3-20-2015

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Sarah Nash Bumpas
Bellarmine University, sarahrnash@yahoo.com

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By Sarah Nash Bumpas

B.A. in History, June 2000, Washington and Lee University
M.M.C. in Journalism, May 2002, University of South Carolina
M.A. in Instructional Technology and Media, February 2007, Columbia University

A Dissertation Submitted to

The Faculty of
The Annsley Frazier Thornton School of Education
Bellarmine University
In partial fulfillment of the requirements
For the degree of Doctor of Philosophy in Education and Social Change

March 20, 2015

Dissertation directed by

Dr. Kathleen S. Cooter
Professor Annsley Frazer Thornton School of Education

BELLARMINE UNIVERSITY

The Annsley Frazier Thornton School of Education of Bellarmine University certifies that Sarah Nash Bumpas has successfully defended her dissertation for the degree of Doctor of Philosophy in Education and Social Change as of March 20, 2015. This is the final and approved form of the dissertation.

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Sarah Nash Bumpas

Dissertation Research Committee:

Dr. Kathleen S. Cooter, Professor of Education, Annsley Frazier Thornton School of Education of Bellarmine University
Dissertation Director

Dr. Grant Smith, Assistant Professor of Educational Research, Annsley Frazier Thornton School of Education of Bellarmine University
Committee Member

Dr. Shawn Apostel, Assistant Professor of Communication and Instructional Technology Specialist, Bellarmine University School of Communication
Committee Member

Acknowledgements

Thank you to Dr. Robert Cooter and Dr. Kathleen Cooter for establishing the Ph.D. for Education and Social Change degree at Bellarmine that allowed me to pursue my educational goals. I am very appreciative of Dr. Kathleen Cooter, Dr. Grant Smith, and Dr. Shawn Apostel for their thorough feedback and guidance as members of my dissertation committee. Thank you to Dr. Fred Rhodes whose class directed me toward this dissertation topic, Dr. William Neace and Dr. Elizabeth Dinkins for their rigorous classes and copious feedback, and Dr. Stephen Daeschner whose humor and enthusiasm were well needed when completing coursework. I would be remiss not to recognize all the members of Cohort I to whom I will always be bonded.

Thank you to everyone at Jefferson County Public Schools who helped me accomplish the study including administrators, principals, assistant principals, and teachers especially my supportive supervisor and cheerleader Dr. Sharis Lattimore. Extreme thanks go to Rachel Klein, Kate Stiglitz, and Emily Ramsey. I could not have completed this dissertation without their commitment to the project.

My deepest appreciation is to my family. My parents, Mary and Richard Nash have supported me in decades of education without question. A special gratitude goes to my father who always wanted me to obtain a Ph.D. but whose death prevented him from being present for my dissertation defense by five months. And finally, I thank my husband, Alex Bumpas for his support and patience through the last four years. He enabled me to give birth to two children and complete this degree at the same time without ever once complaining.

Abstract of the Dissertation

Repeated studies show that cyberbullying is pervasive amongst adolescents. Cyberbullying can lead to self-harm, depression, and suicidal thoughts. Educators are called to intervene in educating students about cyberbullying through research and federal legislation. However, there is little research examining whether this education is taking place or having an effect.

This study investigates the relationship between the incidences of cyberbullying victimization and offending over time and the direct cyberbullying instruction and activities facilitated by classroom teachers. The study took place amongst sixth graders in Jefferson County Public Schools, a large urban school district located in northern Kentucky. Students in one school were assessed on multiple measures of cyberbullying incidences (n=78). In the other school, students (n=45) were assessed on cyberbullying incidences, given 135 minutes of cyberbullying instruction, assessed again, and assessed three months later. The lessons were provided by Common Sense Media.

Wilcoxon Signed-rank tests and Mann-Whitney tests were conducted using data collected from the responses on the surveys. There was also qualitative evidence gathered such as interviews and anecdotes from teachers to assess the fidelity of implementation. This study indicates that cyberbullying intervention can have a significant effect on students' tendencies to be a cyberbullying victim but not in being a cyberbullying offender.

