen, 1991). Teachers support student learning by encouraging students to pose questions, think critically, and process new information independently before sharing with others.

This study employed a constructivist WebQuest to help students navigate and explore information about cyberbullying, its dangers, and consequences. Students' prior knowledge of cyberbullying and experiences with technology were instrumental in supporting the construction of new knowledge about the topic with the Internet working as the facilitator.

The discourse surrounding constructivism helps explain both how knowledge is constructed in the world, and how people learn (Gordon, 2009) by demonstrating that individual learners construct their own knowledge of topics. Brooks pointed out that "constructivism describes an internal psychological process" (as cited by Cronjé, 2006, p. 388) and not a set of teaching or instructional practices, leading students to construct their own realities or interpret them based on their personal experiences (Altun & Büyükduman, 2007).

Social and cognitive constructivism. While many types of constructivism exist, including cognitive, critical, radical, and social (Boghossian, 2006; Gordon, 2009), the most widely addressed in scholarly literature are cognitive and social constructivism.

Cognitive constructivists, e.g., Piaget and Inhelder (1969), argue learners construct knowledge on their own, based on schemata and newly acquired information. Social constructivists, however, believe that knowledge results from collaborative construction through information sharing, discussion, and negotiation (Vygotsky, 1978; Wang, 2008). Both forms of constructivism provide support to the design of pedagogical and social activities in schools.

The work of Vygotsky (1978) further developed Piaget's ideas of development and cognitive constructivism by asserting that learning is embedded within social and historical contexts. He argued that individual learning could not be examined in isolated environments because contextual and external forces impact all learning. One of the key forces shaping student learning, Vygotsky believed, is the more capable or knowledgeable other who helps learners to do and learn more through the modeling. His zone of proximal development (1978) represented the difference between what the student can and cannot do without assistance from the other.

Wang (2008) asserted that cognitive constructivists believe individuals can construct different knowledge even when placed in the same set of circumstances. Therefore, pedagogical design must support the cognitive needs, and learning intentions, of individual learners, necessitating access to a variety of resources and activities that are interesting, appealing, and engaging (Jonassen, 1991; Vygotsky, 1978; Wang, 2008).

Social constructivists promote collaborative learning in environments where students are active constructors of knowledge, working together to build meaning in "safe and comfortable spaces" (Wang, 2008, p. 413). By expanding the basic tenets of this

learning theory, social constructivists use the various skill levels found within groups to help promote learning for all students (Boghossian, 2006; Vygotsky, 1978).

Components of constructivist learning environments. According to researchers and educators, constructivist learning environments, which may include classrooms, share basic features (e.g., Brooks & Brooks, 2001; Gagnon Jr. & Collay, 2001). Brooks and Brooks (2001) suggested that five principles guide constructivist instruction:

- Problems relevant to students' interests are posed.
- Learning is structured around primary concepts.
- Students' points of view are actively sought and valued.
- Curriculum addresses students' suppositions.
- Student learning is assessed in the context of teaching.

These five principles provided structure for the WebQuest treatment in this study. The content of the WebQuest, cyberbullying, and the use of information and communication technologies, are relevant to students' interests and can increase student engagement with the tool. Primary concepts were also explored through the WebQuest and an open-ended question on the post-test solicited students' points of view. Furthermore, the purpose of the WebQuest is to address students' understandings and suppositions about cyberbullying, which can be assessed through the scripted quiz site students visited at the end of the intervention.

Jonassen (1991, 1994) suggested that educators design technological learning environments to provide learners with meaningful, interesting, engaging, and relevant

problems to explore and solve. His framework for learning environments (Jonassen et al., 1999) includes the following five components: (a) conception of the problem, (b) interpretation, (c) information sources to support the understanding of the problem, (d) cognitive tools, and (e) conversation and collaboration tools. Jonassen posits that students must first experience a problem in order to begin their learning development, which is followed by developing possible solutions to these problems. An ideal constructivist learning environment provides students with the information and resources needed to fully understand and solve the identified problems.

Jonassen's vision of the constructivist use of technology requires teachers and researchers who are willing to use the Internet meaningfully. The current technopositivist climate in schools today too often results in "the very 'transmission' and 'reproduction' paradigms of teacher-centered face-to-face learning" (Richards, 2006, p. 240). In fact, research has proven that technologies "teach no better than teachers" (Jonassen, Howland, Moore, & Marra, 2003, p. 237) and are often used simply to deliver instructional messages.

To avoid falling into the transmission trap, technologies should be used to promote active, constructive, intentional, authentic, and cooperative learning (Jonassen et al., 1999) through the sharing of relevant information. Learning through technology will become meaningful when students are actively processing information while working on authentic tasks, much like WebQuests (Jonassen et al., 2003).

Constructivist learning theory is the foundation of Pogrow's (2004) Supermath, a program funded by the National Science Foundation to assist in teaching math skills to

students. Pogrow, like many math teachers, acknowledged that many students struggle with word problems because of poor language skills. In order to teach students the skills needed to solve word problems, Supermath developed software called Word Problem Processors (WPP) that walk students through the process of writing and decoding word problems. The software uses constructivist learning theory by introducing relevant material to help students construct new knowledge about solving word problems.

In Jonassen's framework, this information can be accessed through the Internet (Neo & Neo, 2009), which acts as a cognitive tool to manipulate aspects of the specific problem being addressed. In their 2009 study of multimedia constructivist learning, Neo and Neo suggested that learners "form communities to negotiate and co-construct meaning for the problem" and need "a platform to share and exchange their ideas…collaboratively" (p. 256). Their suggestion of using collaborative tools such as email, chat, listservs, and Multi-user Dimensions (Neo & Neo, 2009), is supported by Becker's (1999) study on the role of computers in constructivist classrooms. The study's findings indicated constructivist teachers are much more likely to use computers with students, and highlight the importance of the Internet as a tool for helping students construct knowledge rather than simply transmitting it.

Building on the work of Jonassen (1991, 1994) and Gordon (2009), the current study employed a WebQuest as a constructivist tool to assist students in constructing meaning about cyberbullying. WebQuests offer a conception of the problem while still allowing students to interpret solutions by using resources and cognitive tools (Jonassen

et al., 1999). The following section explores the history, use, and understandings of WebQuests as learning tools.

WebQuests

A WebQuest is "a computer-based teaching and learning model in which learners are actively involved in an activity or situation and use the Internet as a resource" (Halat, 2008, p. 109). These online teaching tools are "…inquiry oriented [and] optionally supplemented with video conferencing" (Dodge, 1995, p. 10). First developed in 1995 at San Diego State University by Dodge and March (Dodge, 2001), these instructional tools use classroom technology in ways that challenge students to become critical thinkers and active learners using higher order thinking skills to navigate their own educations (Halat, 2008; Jonassen et al., 2003).

WebQuests may expose students to knowledge and information they might not otherwise experience by facilitating effective learning with access to digitized primary sources such as photographs, documents, art, and music, as well as structured evaluation of these resources with teacher supervision (Milson & Downey, 2001). For instance, in a unit designed to introduce students to the culture of the Navajo in Rough Rock, Arizona, the teacher may create a WebQuest to engage students in a scenario asking them to create a visual history of the tribe. Students might be asked to seek out photographs of original Navajo art, or listen to interviews that are posted on the Internet. Additionally, by providing structured creation protocol and guidance for both teachers and students (Dodge, 2001), WebQuests have earned a large following in the K-12 educational

community, with tens of thousands of teachers embracing the tool (Dodge, 1997; Lamb & Teclehaimanot, 2005).

Learners working on WebQuests may engage in a variety of learning activities. Dodge's taxonomy of WebQuests enumerates 12 types: (a) retelling, (b) compilation, (c) mystery, (d) journalistic, (e) design, (f) creative product, (g) consensus building, (h) persuasion, (i) self-knowledge, (j) judgment, (k) analytical, and (l) scientific (Dodge, 1997; Jonassen et al., 2003). Dodge (1995) also identified two types of WebQuests: short term and long term.

Educators design short-term WebQuests with the goal of facilitating students' acquisition and integration of knowledge. Typically, short-term WebQuests may take between one and three class periods to complete, at the end of which students should ideally have gained new information and made sense of it (Dodge, 2005; Gaskill, McNulty, & Brooks, 2006). Long-term WebQuests, according to Dodge (1995), should culminate in a learner having analyzed, refined, extended, and transformed knowledge.

Learners completing a long-term WebQuest should demonstrate their understandings of the material by creating a product others could use. These longer projects may take between one week and one month to complete. An example of a long-term WebQuest, used by Milson and Downey (2001) in a sixth grade social studies class, spanned a two-week period and included students gathering information about Ancient Egypt to be included in a Time Traveler's Guidebook. Students visited six workstations during the two-weeks, including the Land and Time; Daily Life; People and Culture; Arts, Science and Technology; and Mummies and Pyramids (Milson & Downey, 2001).

Students had access to both Internet based information and resource books, and created a final product of an informational booklet that included content about political and physical features in Ancient Egypt.

Although no research is available to indicate if short-term or long-term WebQuests are more effective, it may be assumed that short-term WebQuests are more useful in the classroom. As Halat (2008) indicated, students may lose focus and wander to sites not recommended in the resource list of the WebQuest and using a shorter, more focused WebQuest may help students stay within the recommended parameters for the project. This study offered its participants access to a short-term WebQuest that was not part of the school's existing curriculum.

Construction of WebQuests

Many researchers agree that WebQuests are typically composed of a six-step process (Dodge, 2001; Halat, 2008; Zheng, Perez, Williamson, & Flygare, 2007) while others (Milson & Downey, 2001; Vidoni & Maddux, 2002) assert a five-step process. The six steps most commonly found in WebQuests include an introduction, task, process, resources, evaluation, and conclusion.

The introduction, according to Dodge (1995), sets the stage for the learning experience. Vidoni & Maddux (2002) indicated that the introduction should "whet students' interests" (p. 103) and contain a realistic scenario students may engage in during the learning process. The second part of a WebQuest, the task, may include either a set of questions to be answered or may describe in detail the task to be completed (Vidoni & Maddux, 2002). The desired product or outcome is described in the task and it

establishes the tone for the remainder of the WebQuest. The process, which Dodge (1995) suggested should be broken into clearly defined steps, is followed by a list of resources (Dodge, 1995; Maddux, 1986; Maddux & Cummings, 2007; Vidoni & Maddux, 2002). The list of resources typically includes links to websites on the Internet that are germane to the task students are asked to complete. The wealth of knowledge available online allows for a variety of resources to be used, including primary sources and other historic information (Milson & Downey, 2001). Following the list of resources is an evaluation page that may include details about how the WebQuest will be scored or that asks students to assess their own progress or growth in knowledge as a result of going through the online tool's steps.

The final step in a WebQuest, the conclusion, is meant to close the task, remind learners about what they have learned, and encourage them to extend this knowledge into other areas of their lives (Dodge, 1995). Using a WebQuest in this study on cyberbullying will present students with the opportunity to extend the knowledge gained through the process of the online tool into their social lives as they learn to cope with or avoid aggressive online behaviors.

Well-designed WebQuests use the task and process to introduce questions encouraging students to think critically about the new information being presented. As learners navigate WebQuests, they use skills and knowledge acquired earlier to influence their decision-making and analysis of information in the moment (Jonassen et al., 2003; Dodge, 2005). Additionally, well-designed WebQuests align neatly with Brooks and Brooks' (2001) principles of constructivist learning. The tools are constructed with

students' points of view taken into consideration and are designed to address students' suppositions. The material presented challenges students to think critically and evaluate what they are learning as it relates to their existing schemata. In WebQuests, learning is structured around primary concepts, the problems posed are relevant to students' interests, and student learning is assessed in the context of the teaching.

Understandings of WebQuests

Prior to the introduction of WebQuests, teachers used the Internet in unstructured ways to collect facts and opinions (Lamb & Teclehaimanot, 2005). For example, as they gained access to resources like email and the Internet, teachers created scavenger hunt-like tools for students to answer lower-level questions such as what is the fastest animal in the world (Lamb & Teclehaimanot, 2005). Wanting to encourage higher-order thinking and inquiry among students, teachers embraced WebQuests. Lamb and Teclehaimanot (2005) argued that Dodge's model of the WebQuest focused on the evaluation, analysis, and transformation of information, while remaining student-centered and project based, espousing several educational theories, including constructivist philosophy, situated learning, and cooperative learning. In fact, WebQuests that focus on helping students construct knowledge and find meaning by synthesizing examples and perspectives to build personal understandings (Lamb & Teclehaimanot, 2005), fall neatly into place within Jonassen, Peck, and Wilson's (1999) framework of constructivist learning. This framework listed and defined the five characteristics of meaningful learning, including (a) intentional learning, (b) active learning, (c) constructive learning, (d) cooperative learning, and (e) authentic learning. These five components, supported by rich resources,

anchored instruction, and practical experience, are central to constructivist instruction (Lamb & Teclehaimanot, 2005).

Jonassen, Peck, and Wilson's (1999) argument is supported by the findings of a study of sixth grade students engaging in a WebQuest (Milson & Downey, 2001). The study found that the WebQuest helped students engage in meaningful, structured, and dynamic learning, facilitated by the use of Internet-based resources. Further, the use of organized and planned online data collection reduced the amount of time students spent aimlessly wandering through the Internet and helped provide focus to the activity (Milson & Downey, 2001). Restricting the use of student time and providing direction is a form of intentional learning (Jonassen et al., 1999) and is a suggested component of WebQuest treatments.

In addition to providing a meaningful learning experience for students, the results of Milson & Downey's (2001) study indicated that WebQuests enabled teachers to effectively use computer technology in the classroom, fulfilling administrator and district expectations that teachers are competent in using technology (Halat, 2008; Zheng et al., 2007). Even though planning and creating WebQuests might be time consuming for educators (Halat, 2008), Barbour, Rieber, Thomas, and Rauscher (2009) reminded teachers that these tools are often seen by administrators and colleagues as creative and innovative uses of resources. However, it is imperative for educators to understand that "designing and developing WebQuests is a complex process that involves careful planning by putting in perspective all variables that may influence the learner's learning, including social, psychological, cognitive, [and] developmental" (Zheng et al., 2007, p.

302). These considerations influence teachers' understandings and perceptions of WebQuests and their use.

Studies have demonstrated four underlying constructs teachers must consider when using WebQuests as instructional tools: (a) critical thinking, (b) knowledge application, (c) social skills, and (d) scaffolded learning (Dodge, 1995; Pohan & Mathison, 1998; Vidoni & Maddux, 2002). These constructs were examined in a quantitative study completed in the fall of 2004. Zheng et al. (2007) surveyed 226 teachers by using two surveys to determine their perceptions about WebQuests and identify variables that directly influenced these perceptions. The first survey collected demographic information about the teachers while the second, the WebQuest Questionnaire for Teachers (WQFT), measured teachers' perceptions of WebQuest use. This study supported findings from earlier studies (Dodge, 1995; Pohan & Mathison, 1998; Vidoni & Maddux, 2002) that indicated teachers perceive constructivist problem solving, social interaction, and scaffolded learning as the critical constructs of WebQuest learning.

Practical Application of WebQuests

Although student and teacher attitudes about WebQuests are generally positive (Gaskill et al., 2006; Zheng et al., 2007), there are concerns about the use of WebQuests as teaching tools. Abbitt and Ophus' (2008) review of existing studies examining the effectiveness of WebQuests indicated that few research studies have been done about the effectiveness of the academic role of WebQuests. The review supported the assertion made by Milson and Downey (2001) that most available evidence supporting the use of

WebQuests is anecdotal. Other researchers take issue with the use of WebQuests and the large level of support they receive from the academic community. Barbour et al. (2009) argued that WebQuests, while creative and innovative, are at the most basic level, nothing more than "instructivist examples of technology integration—they are web-enhanced forms of direct instruction" (p. 54). In short, by asking students to complete fact-finding missions or re-telling tasks through a WebQuest, the teacher is simply using the Internet to accomplish what could be done in class.

Teachers and books cannot provide all of the tools needed for modern problem solving according to Varank (2005); the argument that WebQuests are simply direct instruction is misguided. In fact, the Internet and its seemingly endless wealth of information provide teachers and students with resources beyond those available in textbooks (Halat, 2008). Student motivation is more likely to increase with computer and technology use in the classroom (Schofield, 1995; Varank, 2005) because students tend to find computers more engaging and active than textbooks. However, the use of computers alone cannot ensure student engagement. When participating in a WebQuest, students may be bored by the scenario or may not return to the WebQuest portal to complete the assigned task (Halat, 2008). In other words, because students navigate the tool on their own, there is no way to keep students from moving from away from the listed resources.

Conclusion

The review of literature on traditional bullying, cyberbullying, constructivist learning theory, gender, and WebQuests supports the relevance of this study. The

information presented in Chapter 2 influenced the questions used in the pre and post-test questionnaires as well as the construction of the WebQuest, making the instruments more useful. Although most surveys conducted about cyberbullying have used paper-and-pencil formats, online data collection was used in this study to measure students' responses about experiences with cyberbullying as well as their perceptions of the dangers and consequences of online aggression. The content of the questions reflected the many modalities introduced by previous research (e.g., Kowalski et al., 2008; Willard, 2007) and ascertained students' roles in cyberbullying within the framework of Salmivalli's (1999) six participant roles.

Chapter 3 discusses, in greater detail, the research questions, initial directional hypothesis of the study, and its design. It also describes the two-phase nature of the study: WebQuest construction and data collection from students. These procedures address participants, measures, and data analysis plans and are followed by limitations to the study.

CHAPTER 3

METHODOLOGY

Introduction

Despite cyberbullying's frequent appearance in local and national news, its infancy as both a problem and an object of research indicates a policy void in schools; effective intervention solutions have yet to emerge from the vacuum (Shariff, 2009). The rate of technological advances in information and communication technologies (ICT) and the increasing popularity of social networking sites (boyd & Jenkins, 2006) further complicate the matter. This mixed-methods study evaluates the effectiveness of a multimedia WebQuest as an intervention tool in educating middle-school students by using methods congruent with the technology they use today.

This research study offers a significant contribution to the field of academic research on cyberbullying as a devastating phenomenon, but more importantly, addresses issues of social justice that reside at the heart of this problem. Cyberbullied students face many problems including psychological harm, depression, anxiety, eating disorders, physical harm, and suicidal ideation (Bhat, 2008) that may result in academic failure, clinical depression, or even death. Allowing these bricoleurs, individuals who piece together their identities from popular culture (Merchant, 2005, p. 305), to explore their digital identities without offering educational assistance and guidance can be devastating.

After a brief discussion of the research questions and initial hypothesis, this chapter describes and explains the design of the study. The procedures of the study are described in two phases: WebQuest construction and data collection from students. The

section detailing the qualitative portion of the study, Phase I: WebQuest construction, describes the use of focus groups, the participants, the measures, and the qualitative data and its analysis. Phase II: Data collection from students will describe the quantitative portion of the study, and highlights the participants, pre and post-test measures, the WebQuest, and the quantitative data analysis plan.

Research Questions

This study intends to answer the following research questions:

1. To what extent can the use of a multimedia WebQuest increase middle-school students' awareness of the dangers of cyberbullying?

2. What role does gender play in middle-school students' perceptions of cyberbullying?

The first research question assumes students will become more aware of the dangers associated with cyberbullying and as such will perceive it more negatively after participating in the WebQuest treatment. A WebQuest is "a computer-based teaching and learning model in which learners are actively involved in an activity or situation and use the Internet as a resource" (Halat, 2008, p. 109) and can be either short term or long term (Dodge, 1995). The WebQuest used in this study is classified as short-term because it can be completed within the span of 80 minutes and students will not need to produce a collection of written material at the end (Dodge, 1995).

Data about students' perceptions of cyberbullying were collected through pre- and post-test surveys whose main purpose was to describe, explore, and explain students' experiences with, and perceptions of, cyberbullying (Babbie, 1973). The following

section describes, in detail, the design of the study and the researcher's rationale for using surveys, specifically online surveys, as the primary data collection method.

Design

Designed as a quasi-experimental mixed-methods study, this body of research seeks to determine the effectiveness of a multimedia WebQuest in increasing students' awareness of the dangers of cyberbullying. This study used both quantitative and qualitative data collection methods to inform its findings. Specifically, qualitative methods were employed to collect data about resources and information to be included in the WebQuest. Using focus groups with teachers, staff, school technology experts, parents/guardians, school officials, and students, the researcher sought to identify what information about cyberbullying, its dangers, and consequences students already knew and what information was most crucial to the meaningfulness and effectiveness of the WebQuest. Research has suggested that members of the school community should collaboratively design effective interventions for cyberbullying (Bhat, 2008; Diamanduros et al., 2008) and as such, the use of focus groups was especially germane in collecting information from participants. To measure students' attitudes and perceptions, however, the study utilized a different method of assessment.

In addition to focus groups, the study used quantitative methods consisting of pre and post-test online surveys accessible through a WebQuest and administered through Qualtrics™, a web-based survey application. It was appropriate to use a descriptive survey in this study because the methodology directly related to the research questions posed (Hackett, 1981). Survey research, a commonly used method of data collection,

involves "collecting data to test hypotheses or to answer questions about people's opinions on some topic or issue" (Gay et al., 2009, p. 175) and can be either sample or census based. Sample-based surveys seek to gather information from a representative sample, or sub-group, of a designated population, while census based surveys collect information from an entire population (Gay et al., 2009). Because the time and resource constraints of this study made it impossible to survey all middle-school students in an organized and ethical manner, this dissertation, instead, focused on a representative panel sample consisting of middle-school students with diverse ethnic and socioeconomic backgrounds, a factor that supports generalizability to a larger population (Gay et al., 2009; Patten, 2007). Panel samples are samples that contain the same members from one administration to another (Gay et al., 2009) and are typical in longitudinal studies similar to this one.

The pre-test and follow-up post-test are longitudinal in nature; in other words, participants took more than one survey on the topic of cyberbullying (Patten, 2007), allowing the researcher to "assess development or change over time" (Hackett, 1981, p. 601) through within and between subjects design. By using within-subjects design, the researcher reduced the likelihood of error variance. While this study's instrumentation differs from traditional longitudinal surveys with its shorter span of time between administrations, it still offered advantages to the researcher. One such advantage was the use of a panel, which Babbie (1973) identified as a highly sophisticated type of longitudinal survey. Another advantage to using a longitudinal survey was that change is measured from one administration to another, unlike a cross-sectional survey that

captures attitudes at a particular moment in time (Hackett, 1981). Furthermore, technological advancements and a desire to minimize the time and cost factors involved with paper-and-pencil surveys led to the use of online surveys in data collection.

The use of online survey instruments is appropriate for this study as the trend in research moves toward digital data collection (Couper, 2005) and complements the use of a multimedia WebQuest as an intervention among middle-school students. The use of web-based survey tools is further supported by study findings (Diment & Garrett-Jones, 2007) which asserted that web-based surveys tend to be favored by younger participants even though several prominent studies on cyberbullying used pencil-and-paper data collection methods (e.g., Mobile Bullying Survey, Cyber Bullying Among Middle-school Children). In addition to this mode of data collection being favored by young participants, Denscombe's (2006) study found no mode effects in online surveys. In other words, respondents to nearly identical paper-based and online surveys do not give significantly different responses.

Although no mode effects were found in the study mentioned above (Denscombe, 2006), it is important to acknowledge that increases in error and non-response were identified in a study conducted by Beebe, Harrison, Park, McRae, and Evans (2006) and that the technical construction of online surveys may be a contributing factor. Healey (2007) found that drop-down items, lists that populate when users click on a downward facing arrow, are associated with longer response times and higher rates of non-response, and should be replaced with radio buttons. This substitution allows users to see a list of possible responses without using their mouse until selection, which is done by clicking on

a round button next to the desired response. A second factor contributing to error in online surveys is the use of scroll mice as an input mechanism (Healey, 2007). The use of scroll mice, mice with a scroll wheel mounted on the top or side of the device, may lead users to inadvertently change their answers when attempting to scroll down the page to the next question, as was the case with 76% of participants in Healey's study (2007). These findings informed the construction of the instruments used in the current study in two specific ways. First, the pre and post-test surveys used radio buttons instead of drop-down items, thus reducing the risk of non-response. Next, the online surveys contained frequent page breaks, which resulted in fewer questions per page and reduced the likelihood of participants using the scrolling tools on their mice. In addition to reducing the number of questions per page, the researcher moderated each administration of the intervention and verbally reminded students not to use the scroll wheel when answering the survey questions.

Procedures

The following section describes, in detail, the two-phase process involved in the study. The first phase, WebQuest construction, consisted of data collection from focus groups held with teachers and other school staff, parents and guardians, and middle-school students. The researcher analyzed qualitative data collected through focus groups and used these inputs to inform the construction of the WebQuest and the selection of its featured resources. Data collection from students comprises the second phase of the study. The participants and participant selection procedures, the measures, the WebQuest intervention, and the data analysis procedures follow.

Phase I: WebQuest Construction

The first phase of the study was qualitative in nature and informed the creation of the WebQuest intervention. Prior to finalizing the design and content of the WebQuest intervention, the researcher collected data through three focus group discussions. Focus groups "are sets of individuals with similar characteristics or…shared experiences…who sit down with a moderator to discuss a topic" (Hatch, 2002, p. 24) and can generate a unique type of information typically not available through individual quantitative data collection. In other words, the collective nature of focus groups may produce a greater wealth of information than individual interviews (Morgan, 1997) as the individuals in the group respond to each other's comments and thoughts. The findings and procedures for the first phase are described here.

Participants. In order to increase the likelihood of participants having representative characteristics and shared experiences (Hatch, 2002), three focus groups were drawn different populations in the school community: middle-school teachers and staff, parents/guardians of middle-school students, and middle-school students. Members of these populations understand cyberbullying differently and possess varying levels of knowledge about information most useful to students and, thus, their participation and insights influenced the study.

Middle-school teachers, staff, and technology experts interact with students in school settings and over concentrated blocks of time. Their experiences with students occur within the confines of the school and one may assume they have an understanding of student exposure to formal instruction regarding cyberbullying. Conversely, parents

and guardians interact with students in non-school hours and may illuminate students' understandings and attitudes toward cyberbullying in less formal environments. Additionally, parents and guardians may know more about specific incidences of cyberbullying, enabling them to contribute to the decision-making process for WebQuest construction.

Focus groups ideally have six to twelve participants, "with enough individuals to generate and maintain a discussion but not so many that some individuals will have a hard time getting the floor" (Hatch, 2002, p. 135). The school staff and parent/guardian focus groups each consisted of six members, while ten middle-school children participated in the student group. This study's design used samples of convenience although researchers warn against using this type of sampling in focus group selection as it can lead to bias and error in data collection (Hatch, 2002; Patten, 2005). The data collected through this qualitative method informed the construction of the primary intervention tool (Hatch, 2002) and as such did not adhere to strict guidelines to avoid bias. The factor most commonly associated with this type of bias, the exclusion of certain types of individuals from the sample (Patten, 2005), was avoided in this selection process.

The participants in focus group one, the school personnel focus group, received email invitations (see Appendix A for invitation letter for teachers) asking them to participate in the study. The participants all work in Clover City middle-school, and represent a variety of grades, content areas, ages, and ethnicities (see Table 1).

Table 1
Individual Characteristics of Focus Group One

Characteristic		n
Gender		
	Female	4
	Male	2
Ethnicity		
	Asian/Pacific Islander	1
	Hispanic/Latino(a)	2
	African-American/Black	1
	Caucasian	3
Age		
	22-30 years	1
	31-40 years	3
	41-50 years	1
	51 years or older	1
Years of school experience		
	1-5 years	1
	6-10 years	4
	11 years or more	1

The members of the parent focus group, focus group two, are residents of Clover City and were invited to participate by letter (see Appendix B for invitation letter for parents/guardians). The group characteristics are detailed in Table 2.

Table 2
Individual Characteristics of Focus Group Two

Characteristic		n
Gender		
	Female	3
	Male	3
Ethnicity		
	Asian/Pacific Islander	0
	Hispanic/Latino(a)	2
	African-American/Black	1
	Caucasian	3
Age		
	22-30 years	0
	31-40 years	2
	41-50 years	3
	51 years or older	1

Finally, the participants in focus group three, the student focus group, were selected by a sixth-grade teacher at Clover Middle-school and asked to join an after-school focus group session (see Table 3).

Table 3
Individual Characteristics of Focus Group Three

Characteristic		n
Gender		
	Female	6
	Male	4
Ethnicity		
	Asian/Pacific Islander	1
	Hispanic/Latino(a)	3
	African-American/Black	3
	Caucasian	2
	Biracial	1
Age		
	11 years old	6
	12 years old	3
	13 years old	1
Grade		
	Sixth	7
	Seventh	3

All participants in the focus groups read and signed informed consent forms (see Appendix C for focus group consent form) at the start of their respective focus groups, indicating their understanding that the information collected through the conversations would be used to direct the study. Students were provided with informed consent and student assent letters one week prior to the focus group. Initially, 12 students were invited to participate but two did not obtain parental consent and thus were not included in the sample. Collecting the signed consent forms adhered to the ethical requirements of the university's Institutional Review Board (IRB) and the guidelines for research proposed by the American Psychological Association (2002). Participants received two copies of the consent form, which included the purposes of the study and provided information about whom to contact with questions, concerns, or additional comments. The form also offered referrals for parents who required additional information or assistance with cyberbullying issues. In addition to the consent form, focus group participants indicated their understanding that the comments made during the focus group were confidential and should not be shared outside of the group setting. This agreement, indicated through a nod of the head once gathered in the large group, provided a sense of security for participants and was intended to produce more honest and frank conversation.

Focus group procedures. While each focus group meeting was scheduled to last one and one half hours to allow time for ample conversation, they required less time than planned. Focus groups one and two each lasted approximately one hour, while the student focus group used only 45 minutes.

Originally planned to be held in community rooms at a local veterans' organization, the focus groups needed to be relocated due to scheduling conflicts at the site. As such, the two adult focus groups took place in the researcher's home in Clover City, and the student focus group occurred in a classroom on site at Clover Middle-school. By holding the focus groups in a neutral location and away from individuals' workplaces, the researcher hoped to attain a more relaxed and honest feel to the discussions (Hatch, 2002). Light snacks and beverages were provided for participants as the focus groups occurred after school or in the early evening and participants were asked to attend directly following work or school.

The researcher used scripted questions, prepared in advance of the focus groups (see Appendix D for focus group protocol and questions), to help guide the discussions. The questions were written such that they could be adapted to meet the needs of the changing conversations by the researcher, who acted as moderator in the focus groups (Hatch, 2002; Patten, 2005). The questions were intended to further assess middle-school students' knowledge about cyberbullying, its dangers, and consequences.

The researcher audio recorded the discussions through a digital voice-recording device and took notes by hand to help triangulate the data collected. Hatch (2002) offered tips for researchers acting as moderators that were applied in this study. The tips included, but are not limited to (a) allowing time for participants to meet each other and the researcher, (b) providing an overview of the focus group procedure and ground rules for participation, (c) asking participants to provide a brief opening statement to begin the conversation about cyberbullying, (d) building on the opening statements with guiding

questions, (e) maintaining conversational focus on cyberbullying, (f) encouraging participants to "be specific and use examples" (Hatch, 2002, p. 138), (g) monitoring and balancing participation, and (h) providing closure to the session through closing remarks and final statements.

The primary goal of the focus groups was to create conversation about cyberbullying, and the design of the group interview protocol reflected this by containing open-ended questions rather than dichotomous, closed-ended ones, as well as follow-up questions. Additionally, the questions focused on cyberbullying and sought to focus the participants' conversations and responses (Hatch, 2002), thus allowing group members the chance to control the direction of the conversation while also producing rich and useful data.

Questions in the focus groups were based on Hatch's adaption of Spradley's ethnographic questions (as cited in Hatch, 2002) that focus on description, structure, and contrast. Descriptive questions seek to "get informants talking about the particulars of a social scene with which they are familiar" (Hatch, 2002, p. 104) and were used to collect information about perceived student knowledge of cyberbullying. Examples of descriptive questions used in the focus group were, "Can you describe what your child/student thinks about cyberbullying?" and "Tell me about a time when you talked to your child about cyberbullying." Descriptive questions can be further clarified through the use of structural questions (Hatch, 2002) and included questions such as, "What are three ways someone can cyberbully another person?" and "If you've talked to your child/student about cyberbullying, how do you describe it?" The last questions used were

contrast questions that "[explore] how informants make meaning in their social worlds" (Hatch, 2002, p. 105). Contrast inquiries in the focus group question list included, "What is the difference between cyberbullying and traditional bullying?" and "Compare what your child/student knows about cyberbullying in comparison to traditional bullying."

Data analysis. Immediately following each of the focus group sessions, the interviewer transcribed the digital audio recordings verbatim using Microsoft Word and QuickTime software. Immediate transcription allowed data to remain "fresh" (Bertrand, Brown, & Ward, 1992, p. 201) and accessible for analysis at a later date. The verbatim transcription included all comments made by the focus group participants to allow for the most accurate understanding of the data (Bertrand et al., 1992). Following the transcription, the researcher's notes were typed and inserted into a second copy of the transcript.

The researcher then used margin coding (Bertrand et al., 1992) to organize the data collected by theme. Margin coding, one of many forms of qualitative data analysis, involves using letters, numbers, or colors to indicate frames of analysis within the margins of the actual transcript (Bertrand et al., 1992). Prior to beginning the coding process three main segments of data, or frames of analysis (Hatch, 2002), emerged from readings of the transcripts, including students' awareness of the dangers of cyberbullying, students' knowledge of cyberbullying, and students' preferred methods of information reception. These frames of analysis defined the volume of margin coding that occurred. The emergent frames were marked in the margins to allow the researcher to group the data within frames and report on the overall findings. The use of margin coding is less

time consuming than the inventory approach (Bertrand et al., 1992) and is more reliable than using researcher recall to code themes.

The collected and analyzed data informed the final construction of the WebQuest and contributed to determining which resources were offered to students. Following data analysis, the final construction of the WebQuest took place.

WebQuest intervention. After meeting with the focus groups and analyzing their comments, the researcher created the WebQuest intervention using iWeb™, a web-design tool available from Apple. Intended to help students construct their own understandings of cyberbullying, the WebQuest is an inquiry-based lesson situated on the Internet (Dodge, 1995). WebQuests typically are framed around a scenario in which the students take on a role (e.g., detective, anthropologist, scientist, etc.) to complete a task. In order to align more closely with the State Language Arts standards for writing, the WebQuest intervention used in this study asked students to play the role of an investigative journalist researching an article on cyberbullying for a local newspaper. This particular scenario allows teachers to use the assessment portion of the WebQuest to work with students on writing investigative, expository pieces.

Typically, WebQuests contain six sections, including the introduction, task, process, resources, evaluation, and conclusion (Dodge, 2001; Halat, 2008; Zheng et al., 2007). The WebQuest in this study contained five sections due to time restrictions associated with the research. Omitting the evaluation section of the WebQuest where students would typically create an authentic assessment was intentional as the post-test measured their knowledge.

When focus groups members addressed the need for students to be engaged in their learning, one teacher said, "…it's almost like we need bells and whistles to get attention sometimes." Thus, the aesthetic design of the WebQuest intentionally mirrored that of a comic book, using bright colors and graphics to draw students' attention to the site.

The first page of the WebQuest contained a general welcome to participants and a hyperlink to the pre-test. Following their completion of the pre-test, students were redirected to the introduction page of the WebQuest, which provided context about the fictitious scenario in which the participants would engage. Anna, a student from the focus group believed that, "…when I work I like, want to be into it….I don't want to be bored and stuff" and her peers agreed. The scenario included details about a fight that occurred between eighth graders at Fielding Middle-school when harassing text messages escalated into threats. As a result of the fight, the study's participants worked as investigative reporters on the story "Internet Insults Injure Feelings at Fielding."

To learn more about their assignment, students proceeded to the task section of the WebQuest through one of two ways: a direct hyperlink at the bottom of the page labeled, "Click here to move on" or through the links bar at the top of the page. Two links on each page reduced the need for students to scroll up and down in the WebQuest, thus minimizing the chance of error or frustration for participants, as recommended by the school's technology expert in the focus group discussion.

The task section further established context for students, and offered the questions to be answered or the final product to be completed (Vidoni & Maddux, 2002). In this

WebQuest, the task asked students to learn more about cyberbullying by viewing multimedia resources on the Internet. This information was included in the WebQuest to help build background knowledge on the topic and ensure that all students approached the post-test with a common understanding of cyberbullying.

Following the task, participants navigated to the process page where they received explicit directions about what to do in the WebQuest. There, participants learned they would watch two videos, read three true stories about cyberbullying, and take an online quiz for children available through the Cyberbullying Research Center (Hinduja & Patchin, 2009). These resources were housed on the resources page of the WebQuest to provide easy access for students.

After considering the comments from focus groups about students' attention to videos in class, two short videos were included in the intervention. One student felt that videos "helped us learn the stuff without being boring" and enjoyed watching videos during class time. The first segment, a 31 second long public service announcement from the AdCouncil website, depicted a young girl giving an oral presentation to her entire school in a packed auditorium. While she spent her time listing the negative qualities of a girl in school, the students in the audience looked on somberly. The final words that appeared on the screen read, "If you wouldn't say it in person, why say it online?" highlighting the impact of spreading negative or false rumors over the Internet. The online safety group WiredSafety.org created the second video, a 3-minute segment taken from YouTube.com, a popular online video repository. In it, cyberbullying was defined, examples of cyberbullying behaviors were provided, and a young woman told about her

own experience with cyberbullying. Both videos provided information about cyberbullying that was negative in nature and demonstrated the more dangerous aspects of harassing behaviors.

Following the videos, students read three true vignettes about cyberbullying (see Appendix E), written by the researcher, and based on stories that emerged from academic articles and national news outlets. The choice to include true stories in the WebQuest was informed by participants' comments in the student focus group. Several parents and students alluded to the fact that often the scariest and most persuasive information one can learn is true. Sarah, a parent of a sixth grade girl in Clover Middle-school told the group that her "…daughter sometimes doesn't get that things like this really happen. When she sees it on the news, though, it becomes real. And real is what makes her learn." By providing true stories about online harassment, the researcher shared information about cyberbullying and its consequences without having to overtly discuss the issue. Directly influenced by the findings of the focus groups, the inclusion of this material was intended to expose students to the fact that cyberbullying has negative effects on students. The participants read the stories and drew their own conclusions by integrating the new information into their existing schemata.

The final resource in the WebQuest was a quiz from the Cyberbullying Research Center's website. The quiz contained ten multiple-choice questions for students to complete and then provided students with a score for the quiz and its correct answers (see Appendix F for quiz questions). Participants were asked to remember their score and entered it in the final item of the post-test questionnaire. The quiz offered the researcher

a quick, objective format for assessing student knowledge about cyberbullying and cybersafety and exposure to more information about cyberbullying's dangers. Daryl, a seventh grade teacher, suggested that, "Students don't know much about cyberbullying other than what we tell them. And we don't say a lot. At least I don't."

All participants accessed the same multimedia resources in the WebQuest, making it difficult to determine which individual resources influenced students' perceptions to the greatest degree. However, because the first research question in the study sought to determine if the use of a WebQuest, not simply its individual resources, was effective in influencing students' awareness, one uniform set of resources was used for all participants.

After viewing and reading the resources offered and taking the online quiz, students navigated to the second instrument in Qualtrics via a link to the post-test questionnaire located at the bottom of the resources page. In lieu of a traditional WebQuest conclusion, where students are thanked and the assignment is summarized, the intervention's conclusion was embedded in the welcome page to the post-test.