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Chapter 1: Introduction

Statement of the Problem

Recent studies (Hinduja & Patchin, 2012; Kowalski, Biumetti, Schroeder, & Lattaner, 2014; Popovic-Citic, Djuric, & Cvetkovic, 2011; Slonje & Smith, 2008; Smith et al., 2008) suggest that cyberbullying is pervasive and ranks as one of the most common forms of harassment among adolescents. Many studies indicate that bullying and cyberbullying can lead to self-harm and suicidal ideation (Conn, 2010; Hay & Meldrum, 2010; Hinduja & Patchin, 2010; Klomek, Marrocco, Kleinman, Schonfeld, & Gould, 2007). Research suggests that educators must intervene in educating students about cyberbullying (Hoff & Mitchell, 2008; Popovic-Citic et al., 2011). The federal government also calls for schools to instruct students in digital citizenship (Senate Resolution 1492, 2008). Schools require research on effective interventions for cyberbullying behaviors.

Digital citizenship is a complex set of learnings about expected behavior in the digital world. An area in need of study is whether direct instruction of aspects of digital citizenship curricula involving cyberbullying prevention has an effect on students' participation in it. Research (Hinduja & Patchin, 2009; Stauffer, Heath, Coyne, & Ferrin, 2012; Wolfer, Schultze-Krumbholz, Zaborscak, Jakel, & Gobel, 2014) states that cyberbullying prevention programs have yet to receive solid empirical support.

There is a noticeable paucity of research on cyberbullying and victimization despite the high level of concern associated with the topic (Hinduja & Patchin, 2012; Kowalski et al., 2014; Patchin & Hinduja, 2006; Patchin & Hinduja, 2013; Schneider, O'Donnell, Stueve, & Coulter, 2012). There is also little empirical evidence on whether existing school based anti-bullying programs are effective in targeting cyberbullying.

Very few studies exist assessing the relationship between digital citizenship instruction and the frequency of incidences (Hinduja & Patchin, 2009; Lee, Zi-Pei, Svanstrom, & Dalal, 2012; Patchin & Hinduja, 2006). These researchers call for studies with larger numbers of students, larger experimental times, and in different countries. The research that does exist has been criticized for being highly fragmented, lacking theoretical focus (Kowalski et al., 2014) and for lacking consistent definitions of cyberbullying and operational terms (Patchin & Hinduja, 2013).

Four in ten teenagers report that they have experienced some form of cyberbullying, according to a 2006 study commissioned by the National Crime Prevention Council. Additionally, children who are cyberbullied are more likely to induce self-harm or contemplate suicide (Conn, 2010; Hay & Meldrum, 2010; Hinduja & Patchin, 2010; Klomek et al., 2007). Klomek et al. (2007) found a relationship between victimization, depression and suicide when surveying 2,343 adolescents. In January 2010, The National Computer Security Alliance surveyed teachers, administrators, and technology coordinators about online safety and education attitudes and practices. Based on the results of the survey, they concluded that America's adolescents are not receiving adequate instruction to use and navigate digital technology in a safe, secure, and responsible manner (The National Computer Security Alliance, 2011). The survey findings emphasize the importance of educator knowledge and intentional instructional intervention regarding cyberbullying and its effects (Hoff & Mitchell, 2008; Popovic-Citic et al., 2011). Hoff & Mitchell (2008) found that students are ill equipped to handle cyberbullying and schools are not providing adequate education. Popovic-Citic et al.

(2011) state that students need to be educated about how to handle cyberbullying incidents and avoidance strategies.

Purpose of the Study

Research is needed to determine whether digital citizenship instruction decreases bullying in the digital world. This study investigates the relationship between instruction and the incidences of cyberbullying over time through direct instruction and activities facilitated by classroom teachers. It is anticipated that the study will yield insights that inform the link between instruction and cyberbullying incidences. If the research yields positive results as defined by fewer incidences of cyberbullying as both the victim and offender, teachers may be more likely to implement the instruction. More importantly, state educational legislative bodies need research evidence on cyberbullying prevention to inform legislative policy regarding digital citizenship instruction in schools.

Conceptual Framework

Whorf argued that language shapes our perception and thinking (Whorf & Carroll, 1984). McLuhan argued that it is not just linguistics but all media that do this (McLuhan & Fiore, 2001). The theory that media has particular cognitive consequences related to technology is referred to as Media Determinism (McLuhan & Fiore, 2001). Media Determinism is the thought that our use of a particular medium may have profound influences on our framework. The use of technology influences and expands behavior in a social context such as with cyberbullying **(**Brighi, Guarini, Melotti, Galli, & Genta, 2012). Cyberbullying is a behavior which might otherwise not occur in a face-to-face interaction. The technology used has social consequences on the message.