Phase II: Data Collection from Students

Following the focus group discussions and WebQuest construction, the intervention and testing instruments were administered. The study's setting, participants, instruments, data collection procedures, and data analysis procedures are described in the following sections.

Setting. A close review of the literature showed that cyberbullying occurs most commonly among middle-school students (Bhat, 2008; Hinduja & Patchin, 2009;

Juvonen & Gross, 2008; Li, 2006) with nearly half (42.9%) of respondents to a recent study indicating victimization by cyberbullies (Hinduja & Patchin, 2009).

Clover Middle-school. With this consideration in mind, the study was conducted in the middle-school of a mid-sized, West coast school district. Clover School District consists of four typical elementary schools, one language-based elementary school, one middle-school, one high school, a continuation school, and an independent study program. At the time of the study, the middle-school's enrollment was 1,530 students in grades six, seven, and eight with 40% Hispanic or Latino student enrollment, 20% African American, and 20% White (non-Hispanic). Thirty-two percent of students enrolled in the school were classified as socioeconomically disadvantaged. Clover Middle-school's 2008-2009 API score was an 809, with their rank reported as a seven out of 10 on the school's Accountability Report Card.

Obtaining access to the site and participants. Following extensive research about school districts engaging in anti-bullying education and identifying the efforts in Clover City schools, the researcher approached the district's Assistant Superintendent of Educational Services. Following an introductory meeting to discuss the importance of educating students about cyberbullying and its dangers, and after receiving IRB approval to conduct research, a formal letter explaining the purpose of the study was sent to the superintendent of the Clover School District to arrange a meeting to formally discuss the study and its procedures (see Appendix G for the Clover Unified School District meeting request letter).

In 2008, the district introduced an anti-bullying initiative designed to study bullying, its prevalence, and its effects in its five elementary schools, the middle-school, and the high school. In 2009, the families of middle-school students, and students themselves, were encouraged to participate in a national study of traditional bullying conducted by Stan Davis and Charisse Nixon through Pennsylvania State University (2009). A link to the study, which focused exclusively on face-to-face or traditional bullying, was posted on the middle-school's website and participation was voluntary and anonymous. In the formal meeting with the Assistant Superintendent, the researcher highlighted the fact that the proposed study offered the district a unique opportunity to study cyberbullying and would complement the efforts of the anti-bullying initiative and the data collection about traditional bullying conducted by the Youth VOICE Project (Davis & Nixon, 2009), thus making the partnership more valuable.

After obtaining approval for the study, the researcher contacted the assistant principal of the middle-school, who, in turn, connected the researcher with a sixth grade teacher to begin sample selection. The sixth grade Language Arts teacher allowed the researcher access to her classes, as did a seventh grade Language Arts teacher. After identifying the class sections for sampling, the researcher sent a letter explaining the study and its parameters to parents and guardians. The letter included the forms used to obtain informed parental/guardian consent and student assent pursuant to ethical guidelines and IRB guidelines (see Appendix H for parent/guardian consent form and student assent form).

As in all research, the safety and security of participants in this study was paramount and parental/guardian consent and student assent were necessary for engagement in the study. Informed consent is obtained by "making sure that research participants enter the research of their free will and with understanding of the nature of the study and any possible dangers that may arise as a result of participation" (Gay et al., 2009, p. 21) and must be provided by a parent or guardian if the participant is under 18 years of age, as is the case for all participants in this study. The Federal Code of Regulations for the Protection of Human Subjects (2004) requires that the assent of child participants also be obtained, specifically through the use of developmentally appropriate language and with information about what the study will entail. Student assent was solicited in two ways: through a simply worded letter that accompanied the parental/guardian consent form and on the first page of the online survey.

Participants. The middle-school participants from the study are described here.

Sample size. Two teachers, one from sixth grade and one from seventh, at the middle-school consented to take part in the study and allowed the researcher to solicit their students for participation. All students in these teachers' combined six class periods (N=202) were invited and 168 students assented to participate and received parent or guardian consent for their involvement.

Participants who did not complete time 1 and time 2, as well as redundant cases, were omitted from analysis resulting in a total of 156 students who completed either the pre-test or post-test without error, representing a response rate of 77.2%. The retention rate from time 1 (N=156) to time 2 (N=152) was 97.4%.

Demographics. The resultant sample was composed of more girls (58.3%, n=91) than boys (39.7%, n=62), and 71.2% (n=111) of the sample came from the seventh grade. Participants indicated their ethnic backgrounds in the pre-test survey, with the overwhelming majority (40.4%, n=63) reporting Hispanic/Latino(a). Please see Table 4 for additional data.

Table 4
Individual Characteristics of the Sample

Characteristic	n	%
Female	91	58.3
Male	62	39.7
Asian/Pacific Islander	10	6.4
Hispanic/Latino(a)	63	40.4
African-American/Black	23	14.7
Caucasian	19	12.2
Biracial	4	2.6
Multiracial	9	5.8
Other	25	16.0

In order to interpret the data more meaningfully, the pre-test survey contained items that collected additional background information from the students, including academic achievement and access to technology. Although the data was self-reported by respondents and, as such, may not truly represent reality, it will help inform the interpretation of the data.

When asked, "What types of grades do you normally earn?" over a quarter of the sample (26.3%) indicated earning mainly As, while almost half reported earning As and Bs (41.0%). The remaining students reported earning mainly Bs (7.7%), Bs and Cs (15.4%) and Mainly Cs or lower (7.7%), as shown in Table 5.

Table 5
Self-reported Academic Achievement

Grades	n	%
Mainly As	41	26.3
As and Bs	64	41.0
Mainly Bs	12	7.7
Bs and Cs	24	14.4
Mainly Cs	2	1.3
Cs and Ds	8	5.1
Ds and lower	2	1.3

A recent study by the Pew Internet and American Life Project (Lenhart, 2009) found that 71% of teens in the United States owned a cell phone, up from 63% in 2006. Cell phone ownership among the sample in this study was significantly higher (84.6%) than the national average. Broadband access, another factor in access to technology and the Internet, was measured by a similar Pew study in 2010. Findings showed that nearly two-thirds (66%) of American adults have broadband access at home (Smith, 2010). Respondents in the current study overwhelmingly reported "yes" (92.3%) when asked "Do you have access to a computer with Internet access at home?" Access to technology may be significant in students' exposure to cyberbullying and as such is reported here (see Table 6).

Table 6
Self-reported Access to Technology

	No		Yes	
Technology	n	%	n	%
Cell Phone	21	13.5	132	84.6
Broadband Access	9	5.8	144	92.3

Another important characteristic of the sample was its exposure to cyberbullying. To interpret the data that answered the research questions, an understanding of participants' experiences with cyberbullying was necessary. To achieve this, the demographic and background information section in the pre-test asked questions about exposure to cyberbullying, frequency of cyberbullying victimization, and participation in cyberbullying behaviors. The results are shown in Table 7.

Table 7
Experiences with Bullying and Cyberbullying

	No		Yes	
	n	%	n	%
Girls				
Have you ever been bullied?	44	48.4	47	51.6
Have you ever bullied someone?	64	70.3	27	29.7
Have you ever been cyberbullied?	76	83.5	15	16.5
Have you ever cyberbullied someone?	80	87.9	11	12.1
Boys				
Have you ever been bullied?	32	51.6	30	48.4
Have you ever bullied someone?	49	79.0	13	21.0
Have you ever been cyberbullied?	53	85.5	9	14.5
Have you ever cyberbullied someone?	56	90.3	6	9.7

The results of these background questions align with findings from earlier studies. In a study measuring bullying victimization among youth (Finkelhor et al., 2005), nearly half of the nationally representative sample reported being physical harassment victims while 51.6% of girls and 48.4% of boys reported the same ratios in this study. Cyberbullying victimization findings in different studies range from 16% (National Children's Home, 2002) to 53% (Aftab, 2006) and thus the findings here show that fewer students reported having been cyberbullied than the national average.

Measures. Study participants engaged in pre-test and post-test questionnaires that were web-based and hosted by Qualtrics™, an online survey site. The two questionnaires were nearly identical as they were intended to measure changes in knowledge and awareness before and after the WebQuest intervention.

Pre-test. The pre-test survey contained four general sections: demographic information, bullying/cyberbullying background information, perceptions, and behaviors (see Appendix I).

The first bank of questions, designed to collect basic demographic information, included four structured nominal items about gender, grade level, ethnicity, and academic achievement. Structured items, also called closed-ended items, required survey respondents to select a response from several possible responses and proved advantageous for comparing responses: They presented fewer analysis complications than unstructured items (Gay et al., 2009). Unstructured items, alternately known as free-response or open-ended items, are less commonly used because respondents are less inclined to respond to them and scoring is more difficult and time consuming when compared to structured items (Gay et al., 2009).

The second bank of questions included structured items to collect basic background data about information and communication technologies (ICT) use (e.g., how many hours do you spend online each week doing the following things: sending email, playing games, chatting with friends, using social networking sites, doing homework, reading websites, etc.) as well as bullying/cyberbullying experiences. Six point Likert scaled items were used to measure the frequency of students' experiences with

bullying/cyberbullying (e.g., A few times, 2-3 times a year, once a month, 2-3 times a month, once a week, 2-3 times a week, every day). Further, to measure knowledge, a free-response item in this section asked respondents to define cyberbullying in their own words, with responses limited to 150 characters. Response latency time, "a measure of the level of cognitive effort used by the respondent" (Sudman, Bradburn, & Schwarz, 1996, p. 41) was not measured, as it had no direct bearing on the purpose of the study.

Following the collection of demographic information, participants responded to questions measuring their attitudes and awareness of cyberbullying's dangers and their perceptions of the behavior. "Attitude questions essentially ask respondents to convey an evaluative judgment" (Sudman et al., 1996, p. 251) about a topic or object and are measured using attitude scales such as Likert scales, semantic differential scales, rating scales, or Thrustone and Guttman scales (Gay et al., 2009). To retain simplicity in questionnaire construction and appearance for the middle-school participants, five point Likert scales were used with response options ranging from strongly disagree to strongly agree on questions such as "Cyberbullying is a problem in my school" or "I am afraid of cyberbullying."

The last bank of five questions measured students' attitudes about behaviors regarding cyberbullying. Sample questions included, "We should talk about cyberbullying in class" and "Students who cyberbully someone should be punished." After the last question on the pre-test, Qualtrics automatically redirected participants to the Introduction page of the WebQuest.

Post-test. After linking to the post-test questionnaire from the final page of the WebQuest, students re-entered their unique, three-digit identification numbers and completed a slightly modified version of the original pre-test (see Appendix J for post-test questionnaire). Two items (i.e., "What is your sex?" and "What grade are you in this year?") from the first section, basic demographic information, were collected twice to allow for further verification and matching of respondents from the pre-test to post-test. The background information about computer use was not collected a second time, as no shifts in responses over a 50-minute period were anticipated. The questions about experiences with bullying and cyberbullying were asked again, however, as students' responses likely changed following the viewing of the resources in the WebQuest. Students then answered the previously described questions about knowledge and awareness a second time.

Reliability and validity. Items from question banks two and three were used to create composites designed to measure two of the three dependent variables (DV) addressed by the research questions, and which included awareness, safety, and knowledge. Awareness, the first dependent variable, was a 6-item composite consisting of the following items evaluating awareness and perceptions: "Cyberbullying is a problem at my school," "I am afraid of being cyberbullied," "Kids are negatively affected by cyberbullying," "We should talk about cyberbullying class," "My parents should learn more about cyberbullying," and "Kids who cyberbully should be punished."

Participants responded to these opinion-based items using Likert Scale responses ranging from strongly disagree to strongly agree and a Cronbach's coefficient alpha

indicated internal consistency for these items across pre-test (α=.71) and post-test (α=.74). It further indicated acceptable reliability.

The second dependent variable, change in students' feelings of safety in school, was a five-item composite assessed at pre-test (α=.81) and post-test (α=.86). The safety items were assessed with Likert Scale responses (strongly agree to strongly disagree): "I feel close to people at this school," "I feel happy at this school," "The teachers at this school treat students fairly," "I feel safe in my school," and "I feel like the adults here keep us safe."

Two items from the question bank asking about bullying and cyberbullying experiences were used to measure changes in students' knowledge about cyberbullying. The first was an open-ended item asking students to define cyberbullying their own words whereas the second, a structured item, asked students "Do you know what cyberbullying is". Categorical response options of "Definitely No," "Not Sure," and "Definitely Yes" were used for this item.

Although the instruments used for the pre- and post-test were predominantly created by the researcher, selected questions were based on existing survey tools, including the Higher Education Research Institute's (HERI) Cooperative Institutional Research Project (CIRP) Freshman Survey (2009) and i-SAFE (2004). Using measures that have been tested for reliability and validity for guidance in creating the study survey contributes to the notion of construct validity (Gay et al., 2009) such that the language of experts in the field was consulted for inclusion in this study. To enhance content validity, the researcher piloted the instruments with students matching the age and demographics

of the sample used in the study and subsequently made changes to wording and removed a redundant question.

Procedures for data collection. The data collection procedures employed during the administration pre-test and post-test and the WebQuest Intervention follow.

Administered to participants in block periods during the school day, the two instruments and the intervention took approximately 70-75 minutes to complete. The classes that participated in the study underwent the intervention in predetermined class groups, or clusters, based on school scheduling and computer lab availability. This sampling technique helped facilitate a research environment that mirrored the students' typical classroom experience, thus legitimizing the data collection process for students.

The data collection in phase two of the study took place over a three-week span and occurred in a total of six block periods. At the beginning of each period, the classroom teachers brought their classes to the school's computer lab after taking attendance and completing classroom business tasks such as homework collection or paperwork distribution. Students lined up in the hallway and those with parental consent entered the room first. Upon entering the school's computer lab, a room with thirty-five Windows based computer stations, participants with parental consent for involvement in the study selected, at random, a card with a unique three-digit number printed on it. These numbers served as identification codes on the pre-test and post-test, allowing the researcher to measure changes in responses among individuals before and after the intervention as well as eliminate redundant cases before data analysis. Using the numbers helped guarantee anonymity for the participants—they never showed the

number to the researcher and as such, the responses could not be connected back to individuals. Participants who had not received parental consent to participate worked silently on work assigned to them by the teachers and sat together at tables without computer stations.

Prior to the students' entering the computer lab, the researcher opened the Internet browser Firefox on each computer and entered the destination URL (www.cyberbullyingstudy.com). Once each participant selected his/her number and found a seat at a computer, the researcher read a script describing the research process the participants would experience (see Appendix K for intervention protocol). The script was used to minimize the possibility of the experimenter bias effect. In other words, using uniform, pre-written instructions reduced the likelihood of the experimenter's excitement about the research influencing the participants' behaviors or of the researcher using different directions with different groups of participants (Gay et al., 2009). Furthermore, using scripted instructions replicated testing situations students experience in their classrooms, further legitimizing the data collection process.

After listening to the directions, students began their participation on the first page of the WebQuest. There, they were prompted to click on a link that redirected them to the pre-test survey. Upon opening the survey, students encountered a page explaining their rights as participants and informing them that by clicking "next" they assented to participate in the research being conducted (see Appendix I for pre-test assent wording). This indication of assent is the second notice, as participants previously read and signed the student assent form sent home with the parental/guardian consent form.

After completing the pre-test in Qualtrics™, participants were automatically redirected to the WebQuest and navigated through the site and its multimedia resources independently. The final page of the WebQuest contained a hyperlink that, when clicked, directed students to the post-test questionnaire. Students were again asked to enter their unique three-digit identification codes and completed the questionnaire. When students completed the intervention and pre- and post-tests, they either read quietly from a personal reading book or returned to a site with vignettes about cyberbullying.

Data analysis. Data from the instruments were collected using Qualtrics™ online survey software, accessible through the university's assessment office and stored digitally in Qualtrics' servers. Online data collection and storage facilitates easy exportation of data directly into the Statistical Package for the Social Sciences (SPSS), a statistical processing software program. The researcher downloaded, backed up, and password protected the data files in SPSS format after closing the instruments following the final data collection session. All data were stored in password protected files on the researcher's personal laptop computer, two secure external back-up hard drives, and a DVD kept in a locked file drawer in the researcher's home office throughout the duration of the analysis period.

All quantitative data analysis occurred in SPSS 16.0 Graduate Student Version for Mac, enabling the researcher to run a variety of statistical analyses. Prior to beginning data analysis, the researcher reviewed the collected data and cleaned it by eliminating any redundant cases (i.e., cases where the three-digit identification code appeared more than once in either the pre-test or post-test) or incomplete data (i.e., variables not completed in

time 1 and time 2). Therefore, only completed data from the pre-test to post-test were included in the analyses.

Descriptive statistics "summarize data so they can be easily comprehended" (Patten, 2005, p. 103) and, in this study, included frequencies and cross tabulations to analyze the demographic and background items.

The researcher analyzed three dependent variables (DV) to answer the research questions in this study. The first two variables, awareness and safety, arose from composites created from items used in the pre- and post-tests, and their reliability was measured using Cronbach's Alpha. The awareness variable had acceptable reliability from pre-test (α=.71) to post-test (α =.74), as did safety (α=.81, α=.86). The third dependent variable, knowledge, was measured by examining results of two separate items with differing response options (a quantitative item and qualitative responses).

Research question one. The researcher conducted paired-samples *t*-tests to measure change in participants' awareness of cyberbullying and its dangers from the pre-test to the post-test, as well as perceptions of safety.

The knowledge variable was measured by examining the responses provided to an open-ended question asking participants to define cyberbullying in their own words. The researcher exported the responses from Qualtrics™ into an Excel spreadsheet for organization and printing. After reading the responses three times, the researcher noted the terms that appeared most frequently. Then, following the fourth reading, a frequency analysis was done for each of the terms identified (see Tables 10, 11, and 12) and emerging themes were identified and noted.

Knowledge was also measured by the responses to a categorical response item that asked participants, "Do you know what cyberbullying is?" To test for significant change in knowledge from pre-test to post-test, a repeated-measures statistical analyses for categorical data was needed and the decision was made to transform the three response options ("Definitely No," "Not Sure," "Definitely Yes") into a new dichotomous variable. Thus "Definitely No" and "Not Sure" were transformed to "No." Following the transformation, McNemar's repeated-measures analysis for categorical dichotomous data was run to measure difference in knowledge from the pre-test to the post-test.

Research question two. To answer research question two, which examined the role of gender in middle-school students' perceptions of cyberbullying, repeated-measures analyses of variance were run to examine change in awareness and safety over time.

Knowledge was analyzed again by using McNemar's repeated-measures analysis for categorical data on the item asking, "Do you know what cyberbullying is?" Data from boys and girls on this item were examined separately. Additionally, qualitative responses to the open-ended questions from boys and girls were analyzed through the same process, but only after breaking the data out by gender.

Conclusion

The methodology employed within the parameters of this study relied heavily upon previous research and data. While the procedures described here were designed to measure the effectiveness of a multimedia WebQuest in helping students learn about the

dangers and consequences of cyberbullying, they also produced a curricular tool that can be used by educators, in conjunction with the State language arts standards, to address the problem of cyberbullying that threatens students' safety in schools.

The Loyola Marymount University School of Education Conceptual Framework espouses a commitment to social justice and to practices that support just education in schools by asserting that whatever happens to any member of society happens to us all (2009). From this perspective, each incident of cyberbullying that threatens the comfort or safety of one student either in school or at home, threatens everyone's security and as a human family, all people share the onus of alleviating the problem. This dissertation study seeks, then, to alleviate the problem by studying the effectiveness of a constructivist-learning tool that can be used in school to educate students.

CHAPTER 4

FINDINGS

Introduction

Digital environments offer greater freedom to youth now than ever before in history. Without leaving home, students can see the wonders of the world, learn foreign languages, and communicate synchronously with people from nearly any place in the world. Like most things, though, online spaces are restrictive as well. In digital environments unrelenting harassment, name-calling, distribution of personal and private information, teasing, and abuse are also common. These acts are made more insidious by their anonymity, potential to go viral, and permanence of expression.

The purpose of this quasi-experimental, mixed-methods study is to measure the effectiveness of a multimedia WebQuest in making middle-school students more aware of the dangers of cyberbullying. By using a WebQuest as the intervention in the study, the researcher sought to identify a practical, constructivist-learning tool teachers can use to meet Language Arts standards in their classrooms. The tool allows them to sustain student-centered classes that are inquiry oriented (Boghossian, 2006; Jonassen, 1991; Wadsworth, 2004) while still helping students learn about the dangers of cyberbullying.

This chapter presents the data collected in this study and aims to answer two research questions:

1. To what extent can the use of a multimedia WebQuest increase middle-school students' awareness of the dangers of cyberbullying?

2. What role does gender play in middle-school students' perceptions of cyberbullying?

In order to answer these two questions, the analyses focused on three dependent variables: awareness, safety, and knowledge. Awareness is defined here as recognition of the negative aspects of bullying (e.g., "Cyberbullying is a problem at my school," "Kids are negatively affected by cyberbullying," "I am afraid of being cyberbullied") and is a six-item composite. Safety, a five-item composite, is defined as feelings of comfort and safety in the school environment (e.g., "I feel close to people at this school," "The teachers at this school treat students fairly," "I feel safe in my school"). Knowledge, the third dependent variable, is defined as whether or not a student feels that he or she knows what cyberbullying is and can define it in his or her own words.

The findings from the study are reported here and are organized by research question and dependent variable.

Research Question One Findings

To answer research question one, data from the two quantitative instruments employed by the survey were analyzed. The researcher collected responses through Qualtrics™, an online survey and data collection system, and subsequently downloaded the data in a format usable in the Statistical Package for the Social Sciences (SPSS) software. The data were imported into SPSS 16.0 and cleaned by eliminating incomplete or redundant cases. Three dependent variables were considered when addressing research question one: awareness, knowledge, and safety. The findings for each variable follow.

Awareness

To answer the research question, a paired samples *t*-test comparing mean scores from the pre-test to the post-test demonstrated a statistically significant increase in perceptions and awareness of the dangers of cyberbullying among middle-school students from the pre-test ($M = 2.91$, $SD = .76$) to the post-test ($M = 3.05$, $SD = .81$). These findings are presented in Table 8.

Safety

The researcher analyzed the safety composite using a paired samples *t*-test and found no significant increase ($p = .97$) in feelings of safety among middle-school students from the pre-test ($M = 3.76$, $SD = .79$) to the post-test ($M = 3.76$, $SD = .85$). These findings are presented in Table 8.

Table 8

Mean Scores for Feelings of Safety Among Participants

	Pre-test		Post-test				
Composites	M	*SD*	M	*SD*	t	df	d
Awareness	2.91	0.76	3.05	0.81	4.22*	145	0.18
Safety	3.76	0.79	3.76	0.85	0.04	145	0.0

**p<.001*

Knowledge

Knowledge, the third variable used to answer research question one, consisted of two items. The first examined whether knowledge changed from the pre-test to post-test based on categorical data. Table 9 displays the observed frequencies by categories and a

McNemar's test indicated this was a significant change ($p < .001$) from the pre-test to the post-test.

Table 9
Contingency Table for Change in Knowledge Among Participants

		Post-test		
		No	Yes	Total
Pre-test	No	16 (36.4%)	28 (63.6%)	44 (100%)
	Yes	3 (2.9%)	101 (97.1%)	104 (100%)
Total		19 (12.8%)	129 (87.2%)	148 (100%)

Additionally, to measure knowledge of cyberbullying, an open-ended question asked participants to define cyberbullying in their own words in the pre-test and post-test. During analysis, three main themes emerged from the coding: (a) the great majority of respondents defined cyberbullying within the context of a digital, technological, or electronic act; (b) many definitions implied the cyberbullying occurred against the student (e.g., "it is when someone is harassing you through the Internet"), by the student (e.g., "when you send bad stuff to people online and personal"), or a general behavior (e.g., "bullying while on the computer"); and (c) most respondents referenced the medium or method for cyberbullying.

After conducting a hand-coded frequency analysis of the open-ended responses to the question "Cyberbullying is…define in your own words" the first theme emerged.

Means of cyberbullying. Before the WebQuest intervention 77.4% (n=113) of the respondents mentioned the digital nature of cyberbullying (see Table 10) by saying, "online," "Internet," "electronic," or "technology." Following the WebQuest

intervention, 90.5% of responses (n=132) referenced the digital nature of cyberbullying (see Table 10).

Initially, 6.8% of the sample (n=10) indicated that cyberbullying consists of actions not solely digital or electronic in nature. Those 10 respondents defined cyberbullying as being

- strictly physical in nature (e.g., "when you hit or push someone", "when someone takes your money", "it is when you get teased in a bad way"),
- both physical and digital in nature (e.g., "when you say something mean in real life or instant message", "…harassing people in school, internet, web page, talking about their skin color…"), or
- unknown (e.g., "not sure").

Following the WebQuest intervention, however, only one response indicated that cyberbullying was not digital in nature and that response was "Not Sure."

Table 10
Frequency Counts for Means of Cyberbullying

		Pre-test n	Post-test n
Digital means			
	Online	26	68
	Internet	57	37
	Electronics	19	16
	Technology	11	11
Other means			
	Digital and physical	4	0
	Only physical	5	0
	Not sure	1	1

Methods of cyberbullying. The second theme emerged from the high number of respondents who explicitly listed specific methods for cyberbullying (see Table 11).

Definitions became less specific across time as more responses included explicit references to means of cyberbullying rather than methods.

Table 11
Frequency Counts for Methods of Cyberbullying

	Pre-test	Post-test
	n	n
Texting or phone	40	31
Chatting/IMing	4	4
Social Networking Sites	20	13
Email	5	9

Perceived victims of cyberbullying. The final theme that arose from analysis addresses the way in which respondents phrased their responses. Responses fell into one of four different categories depending on the language used in the definitions indicating against whom or who perpetrated cyberbullying (see Table 12). The four categories include definitions implying that:

- An individual is bullied (e.g., "when someone bullies you on the web or a text message").
- An individual bullies someone (e.g., "When u [sic] make fun of someone on Facebook, Tweeter [sic] or any other websites").
- Someone else is bullied (e.g., "cyberbullying is when someone is being bullyed [sic] by the internet").
- The act occurs without reference to an entity (e.g., "bullying that is in text or internet access").

Table 12
Frequency Counts for Perceived Victims of Cyberbullying

	Pre-test	Post-test
	n	n
An individual is bullied	41	52
An individual bullies someone	41	31
Someone else is bullied	26	23
No reference to an entity	36	38

Research Question Two Findings

Research question two explored the role of gender in middle-school students' perceptions of cyberbullying. The same dependent variables used to measure students' awareness in research question one were examined again. The findings for each gender are presented by variable: awareness, safety, and then knowledge.

Awareness

To examine the role of gender in middle-school students' awareness and perceptions of cyberbullying, the researcher ran a repeated-measures analysis of variance (ANOVA). The findings revealed a significant main effect for gender, $F(1,144) = 5.07$, $p < .05$ such that girls demonstrated consistently greater awareness of cyberbullying than boys. There was a significant main effect for time as well, $F(1,144) = 19.30$, $p < .001$ such that all participants increased their awareness of cyberbullying from pre-test to post-test (see Table 13).

Table 13

Repeated-measures ANOVA for Awareness

	Pre-test		Post-test	
	M	*SD*	M	*SD*
Girls	3.05	.80	3.15	.86
Boys	2.72	.66	2.91	.71

As shown in the figure below, there was no interaction between time and gender F (1,144) = 1.66, $p = .20$ (see Figure 1).

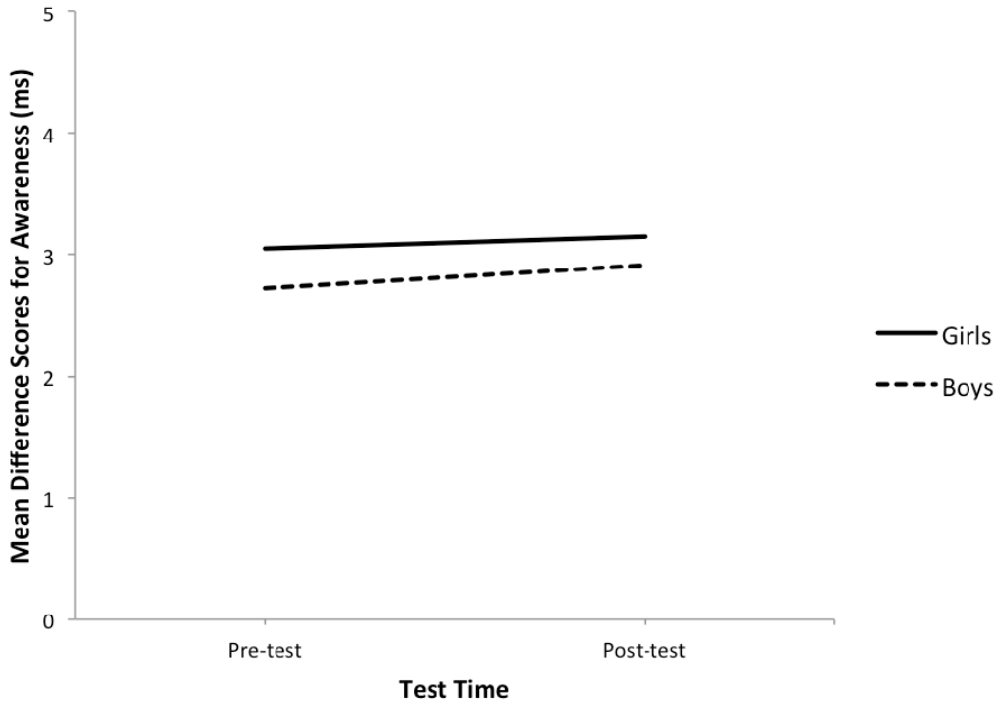


Figure 1. Awareness ANOVA. This figure illustrates the estimated marginal means and lack of interaction from pre-test to post-test for the awareness variable.

Safety

The findings of the repeated-measures ANOVA showed no significant main effects for gender, F (1,144) = .619, p = .43, or time, F (1.144) = .055, p = .81 (see Table 14).

Table 14

Repeated-measures ANOVA for Safety

	Pre-test		Post-test	
	M	*SD*	M	*SD*
Girls	3.82	.74	3.78	.86
Boys	3.67	.87	3.72	.84

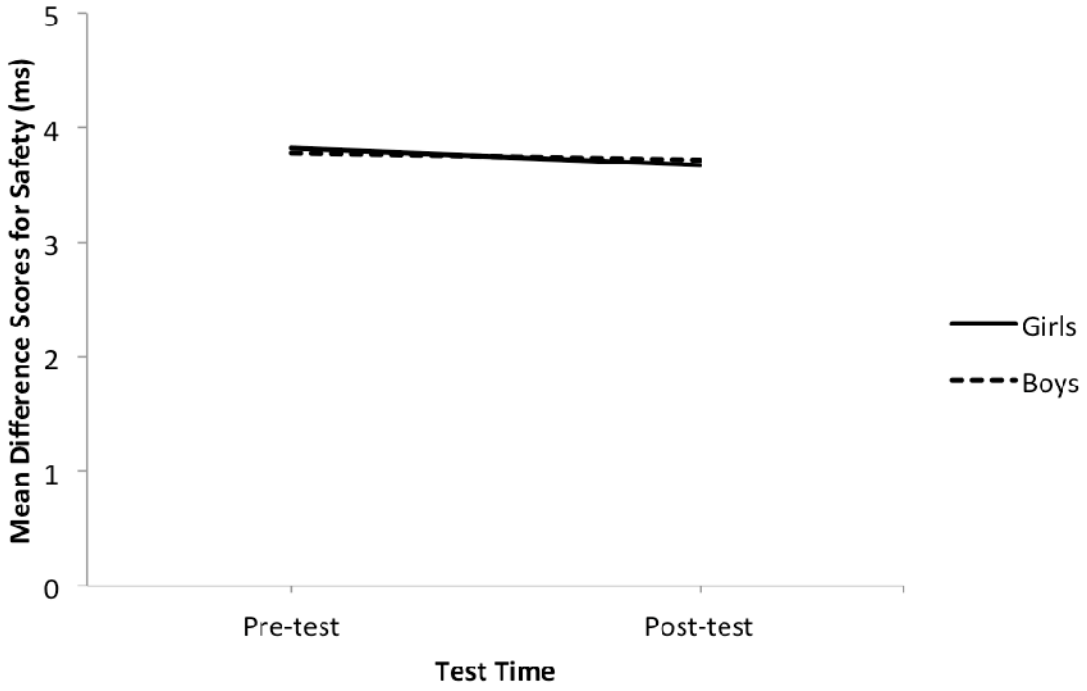


Figure 2. Safety ANOVA. This figure illustrates the estimated marginal means of change in the safety variable and demonstrates lack of interaction.

No interaction was found for safety, F (1,144) = 1.27, p = .26 (see Figure 2). Means and standard deviations are also shown in Table 14.

Knowledge

To examine if boys and girls differed over time in their knowledge of cyberbullying, the one dichotomous question was again analyzed and its categorical data checked for change from pre-test to post-test: This test was run for boys and girls. Table 15 shows the observed frequencies for boys from the pre-test to the post-test while Table 16 displays the observed frequencies for this item for girls. There was a significant change in knowledge from pre-test to post-test among male students ($p < .001$).

Table 15
Contingency Table for Change in Knowledge Among Boys

		Post-test		
		No	Yes	Total
Pre-test	No	6 (46.2%)	7 (53.8%)	16 (100%)
	Yes	2 (4.3%)	45 (95.7%)	47 (100%)
Total		8 (13.3%)	52 (86.7%)	60 (100%)

Table 16
Contingency Table for Change in Knowledge Among Girls

		Post-test		
		No	Yes	Total
Pre-test	No	10 (32.3%)	21 (67.1%)	31 (100%)
	Yes	1 (1.8%)	56 (98.2%)	57 (100%)
Total		11 (12.5%)	77 (87.5%)	88 (100%)

Next, qualitative data was examined to determine if boys and girls differed on their perceptions of knowledge of cyberbullying and its dangers. The question asked

participants to define cyberbullying in their own words. The same themes found in coding were analyzed by gender.

Means of cyberbullying. The first emergent theme in the analyses for the open-ended item was the explicit mention of means of cyberbullying. Girls and boys more frequently used the term "online" to describe cyberbullying following the intervention and used "Internet" less (see Table 17).

Table 17
Frequency Counts for Means of Cyberbullying by Gender

	Girls		Boys	
	Pre-test n	Post-test n	Pre-test n	Post-test n
Digital means				
Online	14	45	12	23
Internet	34	24	23	13
Electronics	14	8	5	8
Technology	8	7	3	4
Other means				
Digital and physical	4	0	0	0
Only physical	4	0	1	0
Not sure	1	1	0	0

Girls demonstrated a shift in knowledge from the pre-test to post-test. This is indicated by the decline across time in responses defining cyberbullying as both digital and physical in nature, as shown in Table 17.

Methods of cyberbullying. The second theme emerged from the high number of respondents who explicitly listed specific methods for cyberbullying (see Table 18). When examined by gender, responses were still less specific from the pre-test to post-test.

Table 18
Frequency Counts for Methods of Cyberbullying by Gender

	Girls		Boys	
	Pre-test	Post-test	Pre-test	Post-test
	n	n	n	n
Texting or phone	29	23	11	8
Chatting/IMing	2	3	2	1
Social Networking Sites	12	7	8	6
Email	4	6	1	3

Perceived victims of cyberbullying. The final theme, how respondents phrased their responses, was also examined by gender. Responses fell into one of four categories, depending on the language used in the definitions related to victims or perpetrators of cyberbullying, and both boys and girls implied that an individual bullies someone less frequently from the pre-test to post-test (see Table 19). Conversely, more responses following the intervention implied participant victimization (e.g., "when you get bullied online by ppl [sic]").

Table 19
Frequency Counts for Perceived Victims of Cyberbullying by Gender

	Girls		Boys	
	Pre-test	Post-test	Pre-test	Post-test
	n	n	n	n
An individual is bullied	28	32	13	20
An individual bullies someone	25	20	16	11
Someone else is bullied	10	11	9	12
No reference to an entity	21	23	15	15

Conclusion

The lines that so often highlight the need for socially just approaches to education, including gender, age, socioeconomic status, race, creed, and sexual orientation, are

blurred in digital environments. When one engages in online living, it is possible to erase all traces of reality and reconstruct oneself into a new, ideal person who is more socially acceptable. However, the difficult process of reconciling one's online and an offline persona generates identity conflict that can lead to students further devalue their offline selves. This problem is exacerbated by cyberbullying and attacks made against personality traits and physical characteristics.

To address this growing problem, it is necessary to create educational tools to help students recognize the dangers of cyberbullying as a first step toward creating safe digital environments where students can feel free to be themselves, embracing the differences that make them unique.

These findings and their implications for cyberbullying education programs are discussed in Chapter 5. Additionally, the significance of this study is explored and recommendations for future research are made.

CHAPTER 5

DISCUSSION AND IMPLICATIONS

Introduction

Through its infancy, the Internet functioned primarily as a tool for the military and corporations seeking avenues through which to streamline their operations. However, in its adolescence, the Internet blossomed into a user-defined medium for communication and for sharing public and private information with relative freedom from corporate or governmental control. Its dynamic nature and constantly changing infrastructure make it a vehicle for innovation and creation but also render it a tool for abuse, assault, harassment, and technological violence (Postigo, 2008). Originally designed to facilitate military communications free from intrusion, the Internet is, by its very nature, nearly impossible to control (Postigo, 2008).

Rather than solely attempting to control the content distributed by students across the Internet, or other forms of technology, systems must be put in place to support educators' efforts to help students learn of the dangers associated with cyberbullying and other forms of online harassment. The findings of this study demonstrated the effectiveness of a multimedia WebQuest in helping increase students' awareness of the dangers of cyberbullying and have further supported the researcher's proposal that socioconstructivist education must be reexamined and reinvented to meet the needs of the new digital society.

This chapter summarizes and discusses the findings of the current study and illuminates the usefulness of a web-based constructivist-learning tool in teaching middle-

school students about the dangers of cyberbullying. The significance of the study is then discussed and recommendations for school policy, ways to deter cyberbullying through education are made. Socioconstructivist learning theory is also reexamined. Finally, the chapter concludes with suggestions for future research.

Results and Discussion

This quasi-experimental, mixed-methods study sought to answer two research questions:

1. To what extent can the use of a multimedia WebQuest increase middle-school students' awareness of the dangers of cyberbullying?

2. What role does gender play in middle-school students' perceptions of cyberbullying?

To answer these research questions, middle-school students explored a multimedia WebQuest as an intervention, and shifts in students' awareness of the dangers of cyberbullying were measured through researcher-created pre- and post-test questionnaires. A WebQuest is a web-based inquiry tool (Dodge, 1995) that is constructivist in nature and allows students to use the Internet to find information for later synthesis. The study's sample of 156 middle-school participants was selected through cluster sampling at Clover City Middle-school and the findings from the data are discussed here.

Research Question One

Research question one sought to measure the effectiveness of a WebQuest intervention in increasing middle-school students' awareness of the dangers of

cyberbullying. To answer the question, three dependent variables were analyzed: awareness, safety, and knowledge. The discussion related to findings for this first question follow.

Awareness. Awareness of the dangers of cyberbullying was examined through a six-item composite consisting of the following items: "Cyberbullying is a problem at my school," "I am afraid of being cyberbullied," "Kids are negatively affected by cyberbullying," "We should talk about cyberbullying in class," "My parents should learn more about cyberbullying," and "Kids who cyberbully should be punished." Respondents selected their choices from a Likert scale ranging from "Strongly Disagree" to "Strongly Agree," with responses of "Strongly Agree" or "Agree" indicating a higher awareness of the dangers of cyberbullying. For example, if a student responded, "Agree" when asked if cyberbullying should be discussed in class, one may assume that the student recognized the danger of the behavior and felt addressing it in class would help alleviate the problem.

The findings from research question one showed that the use of the WebQuest treatment was highly effective ($p < .001$) in increasing middle-school students' awareness of cyberbullying and its dangers with scores from the pre-test ($M = 2.91$, $SD = .76$) to the post-test ($M = 3.05$, $SD = .81$). Overall, students' awareness of the dangers of cyberbullying increased following the WebQuest intervention. In Clover Middle-school, anti-bullying information is often offered through large group presentations with one person speaking at the students. In contrast, the intervention in this study sought to

expose participants to information through a new approach, which would allow them to draw their own conclusions about the dangers of cyberbullying.

In fact, the use of videos and vignettes about cyberbullying in the WebQuest intervention served primarily as a vehicle to expose students to the definition of cyberbullying, but secondarily as a tool to show the dangers associated with these peer harassment behaviors. Students were further able to construct their own meanings and conclusions about cyberbullying behaviors, thereby gaining an understanding of the associated dangers without teacher interaction.

Safety. The dependent variable, a composite of five Likert scaled items, included the following statements: "I feel close to people at this school," "I feel happy at this school," "The teachers at this school treat students fairly," "I feel safe in my school," and "I feel like the adults here keep us safe." Results from the dependent variable safety showed no significant change ($p = .97$) from the pre-test ($M = 3.76$, $SD = .79$) to the post-test ($M = 3.76$, $SD = .85$).

Interestingly, although students recognized the dangers of cyberbullying at a greater rate overall, their perceptions of safety in school did not change noticeably over time following the intervention despite exposure to true stories of cyberbullying behaviors that resulted in psychological and emotional distress in other students from their age group.

The lack of significant change indicated that, on the whole, students felt safe when at school and exposure to information about the dangers of cyberbullying did not affect those feelings. The researcher believes these findings are reassuring in a study

such as this and that they speak volumes about campus climate the school. This may be attributed to the presence of school resource officers on campus, the concern of teachers, or the bullying prevention efforts of the Clover Unified School District's Anti-bullying Task Force.

Knowledge. The dependent variable knowledge was measured by analyzing two questions from instruments. The first question, "Do you know what cyberbullying is?" had categorical response options of "Definitely No," "Not sure," and "Definitely Yes." Before running analyses, the researcher transformed the three response options into a new, dichotomous data variable with two response options consisting of "No" and "Yes." Combining the three options into two produced a more conservative view of students' knowledge of cyberbullying because "Not sure" responses were coded as "No."

The findings from the McNemar's repeated-measures analysis showed that the change in knowledge of cyberbullying from pre- to post-test was significant ($p<.001$). That is, following the WebQuest intervention, more students indicated knowing what cyberbullying is. While this finding could threaten the instruments' internal reliability because of the testing effect, which asserts that taking similar tests within a short time period may increase overall performance (Gay et al., 2009), the definition of cyberbullying was not included in either instrument. Thus, it can be reasonably assumed that the demonstrated increase in knowledge resulted from exposure to the WebQuest intervention.

An open-ended, qualitative item asking participants to, "Define cyberbullying in your own words" was also analyzed to answer research question one. As data coding progressed, three themes emerged.

Means of cyberbullying. The first theme, means of cyberbullying, demonstrated that an overwhelming number of participants in both the pre-test and post-test defined cyberbullying within the context of a digital environment. In other words, the participants were more likely to define cyberbullying as being related to technology as being solely physical or emotional in nature. This finding showed that students had some knowledge of cyberbullying before beginning the WebQuest intervention and were more likely to relate the term cyberbullying to harassment that occurs online, over the Internet, or via technology or electronics. Of those students who responded to the question (n=146), only 14 defined cyberbullying as being either strictly physical (e.g., "Other people gossip or say bad stuff") or a combination of physical bullying and cyberbullying (e.g., "When you say something mean in real life or instant message").

Methods of cyberbullying. The methods of cyberbullying listed by respondents emerged as the second theme. In the pre-test, most students defined cyberbullying by listing the methods through which it occurs (e.g., text messaging, instant messaging, posting on social networking sites). However, over time from the pre-test to post-test, the definitions provided by students became less specific in terms of methods and focused more on the means of cyberbullying. Although the literature showed several methods and behaviors associated with cyberbullying, including flaming, happy slapping, impersonation, blogging, and chatting, the responses to the question in both

administrations of the instrument reflected the most common methods of cyberbullying. These included text messaging, instant messaging, email, phone calls, posting to social networking sites, and sharing personal information.

These responses may indicate two things. First, they may show that the study's middle-school participants were not experiencing cyberbullying in the more obscure cyberbullying methods, an assumption supported by responses to the items asking about experiences with cyberbullying. These responses may also indicate that while students were experiencing the more obscure cyberbullying behaviors (e.g., flaming, impersonation, etc.), they did not know them by these names, thus limiting their abilities to report them effectively.

Perceived victims of cyberbullying. The final theme that emerged from the coding of the qualitative data examined the perceived victims of cyberbullying. In the students' definitions of cyberbullying, they used language that indicated victimization from one of several perspectives: self, others, or no one. For example, students who indicated themselves as victims said things like, "when your [sic] bullied over types of technology" or "cyberbullying is when someone bullyies [sic] you online or by cell phone." Students who indicated others as victims might say, "when you bully someone online," or "when a person online bullies another person online." Finally, students defined cyberbullying in such a way that no one was explicitly referenced as a victim (e.g., "Cyberbullying is a type of bullying that can include mean messages, aim messages, anything online and social networking").

These findings indicated that students' awareness and perceptions of cyberbullying were perhaps framed by their own experiences with the behavior. In the pre-test, responses were somewhat equally divided among an individual being the victim of bullying (n=41), an individual bullying another person (n=41), and no reference to a specific entity (n=36). The number of students who perceived themselves as victims in the pre-test increased from 41 to 52 in the post-test, however, indicating that students recognized cyberbullying may affect them personally at a higher rate following the WebQuest intervention. Recognition of the chance of being victimized increased students' awareness of its dangers. This is reinforced by a comment by one of the students in a focus group for the study: Marcel, a sixth grade student, commented that cyberbullying is dangerous when it happens to him, but not when it happens to others, further illuminating the need for students to learn about the dangers and consequences of cyberbullying in a more personal way, such as through a constructivist WebQuest.

The scholarly literature available on the topic defines cyberbullying as being mostly anonymous (Mason, 2008; Shariff, 2009; Willard, 2005) and repetitive in nature (Aftab, 2006). It is interesting, then, that in the qualitative question only two students indicated that cyberbullying was anonymous, whereas another two students reported that cyberbullying occured more than once. The students' responses aligned with the most recent comments from cyberbullying researchers, who have asserted that cyberbullying need not be repetitive in nature because something posted to the Internet has the potential to go viral, thus making it automatically repetitive (W. Blumenfeld, personal communication, November 15, 2010).

Research Question Two

Research question two examined the role of gender on students' perceptions of cyberbullying. On the whole, gender made little difference in students' perceptions of cyberbullying, with boys and girls scoring closely in both safety and knowledge. The findings are presented by each of the dependent variables, as follows.

Awareness. To measure changes in awareness by gender, repeated-measures ANOVAs were run. The findings from the analyses show that girls demonstrated greater awareness of the dangers of cyberbullying than boys from the pre-test to the post-test, and both genders increased in awareness across time. Li's study (2006) found that girls were more likely to report cyberbullying than boys, implying that female students found cyberbullying to be more dangerous, a belief substantiated by the findings of the current study.

The increase in girls' awareness of the dangers of cyberbullying may stem from their observed propensity to engage in relational, or psychological, harassment more frequently than boys (Nansel et al., 2001; Olweus, 1993). Because cyberbullying is seen as less physically aggressive than traditional bullying, girls who have experienced relational harassment may better understand the danger of engaging in cyberbullying behaviors, thus leading to a higher score on the awareness variable.

Both genders increased in awareness across time, indicating little gender effect from the WebQuest. In other words, the WebQuest was equally effective in helping boys and girls construct meaning about cyberbullying, reinforcing the researcher's belief that technology can equalize the academic playing field to a greater degree.

Safety. The analyses for safety and gender's role in students' perceptions of cyberbullying showed no main effects for gender or time, indicating that boys and girls scored nearly equally on the variable. The fact that boys and girls felt nearly equally safe in their school environment both before and after the intervention indicated that the safe-school mechanisms in place at the school site were effective and the exposure to cyberbullying examples had no impact on boys' and girls' feelings of safety. It is important to note that girls' perceptions of safety declined slightly, albeit not significantly, from the pre-test to the post-test, whereas boys' perceptions increased across time.

Knowledge. To answer research question two, the dependent variable for knowledge was transformed into a dichotomous variable and analyses were run by gender. Quantitative data suggested both boys and girls increased in knowledge of cyberbullying from the pre-test to post-test and the change among boys was significant.

Perhaps more telling than the quantitative data collected for the knowledge variable were the responses by gender to the qualitative item asking students to define cyberbullying in their own words.

Means of cyberbullying. The responses from boys and girls were similar from the pre-test to the post-test, with both genders using the term "online" more frequently following the intervention than before it. Girls, however, were the only respondents in the pre-test to indicated that cyberbullying is both physical and digital in nature. Their responses in the post-test, though, indicate a shift in knowledge, with no girls indicating this duality. Similarly, four girls defined cyberbullying as being exclusively physical in

nature (e.g., "when someone pushes you") in the pre-test, but post-test definitions did not reflect this belief.

Only one boy indicated that cyberbullying was anything other than digital in nature in the pre-test by defining cyberbullying as being only physical (e.g., "being bullied without getting hurt"). Following the intervention, this student's response changed to reflect the digital nature of cyberbullying but the initial response deserves further attention. Of the 144 respondents to the qualitative question, only one overtly stated that cyberbullying does not result in some kind of injury. This comment eerily echoed the sentiments of the 90% of students who, when asked, indicated that cyberbullying is just part of growing up (Juvonen & Gross, 2008) and is not something to be fearful of in life. The change in that response from the pre-test to the post-test pointed to the effectiveness of the WebQuest intervention in making students more aware of the dangers of cyberbullying.

Methods of cyberbullying. After examining the findings from the second emergent theme, the frequency of methods described by both boys and girls were similar. Both genders believed that cyberbullying includes harassment by texting and phone most commonly, followed by inappropriate postings on social networking sites. There was little difference in defined methods of cyberbullying along gender lines, supporting the findings of an unpublished study by Olweus (personal communication, November 16, 2010) that asserted cyberbullying occurs equally among boys and girls and that they experience the harassment through similar methodologies.

Perceived victims of cyberbullying. Both boys and girls shifted in their language describing the victims of bullying following the intervention. Boys and girls both reported being victimized more following the intervention and were less likely over time to report being the perpetrators of cyberbullying. This finding aligns with Edwards' Social Desirability Theory (1957) that states individuals are less likely to admit to a behavior if it is perceived negatively by society. As students' awareness of the dangers of cyberbullying increased from the pre-test to post-test, it can be assumed that their perceptions of society's idea of cyberbullying also became more negative, thus affecting their willingness to admit to these behaviors.

These findings again highlight the effectiveness of using a multimedia WebQuest to help students learn about the dangers of cyberbullying, and their significance will be discussed in the following section.

Significance of the Findings

As students learn to live as digital citizens (Bennett, Wells, & Rank, 2009) educators, policy makers, and parents must recognize and acknowledge that no clear division between online and offline realities exists for students.

Instead, educators must accept the reality that many students are constantly connected to digital environments; they communicate and talk through these new, dynamic forms of communication. Students who engage in online gaming communities like Second Life might not demonstrate increased violent or other socially rejected behaviors (Desai, Krishnan-Sarin, Cavallo, & Potenza, 2010) but do often blur the lines separating their online and face-to-face experiences. For example, in early 2010, a North

Carolina student contacted school authorities to report a threat against school safety he heard while at the mall. The student insisted overhearing two other students from his class threatening to bring guns and bombs to the high school, and district officials and local law enforcement subsequently launched a detailed and large-scale investigation into the accusations. Following further questioning, the accuser's father told officials his son was home on the evening in question and could not have overheard any conversations at the mall. Insistently, and with great vigor, the boy continued to assert that he overheard these threats at the mall and it was hours later, after arguing back and forth about his whereabouts that the boy indicated he was talking about the mall in Second Life. Unable to see the distinction between his online and offline realities, the boy perceived the threat with the same level of danger as if he had heard it himself, in person.

Today's students are active co-constructors of these differing realities. They piece together personalities and lives that suit their needs and do not sit idly by while their online and physical world realities blur. It is imperative that educators begin teaching in the same modalities, using online resources as primary tools and not supplements, so students will choose to engage in their education processes and will see value in the content being shared.

Redefining and Re-envisioning Constructivist Learning Theory

Long regarded as one of the seminal theories in teacher education, Vygotsky's Social Learning Theory is comprised of three major themes that must be considered in redesigning the ways by which students learn about the dangers of cyberbullying. As just one building block of constructivism, Social Learning Theory frames the perspectives of

many educators related to teaching and facilitating in the classroom; while it is no doubt a valuable tool for any teacher, it must be re-envisioned for future success.

The first theme of this foundational theory is Vygotsky's Zone of Proximal Development (ZPD), which describes the space between what a learner has mastered and what the learner can master with the assistance of a facilitator, or more knowledgeable other (Vygotsky, 1978). In other words, the ZPD represents the distance between one's actual level of development and his or her potential development. Taught throughout teacher education programs around the world, Vygotsky's ZPD urges teachers to scaffold material appropriately for students after determining the level of prior knowledge and skills the target population brings to the classroom. The use of a quasi-experimental design in the current study demonstrated the effectiveness of applying the ZPD to the digital world. The results from the pre-test indicated students' knowledge about cyberbullying before accessing the online resources, and the post-test showed their subsequent acquired knowledge. The Internet helped to bridge the gap between content the learners had previously mastered, and content they were then able to master with the assistance of the WebQuest.

The teacher, who is perceived to have a greater understanding of material or a higher skill level in relationship to the material or concepts taught, is then labeled the more knowledgeable other (Vygotsky, 1978). The term "more knowledgeable other" comprises the second major theme of Social Learning Theory and most commonly refers to teachers but can also apply to peers, other adults, and as this chapter suggests, the

Internet. In Vygotsky's Social Learning Theory, the more knowledgeable other must be present and actively engaged to facilitate learning for the student.

The final theme in this theory contends that social interaction plays a fundamental role in the process of cognitive development. Vygotsky (1978) asserts that:

> every function in the child's cultural development appears twice: first, on the social level, and later, on the individual level; first, between people (interpsychological) and then inside the child (intrapsychological). This applies equally to voluntary attention, to logical memory, and to the formulation of concepts. All the higher functions originate as actual relations between human individuals. (p. 57)

If students do in fact learn and develop socially first, and individually second, then most current pedagogical practices are outdated and disconnected from students' developmental needs as they ignore students' online socialization and focus instead on basic grouping practices that include jigsaws, think-pair-shares, and other face-to-face discussion tools.

Increasingly, students socialize and communicate through Information and Communication Technologies (ICT), sharing information digitally and in synchronous environments. Although student socialization commonly occurs in online environments in increasingly complex ways, current instructional practices still force student to take turns communicating by raising their hands or talking to teach other in small groups. Educators fail to acknowledge that learning and meaningful conversations can occur in

online or tech-based domains, thus robbing students of the opportunity to communicate and share in the formats most comfortable to them.

Even when teachers do use technology, it is one-dimensional, essentially asking students to participate in online information treasure hunts that rarely ascend beyond the lower order thinking described by Bloom's Taxonomy. The pedestrian use of technology excludes students from experiencing its benefits and relegates them to being viewers of technology, rather than users.

If the goal of constructivist learning is to allow students the chance to be active learners and producers of knowledge who construct meaning about concepts, topics, and problems, the integration and use of technology in classrooms is essential. It is imperative that teachers in the P-12 environment, as well as higher education, begin to harness the usefulness of technology and the Internet in teaching. The sense of disinhibition offered by the Internet (Shariff, 2009) allows students to participate more creatively, with greater engagement, and in more meaningful class activities.

As the current study demonstrated, using technology to help students construct meaning about the dangers of cyberbullying was highly effective. Students were able to navigate through information at their own speeds, picking and choosing the information most relevant to their lives. Embracing technology and the Internet shifts the focus of the more knowledgeable other from the teacher to the students, allowing the educational community to take the first step in constructing netagogies to facilitate learning.

Building a Netagogy for Youth

Pedagogies employed in traditional school environments are intrinsically teacher-centered despite their claims to the contrary. In the current, somewhat hypocritical education system that espouses student-centered education, teachers spend most of their time standing at the front of classrooms, performing ritualized plays of instruction for their student audiences and dominating most class environments. The audience members occasionally perform in this theater of the absurd, mimicking the teachers' actions and performing tasks that occur offline, leading to disengagement and student apathy.

This current study demonstrated that a new approach to teaching concepts can and should be employed in schools. This new netagogy that employs technology-based curriculum and communication will allow schools to use frameworks such as digital citizenship and netiquette to help mitigate cyberbullying behaviors. This approach is not new—technology and social media have been harnessed and used to mitigate other social problems in the recent past, such as teen drinking and teen smoking. It is, then, only natural that these forums be used to help students learn about the dangers associated with online harassment and cyberbullying.

The WebQuest used in this study represented the first step in creating a constructivist tool to help students learn in both online and offline environments. By allowing students to take on the role of the more knowledgeable other through the information they acquired from the Internet, they acted as facilitators in helping their peers learn about cyberbullying's dangers in the offline world, thus helping other students construct meaning about the perils of online harassment.

Recommendations for Future Practice and Research

The current study addressed just one small component of the cyberbullying epidemic. Mitigating this problem must become a global effort, not just one taken on by school districts, and to do so, policy and educational practices need reexamining.

Technology, Partnerships, and Education

Microsoft, a leader in technology and one of the first large corporations to take on the topic of cyber safety, classified threats to cybersafety in four buckets. They addressed this issue by examining content (e.g., inaccurate information, questionable material, extreme views/hate speech), contact (e.g., unwanted contact, cyberbullying, cyberharassment, child predators), conduct (e.g., cyber stalking, harassment), and commerce (e.g., spam, phishing, unsolicited product service invitations, identity theft).

After conducting extensive research and following the implementation of its own cyber safety program, Microsoft announced its plan to approach the problems of cyber threats through a three-prong approach, and I adopt that as the primary recommendation for cyberbullying intervention from this dissertation.

The approach consists of technology, partnerships, and education, three different areas that are fundamental and necessary for developing effective, technology-based interventions for cyberbullying. Individually, each of these components already plays an important role in how schools are managed but, together, they take on a richer and more powerful meaning. To effectively mitigate the problem of cyberbullying, technology, partnerships, and education must become inseparable.

Integrating technology in constructive, not just instructive, ways promotes awareness and recognition of the fact that students learn digitally and not simply through traditional paper and pen modalities. School policy makers and curriculum designers must begin to allocate financial and human resources to purchase, design, test, and implement regionally specific information and software that can encourage change and growth in these populations. Programs and software for anti-bullying prevention programs should be co-designed and pilot tested by youth in the areas in which they will be used. This mandate lends polyvocality to the process, allowing students to contribute their thoughts and ideas to the process, thus avoiding the complications that arise when a group of adults assume they can program and design for youth.

Furthermore, policies need to be written that mandate technology training for teachers, staff, and administrators on both software and hardware. Offering training and exposing educators to the possibilities available through technology is essential to ensure that the hardware and software in schools will not sit dormant. The training, which can be offered by colleagues or students at a low cost, will further expose teachers to technological trends and terminology that will assist them in recognizing when instances of cyberbullying are occurring.

As mentioned above, technology alone is not a sufficient capability for soloving cyberbullying problems. However, when coupled with appropriate partnerships, technology can make a significant difference in how students learn about netiquette and cyberbullying behaviors. Local school districts seeking to create technology-based interventions for cyberbullying should reach out to local law enforcement agencies, child

welfare agencies, school resource officers, community leaders, parents, teachers, students, media outlets, corporations, and other groups in order to enrich their intervention work. Collaboratively designed interventions are more effective (Bhat, 2008; Diamanduros et al., 2008) than those planned by one or two groups and are better able to serve the needs of many different students. Partnering with only one of these entities may alienate students if it is one that is distrusted, feared, or not valued. In other words, if there is an inherent mistrust of law enforcement agencies among the students in the school, partnerships with other organizations must be established to bolster community trust and support.

Schools should critically examine partnerships as they arise, looking for potential benefits and negatives associated with each. While the school might receive some benefit from a particular partnership, is it at the cost of allowing interest convergence to drive the agenda? If so, a cost-benefit analysis will help school members determine what will work best for their own needs and interests.

In addition to curricular support, partnerships can offer financial and human resource support. Organizing committees with specific tasks designed to support anti-cyberbullying curriculum can reduce the responsibility and time drain experienced by an organization's leaders and diversify the ideas that are brought to the planning table.

Education, the final piece needed to complete the intervention puzzle is the most complex. Its complexity stems from the multi-layered approaches that need to take place. Students and adults alike require constant and up-to-date education about cyberbullying, its dangers, and the laws regulating it. Additionally, education about technology, its

advances, and new mediums for cyberbullying are needed. Finally, educators and members of the mentioned partnerships should stay abreast of curricular changes, and new pedagogical and netagogical approaches to the classroom.

Unfortunately, the reality is that offering educational opportunities to staff and educators requires a serious financial commitment that districts are not prepared to make because of reduced spending on education and misplaced priorities. It is, then, the responsibility of institutions of higher learning to step up and form synergistic partnerships with their local school communities to help support safe-school efforts. By combining the resources available in a school of education, programs can be created that are built on the foundations of counseling programs, research courses, and faculty expertise. Offering service to the community through this vehicle demonstrates a university's commitment to social justice programming while offering its students and staff the opportunity to work for a solution to a debilitating social problem.

Future Research

The current study and its findings have highlighted the need for additional research in the areas of educational technology and cyberbullying intervention to help defuse this explosive phenomenon. The following suggestions for additional research are recommended:

- A replication of this study with a two-year longitudinal follow-up post-test. The follow-up to the study will allow the researcher to measure the long-term effectiveness of the WebQuest and its impact on student awareness and will allow

for measurement of increases or decreases in engagement in cyberbullying behaviors.

- Further studies on the role of online disinhibition in students' experiences with cyberbullying and online education. These studies will further explore the usefulness of online communication in allowing students to socialize as a means of learning new concepts.
- A comparative study exploring the effectiveness of using social media or WebQuests to increase students' awareness of the dangers of cyberbullying and online harassment.
- A comparative study exploring whether this web-based, constructivist intervention is more effective in helping students learn about cyberbullying than passive, instructivist interventions.

Conclusion

Because children like Amanda Marcuson, a girl victimized by cyberbullies for doing what she believed was right, continue to experience aggression in a world often invisible to adults (Bazelon, 2010), every adult in the educational community is called to arms. To effectively stand up against cyberbullying, stakeholders must acknowledge the serious implications of online aggression and begin advocating for what this researcher terms "digital social justice."

A concept that has been a long-time in the making, digital social justice represents efforts to ensure that respect, education, advocacy, and leadership are supported in the non-physical environments in which today's students reside. Supported by the efforts of

the Electronic Frontier Foundation and other organizations, teachers, schools, and communities can begin creating netagogies designed to support and promote social justice. Then, and only then, will the efforts made in the physical world be truly effective.

Appendix A

Letter to Focus Group Participants (teachers)

Dear Colleagues,

I hope this letter finds you well. As many of you know, I am part of Loyola Marymount University's doctoral program and am currently working toward earning an Ed.D. in Educational Leadership for Social Justice. I am in the second year of the three-year program and am preparing to begin my dissertation research formally.

My dissertation study will examine the effectiveness of a multimedia WebQuest in changing middle-school students' attitudes toward, and perceptions of, cyberbullying. Our students face social and cultural pressures like we did, but they are at a severe disadvantage. They are tied to information and communication technologies (like cell phones, computers, the Internet, and PDAs) in most facets of their lives and if they are being harassed or bullied through these technologies, we may never know. Research shows that middle-school students are most frequently cyberbullied and that they tend to perceive this harassment as "just part of growing up" and something to be dealt with on one's own.

My research seeks to provide schools with a WebQuest, a constructivist-learning tool that will help students learn about the negative effects of cyberbullying while also changing students' attitudes. A WebQuest is an online learning exercise that asks students to use the Internet as a resource for learning and many of you use WebQuests in your classes with your own students.

I will be holding a confidential focus group on ____[*insert date and time*]___ at _____[*insert location*]_____ for middle-school teachers, staff, and administrators to explore what students know about cyberbullying. These group conversations will enlighten my choice of resources to be used in the WebQuests and will help me move forward in developing the questionnaires to be used with the participants of the study.

I hope you'll join me as we discuss this crucial matter. If you have any questions about the process and research, or to RSVP by ___[*insert date*]___, please call or email me at [*phone number]* or [*email address]*.

Best,
Beth

Appendix B

Letter to Focus Group Participants (parents/guardians)

Dear Parents/Guardians of Clover Middle-school students,

I hope this letter finds you well. My name is Beth Brewer and I am part of Loyola Marymount University's doctoral program. I am currently working toward earning an Ed.D. in Educational Leadership for Social Justice. Now in the second year of this three-year program, I am preparing to begin my dissertation research formally.

My dissertation study will examine the effectiveness of a multimedia WebQuest (a WebQuest is an online learning exercise that asks students to use the Internet as a resource for learning) in changing middle-school students' attitudes toward, and perceptions of, cyberbullying. Our students face social and cultural pressures like we did, but they are at a severe disadvantage. They are tied to information and communication technologies (like cell phones, computers, the Internet, and PDAs) in most facets of their lives and if they are being harassed or bullied through these technologies, we may never know. Research shows that middle-school students are most frequently cyberbullied and that they tend to perceive this harassment as "just part of growing up" and something to be dealt with on one's own.

My research seeks to provide schools with a constructivist-learning tool that will help students learn about the negative effects of cyberbullying while changing students' attitudes.

I will be holding a confidential focus group on ____[*insert date and time*]___ at _____[*insert location*]_____ for the parents of Clover Middle-school to explore what students know about cyberbullying and what they should know. These confidential group conversations will enlighten my choice of resources to be used in the WebQuests and will help me move forward in developing the questionnaires to be used with the participants of the study.

I hope you'll join me as we discuss this crucial matter. If you have any questions about the process and research, or to RSVP by ___[*insert date*]___, please call or email me at [*phone number]* or [*email address]*.

Best,
Beth

Appendix C

Focus Group Consent Form

(for teachers/staff/administrators and parents/guardians)

Loyola Marymount University (LMU)

Topic: To what extent can a multimedia WebQuest change students' attitudes toward, and perceptions of, cyberbullying?

1) I hereby authorize Elizabeth Brewer, M.A., Ed.D. candidate to include me in the following research study: To what extent can a multimedia WebQuest change students' attitudes toward, and perceptions of, cyberbullying?

2) I have been asked to participate in a research project which is designed to examine the following question: To what extent can a multimedia WebQuest change students' attitudes toward, and perceptions of, cyberbullying? The study will last from approximately February 20, 2010 through May 31, 2010.

3) It has been explained to me that the reason for my inclusion in this project is because I am [a parent/guardian of a child at Clover Middle-school or a teacher, staff member, or administrator at a middle-school].

4) I understand that if I am a participant, I will participate in the following procedures:

   Instrument: One, 2-hour long, audio recorded focus group. The focus group will be held at [insert location here] on [insert date here]. The questions in the focus group will ask about my child/ward/student's experiences with cyberbullying, their knowledge of the topic, and my own opinions about what is most important for students to know and understand about the topic.

5) The investigator will write a dissertation paper on the data collected through pre and post-tests, as well as research of scholarly literature, books, media accounts, and artifacts about the effects of and attitudes towards cyberbullying. The data collected through the focus groups will be transcribed, margin coded, and analyzed for thematic content. The study will be submitted as partial requirements of LMU's Ed.D. in Educational Leadership for Social Justice.

6) These procedures have been explained to me by Elizabeth Brewer, M. A., Ed.D. candidate, and researcher.

7) I agree that the focus group transcripts, anonymous surveys and findings shall be retained for research and/or teaching purposes for an indefinite time.

8) I understand that the study described above may involve the following risks and/or discomforts: There are no physical or emotional risks from participation in this study. Should a participant experience emotional discomfort, he/she will be referred to a counselor [to be determined].

9) I understand that I will receive no direct benefit from my participation in this study; however, the possible benefits to humanity include a more thorough understanding of the effect of cyberbullying on students and intervention techniques to address the problem.

10) I understand that Elizabeth Brewer, who can be reached at [*email address*] or [*phone number*], will answer any questions I may have at any time concerning details of the procedures performed as part of this study.

11) If the study design or the use of the information is to be changed, I will be so informed and my consent re-obtained.

12) I understand that I have the right to refuse to participate in, or to withdraw from this research at any time without prejudice to my child/ward's experiences in school (e.g.,, grades).

13) I understand that circumstances may arise which might cause the investigator to terminate my participation before the completion of the study.

14) I understand that no information that identifies me will be released without my separate consent except as specifically required by law.

15) I understand that I have the right to refuse to answer any question that I may not wish to answer.

16) Some of the information with which I will be provided may be ambiguous, or inaccurate. However, I will be informed of any inaccuracies following my participation in this study.

17) I understand that I will receive no remuneration for my participation in this study.

18) I understand that if I have any further questions, comments, or concerns about the study or the informed consent process, I may contact John Carfora, Ed.D. Chair, Institutional Review Board, 1 LMU Drive, Suite 3000, Loyola Marymount University, Los Angeles CA 90045-2659 (310) 338-4599, John.Carfora@lmu.edu.

19) In signing this consent form, I acknowledge receipt of a copy of the form, and a copy of the "Subject's Bill of Rights".

20) In signing this consent form, I acknowledge receipt of a copy of this form.

_____

Signature

_____

Printed Name

_____

Date

Appendix D

Focus Group Protocol and Questions

Script:
Good evening. I'd like to take a brief moment to thank everyone for attending this focus group tonight. I know your time is valuable and I appreciate you sharing it with me for this research study. I'd like to briefly confirm that you are [a parent/guardian of a student at Clover Middle-school/a teacher, staff member, or administrator at a middle-school].

[If not, they will be thanked for coming and told when the focus group best serving their needs will be held.]

Thanks! I'm Beth Brewer, a doctoral student in the Ed.D. in Educational Leadership for Social Justice program at Loyola Marymount University in Westchester. I taught high school for six years and am currently teaching one graduate class in the School of Education at the university.

This focus group is part of my doctoral dissertation research and is designed to collect your beliefs and opinions about what your [children/students] know and think about cyberbullying. Cyberbullying can best be defined as using cell phones, computers, or other forms of technology to send mean, harassing, or insulting messages to other people. It can also include the sharing or spreading of private information online or via technology, like pictures, personal conversations, or secrets. Cyberbullying has been pretty prevalent in the media lately and you have most likely seen one or two pieces about it on the news.

Your honesty and candor are appreciated. This evening's conversation will be digitally recorded, but the file will only ever be heard by me. I'll be transcribing the audio verbatim but codes will be used to indicate your names, making this completely anonymous.

To create an atmosphere where everyone feels comfortable sharing, I'd like to ask that you promise to not disclose what is discussed with others. Anything shared in this room will remain in this room. Also, if you don't feel comfortable sharing out loud, you are welcome to write comments on the blank sheet of paper I will distribute and then return it to the box by the door at the end of the night. In the interest of anonymity, you don't need to put your name on the sheet.

Can I see by a nod of your head that you all agree to not discuss what is shared here today?

[If anyone disagrees, they will be thanked for their time and asked to leave].

Before we begin, please read and sign these consent forms indicating that you understand your rights are participants. You may keep the second copy of the consent form for your records.

[Once consent forms are collected, we will begin.]

Please free to help yourself to food and drinks and we'll go ahead and get started.

Questions:

1. Please begin by giving a brief, 2-3 minute introduction. Tell us your name, institutional affiliation/grade level of your child/ward, and a brief definition of cyberbullying.
2. What are 3 ways someone can be cyberbullied?
3. If you know someone who has been cyberbullied, can you tell me what happened without using real names?
    a. What was your role?
    b. How was it done?
    c. Was it addressed by adults (e.g.,, teachers, parents, coaches, etc.)?
4. Describe what your child/ward/students think(s) about cyberbullying. How do they feel about it? Do they talk about it? What do they say?
5. Do you think cyberbullying is dangerous? Why or why not?
6. If you have talked to your child/ward/students about cyberbullying, what was that conversation like?
    a. Who brought it up?
    b. What did you say?
    c. What did they say?

One part of the research study involves students going through a WebQuest. WebQuests are websites teachers create to help students go through a learning process while using resources and information on the Internet to help build knowledge.

7. What do you think children today need to know about cyberbullying?

8. Should schools teach about cyberbullying? Why or why not?

9. Is there anything related to the topic that we haven't discussed that you'd like to share?

Final Comments to be read to the groups:

Well, I'd like to thank you all, again, for coming out tonight. I appreciate your time and thoughtful comments and look forward to reviewing our conversation and applying it to the research study.

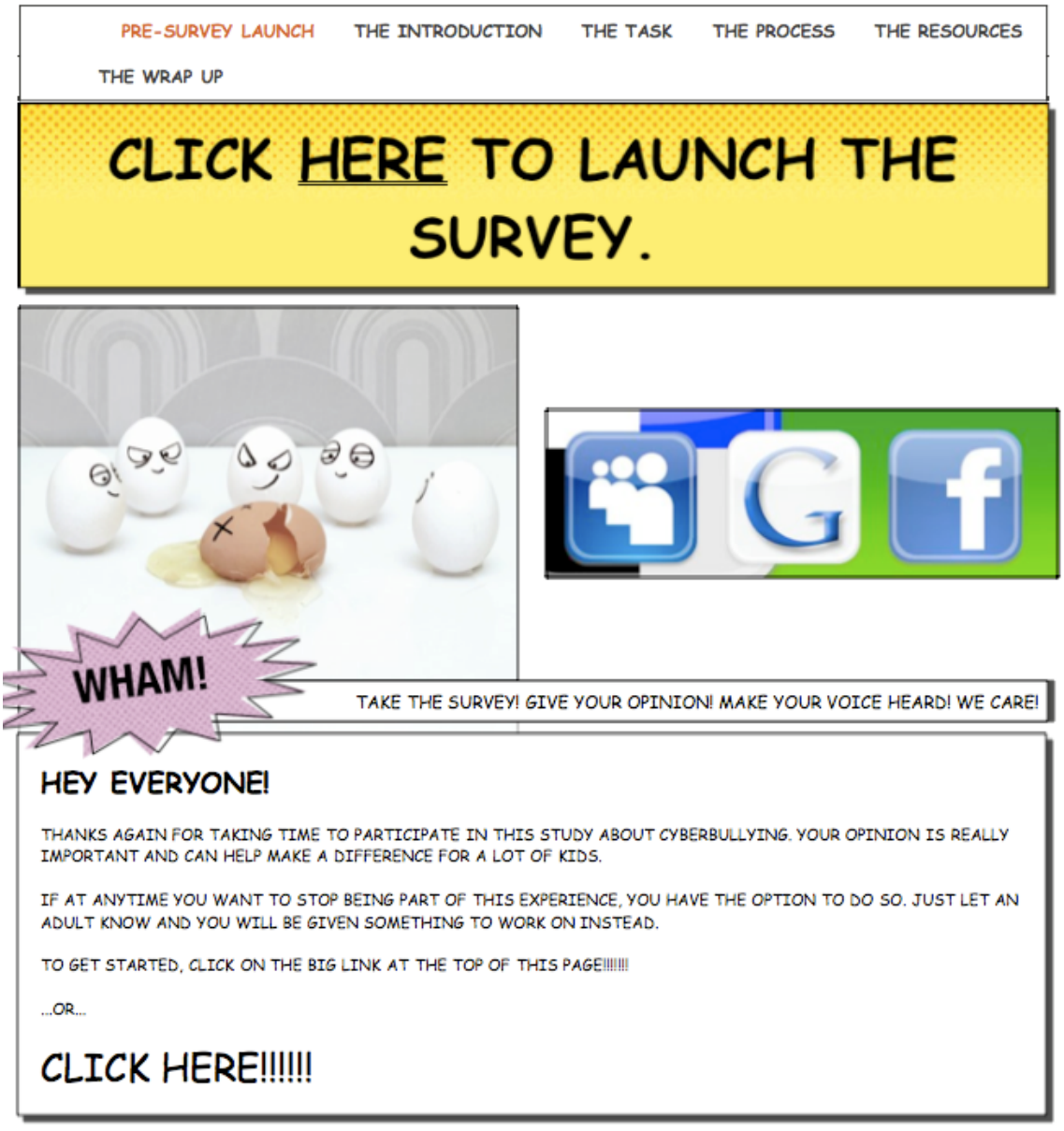
If you felt more comfortable jotting down comments on the provided paper, please feel free to leave that sheet in the box by the door as you leave.

If you have any questions or comments that come to mind once you leave tonight, please feel free to contact me at the email address or phone number on the copy of the consent form that you kept.

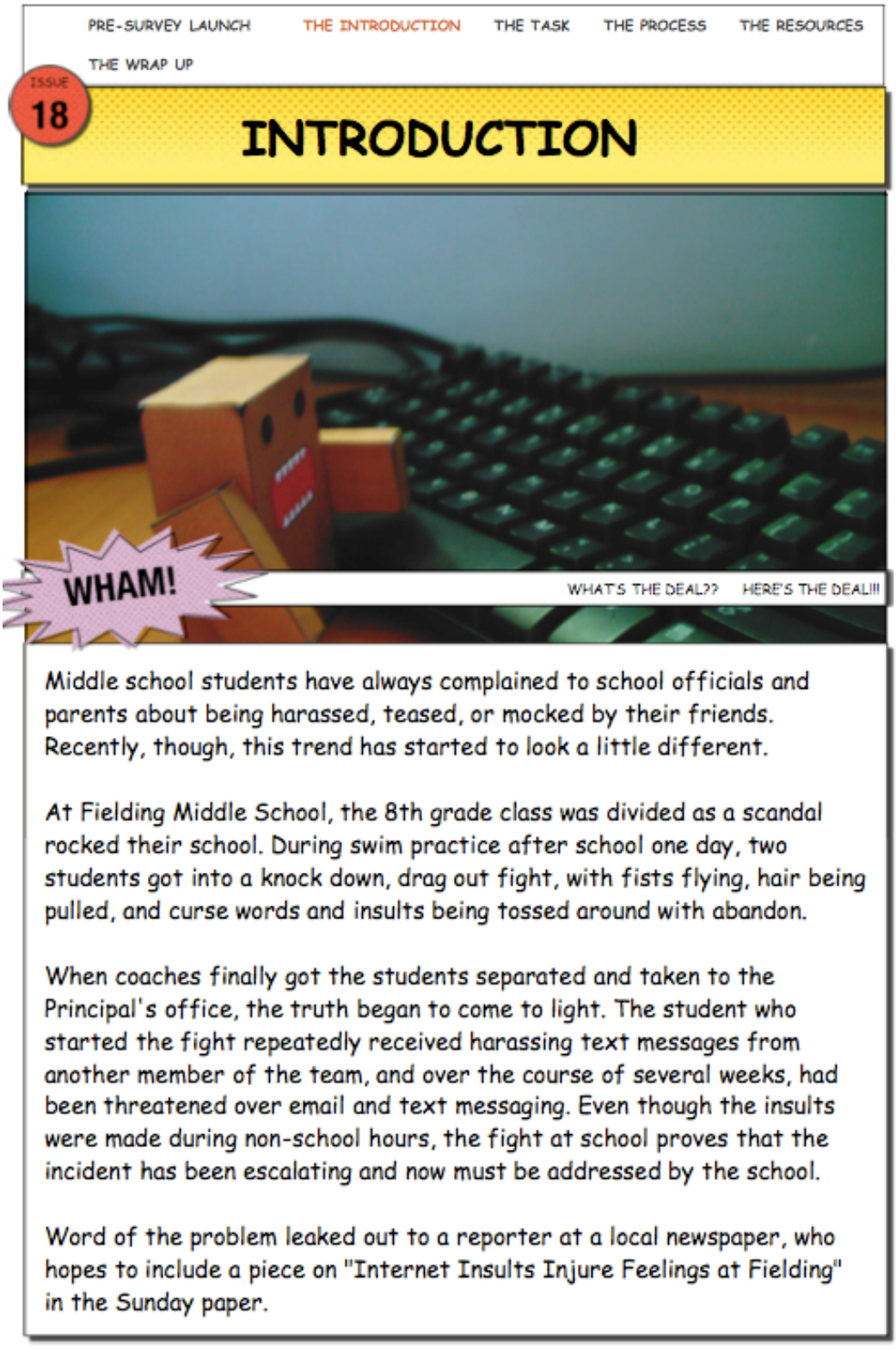
Appendix E

WebQuest Screen Shots

Pre-survey launch page



Introduction page



Task page

As a reporter for the Fielding Front Page News, you're always looking for a fresh new story and an idea that will captivate readers minds. You've written award winning pieces in the past, but have been slow to keep up with the technological advances that your peers are using in their reporting.

Use the information and links provided under the resources link to catch yourself up on the phenomenon of cyberbullying. You will need this information when your editor asks you to justify the article on the "Internet Insults" fight.

Having this information will also prepare you for any interviews with students, school administrators, or friends of the accused.

Process page

PRE-SURVEY LAUNCH THE INTRODUCTION THE TASK THE PROCESS THE RESOURCES THE WRAP UP

ISSUE 18

THE PROCESS

HERE'S WHAT YOU NEED TO KNOW!

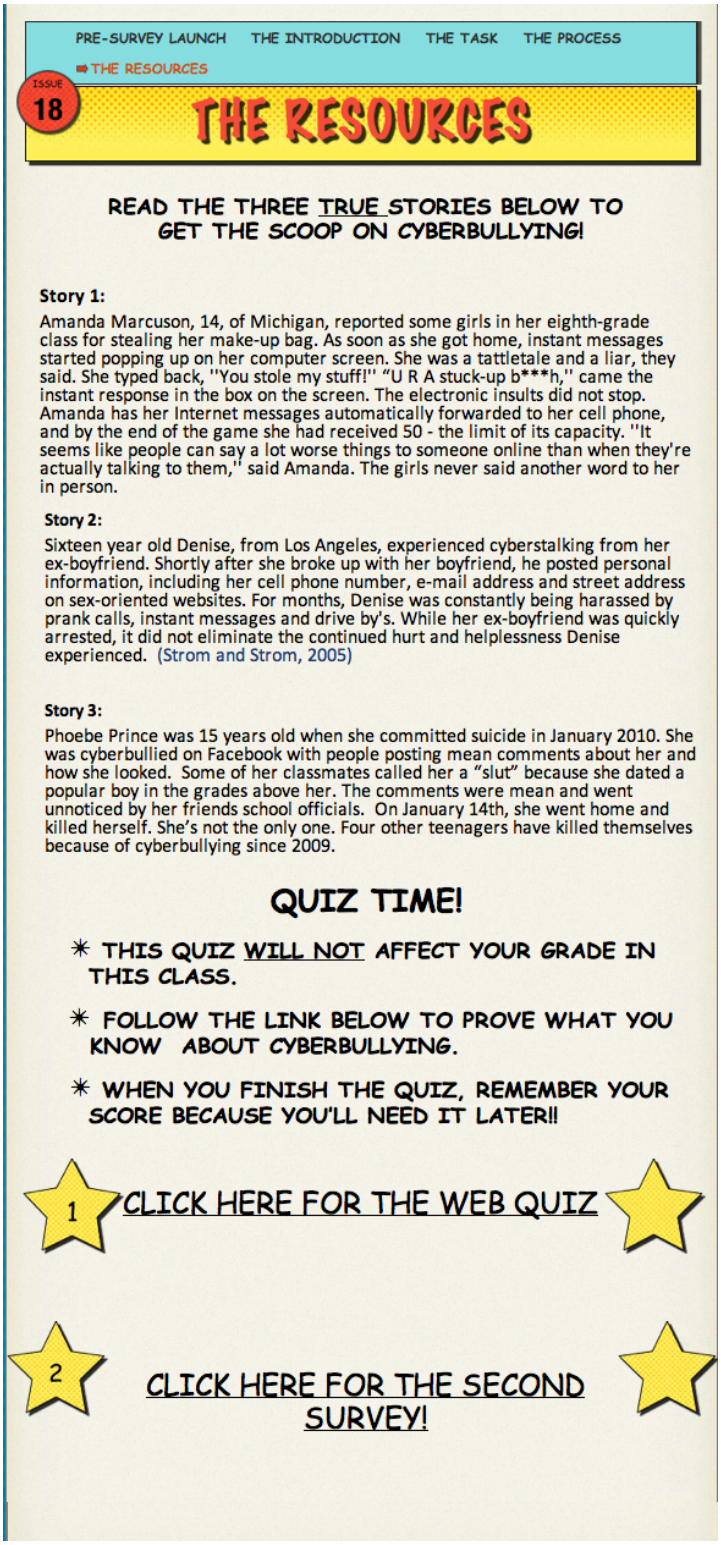
In order to start researching the topic of cyberbullying, you will turn to one of the most frequently visited sites on the Internet - YouTube. You know that the postings there can come from authorities, people like you, or anyone else so hopefully you'll get a variety of information about the topic.

Please watch the videos found on the resources link.

Then, follow the links to read about kids like you who've been cyberbullied.

After that, get ready - it's quiz time!!

Resources page



PRE-SURVEY LAUNCH THE INTRODUCTION THE TASK THE PROCESS

➡ THE RESOURCES

ISSUE 18

THE RESOURCES

READ THE THREE TRUE STORIES BELOW TO GET THE SCOOP ON CYBERBULLYING!

Story 1:

Amanda Marcuson, 14, of Michigan, reported some girls in her eighth-grade class for stealing her make-up bag. As soon as she got home, instant messages started popping up on her computer screen. She was a tattletale and a liar, they said. She typed back, "You stole my stuff!" "U R A stuck-up b***h," came the instant response in the box on the screen. The electronic insults did not stop. Amanda has her Internet messages automatically forwarded to her cell phone, and by the end of the game she had received 50 - the limit of its capacity. "It seems like people can say a lot worse things to someone online than when they're actually talking to them," said Amanda. The girls never said another word to her in person.

Story 2:

Sixteen year old Denise, from Los Angeles, experienced cyberstalking from her ex-boyfriend. Shortly after she broke up with her boyfriend, he posted personal information, including her cell phone number, e-mail address and street address on sex-oriented websites. For months, Denise was constantly being harassed by prank calls, instant messages and drive by's. While her ex-boyfriend was quickly arrested, it did not eliminate the continued hurt and helplessness Denise experienced. (Strom and Strom, 2005)

Story 3:

Phoebe Prince was 15 years old when she committed suicide in January 2010. She was cyberbullied on Facebook with people posting mean comments about her and how she looked. Some of her classmates called her a "slut" because she dated a popular boy in the grades above her. The comments were mean and went unnoticed by her friends school officials. On January 14th, she went home and killed herself. She's not the only one. Four other teenagers have killed themselves because of cyberbullying since 2009.

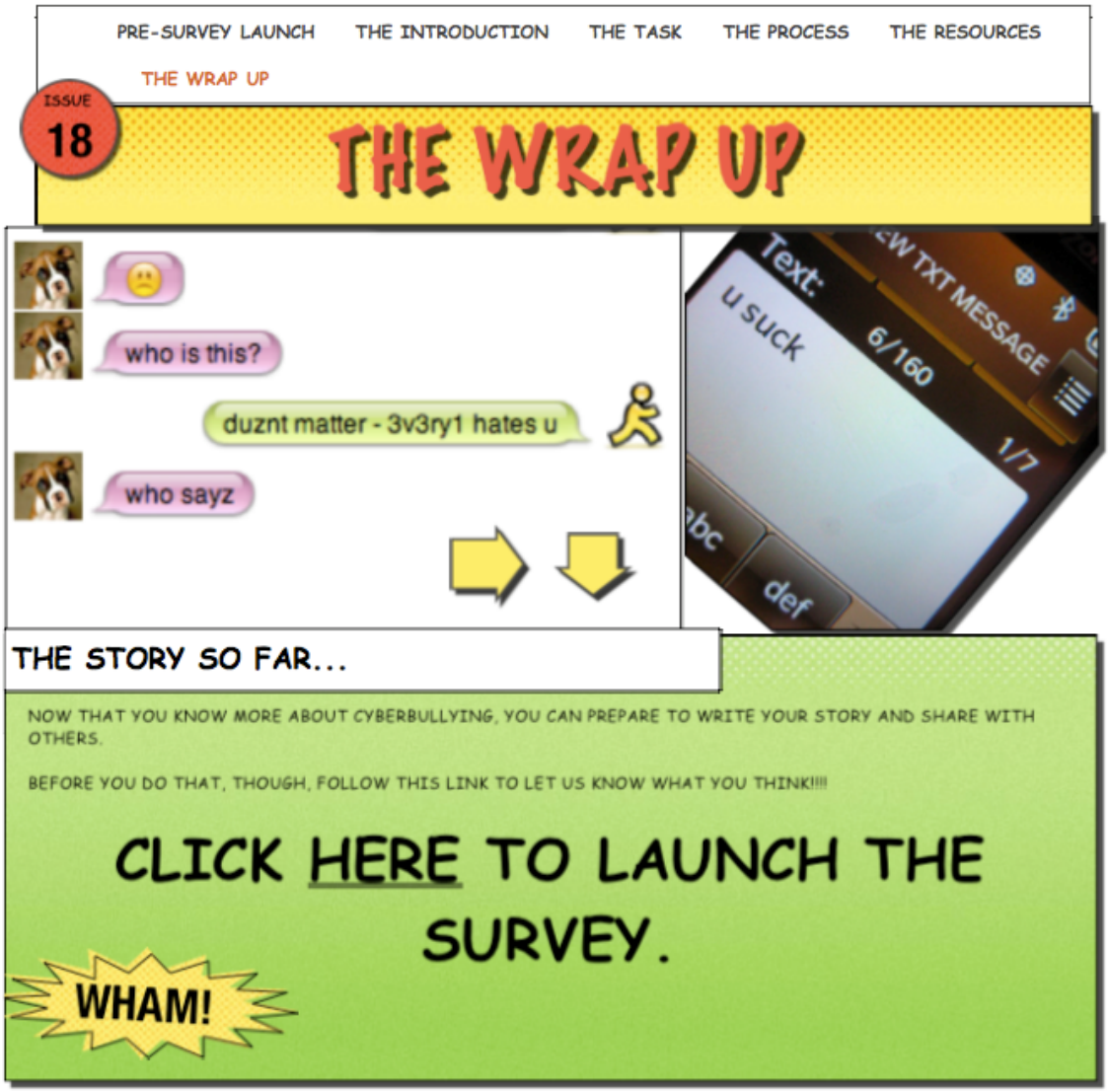
QUIZ TIME!

- THIS QUIZ WILL NOT AFFECT YOUR GRADE IN THIS CLASS.
- FOLLOW THE LINK BELOW TO PROVE WHAT YOU KNOW ABOUT CYBERBULLYING.
- WHEN YOU FINISH THE QUIZ, REMEMBER YOUR SCORE BECAUSE YOU'LL NEED IT LATER!!

1 CLICK HERE FOR THE WEB QUIZ

2 CLICK HERE FOR THE SECOND SURVEY!

Wrap up page


PRE-SURVEY LAUNCH
THE INTRODUCTION
THE TASK
THE PROCESS
THE RESOURCES
THE WRAP UP
ISSUE 18
THE WRAP UP
who is this?
duznt matter - 3v3ry1 hates u
who sayz
Text:
u suck
6/160
1/7
THE STORY SO FAR...
NOW THAT YOU KNOW MORE ABOUT CYBERBULLYING, YOU CAN PREPARE TO WRITE YOUR STORY AND SHARE WITH OTHERS.
BEFORE YOU DO THAT, THOUGH, FOLLOW THIS LINK TO LET US KNOW WHAT YOU THINK!!!!
CLICK HERE TO LAUNCH THE SURVEY.
WHAM!

Appendix F

Hinduja & Patchin (2009) Quiz

The following questions are taken from a quiz available on the Cyberbullying Research Center website (Hinduja & Patchin, 2009).

Dealing with Cyberbullying

1. Which of the following can be considered "cyberbullying"?
    A. Sending harassing text messages
    B. Creating mean web sites
    C. Posting embarrassing pictures of someone else online without their permission
    D. Threatening someone on Facebook
    E. All of the above

2. A person can do the following when he or she is being bullied online:
    A. Sign off from or leave the chatroom or instant message conversation
    B. Block the bully's messages
    C. Ignore the bully
    D. Tell an adult
    E. All of the above

3.How can you find out if there is any personal information about you on the Internet?
    A. Ask a stranger
    B. Ask your parents
    C. Google yourself
    D. Call the police
    E. You can't find out, it is impossible

4. You should call the police if which of the following happens to you online:
    A. Someone threatens your safety
    B. Someone threatens your family's safety
    C. Someone tries to set up a face-to-face meeting with you
    D. Someone pressures you to do something illegal
    E. All of the above

5. Which of the following is the best way to protect your personal information while online?
    A. Set your MySpace and Facebook page to "private"
    B. Only tell your friends your passwords
    C. Don't ever put any personal information online

D. Only post private information on web sites that you trust
E. All of the above

6. A person can do the following when he or she feels like bullying others:
   A. Turn off the computer
   B. Journal/write the situation down on paper
   C. Call a friend for emotional support
   D. All of the above
   E. None of the above

7. What are some ways that digital evidence of cyberbullying can be collected and used to get an adult to discipline the bully?
   A. Instant messaging logs
   B. Screenshots taken of offending web pages
   C. Tracing the identity of an email sender
   D. Analyzing computer hard drives and flash memory cards in phones and cameras
   E. All of the above

8. Which of the following would be the most secure password for an online site?
   A. "computer"
   B. "cow"
   C. "$trawb3rry"
   D. "5555555555"
   E. "football37"

9. What should you do if you see someone else being cyberbullied?
   A. Report it to an adult
   B. Support the person who is being bullied
   C. Stand up to the bully
   D. Save any digital evidence (make screenshots, printouts, etc.)
   E. All of the above

10. Which of the following should you do if you are cyberbullied:
   A. Think that it is your fault
   B. Keep it to yourself
   C. Try to resolve it yourself, and then tell an adult if you are unsuccessful
   D. Skip school
   E. Fight back

Appendix G

Clover Unified School District Meeting Request Letter

Gwenis Laura, Superintendent
Clover Unified School District
[street address]
[City, State, Zip code]

Dear Superintendent Laura,

As a student in Loyola Marymount University's Ed.D. in Educational Leadership for Social Justice, and as a Clover City resident, I have had the pleasure of following your work as the Superintendent of the Clover Unified School District. I have been consistently impressed with your leadership style and the passion for education that influences your work.

I am writing to request a meeting with you to discuss the possibility of conducting my doctoral research in Clover Middle-school. My research focuses on changing middle-school students' attitudes toward, and perceptions of, cyberbullying and research shows that this age group is most susceptible to cyber harassment. My proposed research complements nicely the district-wide anti-bullying initiative introduced by you in 2008 and will help to further illuminate the problem of cyberbullying in Clover City schools.

As you know, cyberbullying is an insidious reality today's students face. By constructing a multimedia WebQuest, an online learning exercise that asks students to use the Internet as a resource for learning, I hope to affect change in students' attitudes toward online and digital harassment with the intention of changing their cyberbullying behaviors.

My research can be conducted on-site at Clover Middle-school and will require the use of the school's computer laboratory. The intervention includes an anonymous, online pre-test survey followed by individual review of the WebQuest. Following that, the students will complete a post-test survey that asks nearly identical questions.

I am happy to discuss the details of this study with you when we meet. If you have any questions please do not hesitate to contact me. I can be reached by phone at [*phone number*] or by email at [*email address*].

Gratefully,

Beth Brewer

Appendix H

Parent/Guardian Consent Form and Student Assent Form

Parent/Guardian consent wording

Loyola Marymount University (LMU)

Topic: To what extent can a multimedia WebQuest change students' attitudes toward, and perceptions of, cyberbullying?

1) I hereby authorize Elizabeth Brewer, M.A., Ed.D. candidate to include my child/ward in the following research study: To what extent can a multimedia WebQuest change students' attitudes toward, and perceptions of, cyberbullying?

2) I have been asked to participate in a research project which is designed to examine the following question: To what extent can a multimedia WebQuest change students' attitudes toward, and perceptions of, cyberbullying? The study will last from approximately February 20, 2010 through May 31, 2010.

3) It has been explained to me that the reason for my inclusion in this project is because I am a parent/guardian of a child at Clover Middle-school.

4) I understand that if I am a participant, I will participate in the following procedures:

   Instruments: Two online survey instruments will be used during the study – one as a pretest and one as a post-test. They will be administered through Qualtrics.
   - The pretest will survey participants' demographic components and will measure participants' beliefs and attitudes about cyber bullying. Responses will be based on Likert scale measurement, yes and no questions, and ranking questions.
   - The post-test will be composed of items measuring beliefs and attitudes about cyber bullying and about the treatment itself. Responses will be based on Likert scale measurement, yes and no questions, and ranking questions.
   - The two instruments will be identical for all participants and responses to all items will be required.
   - Participants will be asked to select and include a unique identifier which will be entered in the pre-test and post-test to allow the researcher to match up collected data over the two instruments.
   - The treatment participants will go through includes a WebQuest which will used mixed media to present information about cyber bullying and electronic assault. Participants will be asked to navigate through several pages which present information about cyber bullying selected by the researchers. There will be a task for the students to consider while going through the WebQuest.

5) The investigator will write a dissertation paper on the data collected through pre and post-tests, as well as research of scholarly literature, books, media accounts, and artifacts about the effects of and attitudes towards cyberbullying. The study will be submitted as partial requirements of LMU's Ed.D. in Educational Leadership for Social Justice.

6) These procedures have been explained to me by Elizabeth Brewer, M. A., Ed.D. candidate, and researcher.

7) I agree that the anonymous surveys and findings shall be retained for research and/or teaching purposes for an indefinite time.

8) I understand that the study described above may involve the following risks and/or discomforts: There are no physical or emotional risks from participation in this study. Should a participant experience emotional discomfort, he/she will be referred to a counselor [to be determined].

9) I understand that I will receive no direct benefit from my participation in this study; however, the possible benefits to humanity include a more thorough understanding of the effect of cyberbullying on students and intervention techniques to address the problem.

10) I understand that Elizabeth Brewer, who can be reached at [*email address*] or [*phone number*], will answer any questions I may have at any time concerning details of the procedures performed as part of this study.

11) If the study design or the use of the information is to be changed, I will be so informed and my consent re-obtained.

12) I understand that I have the right to refuse to participate in, or to withdraw from this research at any time without prejudice to my child/ward's experiences in school (e.g.,, grades).

13) I understand that circumstances may arise which might cause the investigator to terminate my participation before the completion of the study.

14) I understand that no information that identifies me will be released without my separate consent except as specifically required by law.

15) I understand that I have the right to refuse to answer any question that I may not wish to answer.

16) Some of the information with which I will be provided may be ambiguous, or inaccurate. However, I will be informed of any inaccuracies following my participation in this study.

17) I understand that I will receive no remuneration for my participation in this study.

18) I understand that if I have any further questions, comments, or concerns about the study or the informed consent process, I may contact John Carfora, Ed.D. Chair, Institutional Review Board, 1 LMU Drive, Suite 3000, Loyola Marymount University, Los Angeles CA 90045-2659 (310) 338-4599, John.Carfora@lmu.edu.

19) In signing this consent form, I acknowledge receipt of a copy of the form, and a copy of the "Subject's Bill of Rights".

20) In signing this consent form, I acknowledge receipt of a copy of this form.

_____

Signature

_____

Printed Name

_____

Date

Student assent wording

Loyola Marymount University (LMU)

Dear students,

My name is Beth Brewer and I'm a graduate student at Loyola Marymount University. I work with teachers and am doing a research study that I'd like you to participate in this year. A research study is a way of learning new information about how to teach more effectively and make learning more fun. My study will help me understand what you know and think about cyberbullying.

You're probably asking, why me? I want you to participate in this study because you're a middle-school student in Clover City. During the study, you'll come to the computer lab, take a brief questionnaire that asks you basic background information about your age, grade level, the types of grades you normally earn, how much you use the computer, and whether or not you've had experiences with bullying or cyberbullying. Then you'll go through a WebQuest, a website that walks you through a learning process, where you'll watch some videos, read a couple of stories, and take a short quiz. Finally, you'll answer questions on another questionnaire.

This study is completely anonymous and your responses cannot be traced back to you. Choosing to participate (or not participate) will not affect your grades at all and there are no consequences involved. In other words, if you choose to participate but want to stop early, you can do so without a penalty.

If you would like to participate in this study, you will need to print, sign, and date this form. Don't forget to have your parents/guardians sign it too because they need to give their permission for you to participate.

If you have any questions, please feel free to ask me!

Thanks!
Ms. Brewer

I, _____, want to be part of this study.
print your name here

(your signature) _____ (date) _____

(parent/guardian signature) _____ (date) _____

Appendix I

Pre-test Assent Wording and Questionnaire

The following text will appear on the first page of the online pre-test survey:
My name is Beth Brewer and I'm a graduate student at Loyola Marymount University. I work with teachers and am doing a research study that I'd like you to participate in this year. A research study is a way of learning new information about how to teach more effectively and make learning more fun. My study will help me understand what you know and think about cyberbullying.

You're probably asking, why me? I want you to participate in this study because you're a middle-school student in Clover City. During the study, you'll come to the computer lab, take a brief questionnaire that asks you basic background information about your age, grade level, the types of grades you normally earn, how much you use the computer, and whether or not you've had experiences with bullying or cyberbullying. Then you'll go through a WebQuest, a website that walks you through a learning process, where you'll watch some videos, read a couple of stories, and take a short quiz. Finally, you'll answer questions on another questionnaire.

This study is completely anonymous and your responses cannot be traced back to you. Choosing to participate (or not participate) will not affect your grades at all and there are no consequences involved. In other words, if you choose to participate but want to stop early, you can do so without a penalty.

To indicate you would like to participate in this study, please click on the word "next" that appears below.

Instructions that will be included on the first page of the survey:
The survey measures focus on your knowledge of/experiences with cyberbullying issues through a series of questions. Please answer these questions as accurately and honestly as possible.

Question bank one – Demographic Information

Q#	Questions	Responses	Coding
1.	How old are you?	10 years old or younger	(1)
		11 years old	(2)
		12 years old	(3)
		13 years old	(4)
		14 years old or older	(5)
2.	What is your sex?	Male	(1)

		Female	(2)
3.	What grade are you in?	5th	(1)
		6th	(2)
		7th	(3)
		8th	(4)
		Other (response field – number entry only)	
4.	What is your ethnic background?	American Indian/Eskimo	(1)
		Asian/Pacific Islander	(2)
		Hispanic/Latino(a)	(3)
		African-American	(4)
		Caucasian	(5)
		Other	(6)
5.	What types of grades do you normally earn?	Ds and lower	(1)
		Cs & Ds	(2)
		Mainly Cs	(3)
		Bs & Cs	(4)
		Mainly Bs	(5)
		As & Bs	(6)
		Mainly As	(7)

Question bank two – Background information (computer use/bullying and cyberbullying exp)

6.	Do you have a cell phone?	No* (skip logic – to #8)	(1)
		Yes* (skip logic – to #7)	(2)
7.	Which of the following functions have you used on your cell phone?	Text messaging (SMS)	(1)
		Picture or video messaging (MMS)	(2)
		Instant messaging (e.g., AIM, BBM)	(3)
		Email	(4)
		Web browsing	(5)
8.	Do you have a computer with reliable Internet access at home?	No	(1)
		Yes	(2)

9. How often do you access the Internet from the following locations?

	Never (1)	A few times a year (2)	A few times a month	A few times a week	Everyday (5)

	(3)	(4)
A personal computer or laptop at home		
Your laptop away from home		
A family member's house		
A non-family member's house		
School		
The public library		
An after-school program (e.g.,, arts, sports, scouts, etc.)		
Tutoring		

10. How much time during a typical **<u>weekday</u>** (including before, during, or after school) do you spend online doing the following activities?

	0 hours	Less than 1 hour	1-2 hours	3-4 hours	5-6 hours	More than 6 hours
Instant messaging/chatting						
Checking your email						
Surfing the web						
Using social networking sites (e.g.,, Facebook, MySpace, etc.)						
Doing homework						
Gaming						

11. How much time during a typical **<u>Saturday or Sunday</u>** do you spend online doing the following activities?

	0 hours	Less than 1 hour	1-2 hours	3-4 hours	5-6 hours	More than 6 hours
Instant messaging/chatting						
Checking your email						
Surfing the web						
Using social networking sites (e.g.,, Facebook, MySpace, etc.)						
Doing homework						
Gaming						

12.	Do you know what bullying is?	Definitely not	(1)
		I'm not sure.	(2)
		Definitely yes.	(3)
13.	Have you ever been bullied?	No* (skip logic – to #17)	(1)
		Yes* (skip logic – to #14)	(2)
14.	How were you bullied? (mark all that apply)	Teasing or name calling	(1)
		Gossip or rumors	(2)
		Hitting, slapping, or pushing	(3)
		Being excluded from activities or groups	(4)

15.	How frequently were you bullied in the last year?	A few times Once a month 2-3 times a month Once a week 2-3 times a week Everyday	(1) (2) (3) (4) (5) (6)
16.	When you were bullied, did you…(mark all that apply)	Retaliate or fight back Ignore it Tell a friend Tell an adult (e.g.,, a teacher, parent/guardian, coach, etc.)	(1) (2) (3) (4)
17.	Have you ever bullied someone?	No* (skip logic – to #19) Yes* (skip logic – to #18)	(1) (2)
18.	How did you bully that person?	Teasing or name calling Gossip or rumors Hitting, slapping, or pushing Being excluded from activities or groups	(1) (2) (3) (4)
19.	Do you know what cyberbullying is?	Definitely not I'm not sure. Definitely yes.	(1) (2) (3)

20. To the best of your ability, define cyberbullying in your own words (150 characters maximum)

21.	Have you ever been cyberbullied?	No* (skip logic – to #25) Yes* (skip logic – to #22)	(1) (2)
22.	How were you cyberbullied? (Mark all that apply)	Harassing text messages Mean emails Gossip or rumors posted online Mean comments in social networking sites (e.g.,, Facebook, MySpace, etc.) Someone pretending to be you online	(1) (2) (3) (4) (5)

		Flaming (angry or rude language directed toward you)	(6)
		Mean instant messages	(7)
23.	How often were you cyberbullied in the last year?	A few times	(1)
		Once a month	(2)
		2-3 times a month	(3)
		Once a week	(4)
		2-3 times a week	(5)
		Everyday	(6)
24.	When you were cyberbullied, did you…(mark all that apply)	Retaliate or fight back	(1)
		Ignore it	(2)
		Tell a friend	(3)
		Tell an adult (e.g.,, a teacher, parent/guardian, coach, etc.)	(4)
25.	Have you ever cyberbullied someone?	No* (skip logic – to #27)	(1)
		Yes* (skip logic – to #26)	(2)
26.	How did you cyberbully someone?	Harassing text messages	(1)
		Mean emails	(2)
		Gossip or rumors posted online	(3)
		Mean comments in social networking sites (e.g.,, Facebook, MySpace, etc.)	(4)
		Someone pretending to be you online	(5)
		Flaming (angry or rude language directed toward you)	(6)
		Mean instant messages	(7)

Question bank three – Attitudes and Perceptions

27.	I feel close to people at this school.	Strongly disagree	(1)
		Disagree	(2)
		Neutral	(3)
		Agree	(4)
		Strongly agree	(5)
28.	I am happy to be at this school.	Strongly disagree	(1)
		Disagree	(2)
		Neutral	(3)
		Agree	(4)
		Strongly agree	(5)

29.	The teachers at this school treat students fairly.	Strongly disagree Disagree Neutral Agree Strongly agree	(1) (2) (3) (4) (5)
30.	I feel safe in my school.	Strongly disagree Disagree Neutral Agree Strongly agree	(1) (2) (3) (4) (5)
31.	I feel like the adults in school help keep us safe.	Strongly disagree Disagree Neutral Agree Strongly agree	(1) (2) (3) (4) (5)
32.	Cyberbullying is a problem at my school.	Strongly disagree Disagree Neutral Agree Strongly agree	(1) (2) (3) (4) (5)
33.	Kids are negatively affected by cyberbullying.	Strongly disagree Disagree Neutral Agree Strongly agree	(1) (2) (3) (4) (5)
34.	I am afraid of being cyberbullied.	Strongly disagree Disagree Neutral Agree Strongly agree	(1) (2) (3) (4) (5)
35.	It's OK to send mean emails, IMs, or text messages.	Strongly disagree Disagree Neutral Agree Strongly agree	(1) (2) (3) (4) (5)
36.	I can be anonymous on the Internet.	Strongly disagree Disagree	(1) (2)

		Neutral	(3)
		Agree	(4)
		Strongly agree	(5)
37.	Cyberbullying is…	Worse than physical bullying	(1)
		The same as physical bullying	(2)
		Better than physical bullying	(3)

Question bank four – Behaviors

38.	I would rather cyberbully someone than	Talk about a problem face-to-face	(1)
		Bully the person face-to-face	(2)
		Tell an adult	(3)
		I would never cyberbully	(4)
39.	We should talk about cyberbullying in class.	Strongly disagree	(1)
		Disagree	(2)
		Neutral	(3)
		Agree	(4)
		Strongly agree	(5)
40.	My parents should learn about cyberbullying.	Strongly disagree	(1)
		Disagree	(2)
		Neutral	(3)
		Agree	(4)
		Strongly agree	(5)
41.	Students who cyberbully others should be punished.	Strongly disagree	(1)
		Disagree	(2)
		Neutral	(3)
		Agree	(4)
		Strongly agree	(5)

Appendix J

Post-test Questionnaire

Instructions that will be included on the first page of the survey:
The survey measures focus on your knowledge of/experiences with cyberbullying issues through a series of questions. Please answer these questions as accurately and honestly as possible.

Question bank one – Demographic Information

Q#	Questions	Responses	Coding
1.	How old are you?	10 years old or younger	(1)
		11 years old	(2)
		12 years old	(3)
		13 years old	(4)
		14 years old or older	(5)
2.	What is your sex?	Male	(1)
		Female	(2)
3.	What grade are you in?	5^{th}	(1)
		6^{th}	(2)
		7^{th}	(3)
		8^{th}	(4)
		Other (response field – number entry only)	
4.	What is your ethnic background?	American Indian/Eskimo	(1)
		Asian/Pacific Islander	(2)
		Hispanic/Latino(a)	(3)
		African-American	(4)
		Caucasian	(5)
		Other	(6)
5.	What types of grades do you normally earn?	Ds and lower	(1)
		Cs & Ds	(2)
		Mainly Cs	(3)
		Bs & Cs	(4)
		Mainly Bs	(5)
		As & Bs	(6)
		Mainly As	(7)

Question bank two – Background information (computer use/bullying and cyberbullying exp)

6.	Do you know what bullying is?	Definitely not I'm not sure. Definitely yes.	(1) (2) (3)
7.	Have you ever been bullied?	No* (skip logic – to #11) Yes* (skip logic – to #8)	(1) (2)
8.	How were you bullied? (mark all that apply)	Teasing or name calling Gossip or rumors Hitting, slapping, or pushing Being excluded from activities or groups	(1) (2) (3) (4)
9.	How frequently were you bullied in the last year?	A few times Once a month 2-3 times a month Once a week 2-3 times a week Everyday	(1) (2) (3) (4) (5) (6)
10.	When you were bullied, did you…(mark all that apply)	Retaliate or fight back Ignore it Tell a friend Tell an adult (e.g.,, a teacher, parent/guardian, coach, etc.)	(1) (2) (3) (4)
11.	Have you ever bullied someone?	No* (skip logic – to #13) Yes* (skip logic – to #12)	(1) (2)
12.	How did you bully that person?	Teasing or name calling Gossip or rumors Hitting, slapping, or pushing Being excluded from activities or groups	(1) (2) (3) (4)
13.	Do you know what cyberbullying is?	Definitely not I'm not sure. Definitely yes.	(1) (2) (3)

14. To the best of your ability, define cyberbullying in your own words (150 characters maximum)

15.	Have you ever been cyberbullied?	No* (skip logic – to #20) Yes* (skip logic – to #16)	(1) (2)
16.	How were you cyberbullied? (Mark all that apply)	Harassing text messages Mean emails Gossip or rumors posted online Mean comments in social networking sites (e.g.,, Facebook, MySpace, etc.) Someone pretending to be you online Flaming (angry or rude language directed toward you) Mean instant messages	(1) (2) (3) (4) (5) (6) (7)
17.	How often were you cyberbullied in the last year?	A few times Once a month 2-3 times a month Once a week 2-3 times a week Everyday	(1) (2) (3) (4) (5) (6)
18.	When you were cyberbullied, did you…(mark all that apply)	Retaliate or fight back Ignore it Tell a friend Tell an adult (e.g.,, a teacher, parent/guardian, coach, etc.)	(1) (2) (3) (4)
19.	Have you ever cyberbullied someone?	No* (skip logic – to #21) Yes* (skip logic – to #20)	(1) (2)
20.	How did you cyberbully someone?	Harassing text messages Mean emails Gossip or rumors posted online Mean comments in social networking sites (e.g.,, Facebook, MySpace, etc.) Someone pretending to be you online Flaming (angry or rude language directed toward you) Mean instant messages	(1) (2) (3) (4) (5) (6) (7)

Question bank three – Attitudes and Perceptions

21.	I feel close to people at this school.	Strongly disagree	(1)
		Disagree	(2)
		Neutral	(3)
		Agree	(4)
		Strongly agree	(5)
22.	I am happy to be at this school.	Strongly disagree	(1)
		Disagree	(2)
		Neutral	(3)
		Agree	(4)
		Strongly agree	(5)
23.	The teachers at this school treat students fairly.	Strongly disagree	(1)
		Disagree	(2)
		Neutral	(3)
		Agree	(4)
		Strongly agree	(5)
24.	I feel safe in my school.	Strongly disagree	(1)
		Disagree	(2)
		Neutral	(3)
		Agree	(4)
		Strongly agree	(5)
25.	I feel like the adults in school help keep us safe.	Strongly disagree	(1)
		Disagree	(2)
		Neutral	(3)
		Agree	(4)
		Strongly agree	(5)
26.	Cyberbullying is a problem at my school.	Strongly disagree	(1)
		Disagree	(2)
		Neutral	(3)
		Agree	(4)
		Strongly agree	(5)
27.	Kids are negatively affected by cyberbullying.	Strongly disagree	(1)
		Disagree	(2)
		Neutral	(3)
		Agree	(4)
		Strongly agree	(5)
28.	I am afraid of being cyberbullied.	Strongly disagree	(1)

		Disagree	(2)
		Neutral	(3)
		Agree	(4)
		Strongly agree	(5)
29.	It's OK to send mean emails, IMs, or text messages.	Strongly disagree	(1)
		Disagree	(2)
		Neutral	(3)
		Agree	(4)
		Strongly agree	(5)
30.	I can be anonymous on the Internet.	Strongly disagree	(1)
		Disagree	(2)
		Neutral	(3)
		Agree	(4)
		Strongly agree	(5)
31.	Cyberbullying is…	Worse than physical bullying	(1)
		The same as physical bullying	(2)
		Better than physical bullying	(3)

Question bank four – Behaviors

32.	I would rather cyberbully someone than	Talk about a problem face-to-face	(1)
		Bully the person face-to-face	(2)
		Tell an adult	(3)
		I would never cyberbully	(4)
33.	We should talk about cyberbullying in class.	Strongly disagree	(1)
		Disagree	(2)
		Neutral	(3)
		Agree	(4)
		Strongly agree	(5)
34.	My parents should learn about cyberbullying.	Strongly disagree	(1)
		Disagree	(2)
		Neutral	(3)
		Agree	(4)
		Strongly agree	(5)
35.	Students who cyberbully others should be punished.	Strongly disagree	(1)
		Disagree	(2)

Neutral	(3)
Agree	(4)
Strongly agree	(5)

36. Please enter your score from the cyberbullying quiz you took earlier. ____

Appendix K

Intervention Protocol and Script

Script:

Hi everyone. Thanks for coming today to be part of this research project. My name is Ms. Brewer and I'm really excited to see all of you! I'm going to be walking you through the process of this project today, so if you have any questions about the computers, the information you read, or anything at all related to the project, please come and see me. I'm happy to help!!! I'm going to explain the process to you now, and I'll answer any questions you have once we're done. Sound good?

[Allow time for questions.]

Great..let's get started!

As you came in the door, you were asked to pull a number from the box. Did everyone do that?

[Wait for responses. If anyone didn't, send him/her back to the door to draw a number]

Ok, good. Now, you'll notice that the number has four digits, for example 0192. This number is what allows this process to be completely anonymous. You're going to be taking two online questionnaires today and you'll be asked to enter that number, exactly as it appears on that card, at the beginning of each questionnaire. When you do that, please be careful and be sure you do it as accurately as possible…the number should be entered the same way both times!!

Today you'll be answering questions in one questionnaire, then you'll be going through a WebQuest where you'll read about cyberbullying, and then you'll answer questions in a second questionnaire. Please respond as honestly as you can and remember that these responses are completely anonymous. Your answers will help me in planning future educational experiences for kids your age.

Ok, the first thing you'll do is open Firefox *[Allow time for this to occur.]*

Go to the following website *[the URL for the WebQuest will be read aloud at this point. It will also be written on the board and will printed on the card with the students' unique identification numbers.1-2 minutes will be allowed for everyone to navigate to the site.]*

Is anyone having trouble getting there? *[Wait for responses and respond.]*

You'll see a link at the top of the page…once you click on that link, you'll be taken to the first questionnaire. Please read the language on the first page. If you click ok there, you're telling me again, like the form you signed, that you agree to be part of the study. Even though you're agreeing, you have the right to stop participating at any time. You can just raise your hand and let me know and you can stop then.

If you do choose to participate please remember to answer the questions as honestly as you can. Please read them carefully.

After you finish the first questionnaire, you'll be automatically redirected to the WebQuest. Follow the instructions there and then click on the link on the Wrap up page to take the second questionnaire. The questions will seem very similar, but answer them as well as you can about how you feel and what you think in that moment.

Are there any questions? *[Pause for questions]*

Fantastic – let's get started. Click on the SURVEY link now!

Script for after the WebQuest and questionnaires:

I'd like to thank you all, once again, for coming today. I really appreciate your time and energy and I look forward to reading your thoughtful responses. Your comments will help with planning in the future.

If you have any questions, please feel free to ask me. If, while doing this, you thought of anything you'd like to talk to a counselor about, you can see *[Insert name here once determined.]*

THANKS!

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