McLuhan predicted that media (and the Internet) would seep into the everyday facets of our lives. On the Internet, there are no gatekeepers, so children are subject to the chaos of the message on the Internet all the time. The dangers that used to take place in the school or on the playground have been pushed to the margins and there is a lack of protection or management for the students. Adults and schools are still approaching technology with the old ways of thinking and students are not prepared. Society must determine how to protect students on the Internet.

Research Questions and Hypothesis

The objective of this dissertation is to investigate the current incidences and the impact an intervention has on the incidence. The research questions guiding the study are: (1) Does instruction about the dangers of cyberbullying have an effect on the victims and offenders of cyberbullying? (2) Does direct instruction change the reported incidence of cyberbullying victimization and offending over time? (3) Is the change in cyberbullying victimization and offending over time dependent on the intervention?

It is hypothesized that students who are given digital citizenship instruction will exhibit fewer incidences of cyberbullying victimization and offending than students who receive no instruction. It is also hypothesized that the reduced incidence of cyberbullying resulting from the intervention of cyberbullying will be sustained over a specified time period.

Methodology and Design Description

The study takes place in Jefferson County Public Schools, a large urban school district located in northern Kentucky. Sixth grade students attending a middle school where approximately 49.6% of students receive free-or reduced-price lunch are in the

experimental group. Three female teachers will conduct the cyberbullying lessons to three homerooms of approximately 30 students. Every student in the three homerooms will be given the permission form and one week to return it. Students who return the appropriate permission forms will be assessed on multiple measures of cyberbullying incidences.

The control group is made up of students at another middle school in the same district where approximately 58.4% of students receive free-or reduced-price lunch. Six female teachers and one male teacher will assess students who return permission forms on multiple measures of cyberbullying incidences.

The cyberbullying lessons are taken from Common Sense Media middle school lessons designed to address cyberbullying. (See Appendix A.) The lessons are entitled "Cyberbullying: Be Upstanding," "The Reality of Digital Drama," and "Cyberbullying: Crossing the Line." These lessons are used, because Common Sense Media is the suggested resource for students in this school district (Jefferson County Public Schools, 2015).

The intervention in this study is the direct instruction and activities facilitated by the teacher. Students in the experimental group (45) will receive 135 minutes of instruction about how to deal with a cyberbully and the consequences of cyberbullying. These lessons will be conducted during the homeroom time that is approximately 20 minutes each morning equating to approximately 135 minutes of instruction. Students in the control group (78 students) will not receive this instruction and will do routine homeroom activities. To test the hypotheses that students given cyberbullying instruction will have less incidences of cyberbullying than students who receive no interventions,

Wilcoxon Signed-rank tests and Mann-Whitney tests will be conducted using data collected from the responses on the surveys. There will also be qualitative evidence gathered such as interviews and anecdotes from teachers to assess the fidelity of implementation. The cooperation of the teachers makes this study possible.

Assumptions and Limitations

It is assumed that Hinduja and Patchin's Cyberbullying and Online Aggression Survey Instrument (J.W. Patchin, personal communication, November 27, 2013) is an acceptable proxy for victimization and offending of cyberbullying. (See Appendix B.) The rationale for inclusion of the items in the survey is based on existing literature on cyberbullying. Berne et al. (2013) performed a systematic review on the structural and psychometric properties of cyberbullying instruments such as validity and reliability as well as the conceptual and definitional basis and found this instrument to be appropriate. (See Appendix C.) It is assumed that the experimental teachers will adhere to the prescribed lessons and reporting. The qualitative evidence will be analyzed to help determine the fidelity of implementation.

One limitation of the study is that the findings are limited to middle school learners in an urban area. Another limitation is the students' self-reported data. Fan et al. (2006) provided evidence that some adolescents give inaccurate or invalid responses on self-administered questionnaires. Responders are likely to report extreme levels of behavior either inaccurately or jokingly and this effect could affect the validity of research findings (Fan et al., 2006).

Summary

Through statistical evaluation of the effects of digital citizenship instruction, there will be an increased knowledge base regarding the efficacy of digital citizenship instruction. The results of this study will be useful in developing teacher instruction by providing much needed knowledge regarding the relationship between digital citizenship knowledge, the occurrences of victimization, and offense of cyberbullying.

Chapter 2: Review of the Literature

Introduction: Children and Cyberbullying

Because cyberbullying can occur at any time of the day, it is difficult for children to escape or avoid peer harassment (Patchin & Hinduja, 2006; Slonje & Smith, 2008). A single incident can repeatedly be seen by a large audience (Dempsey, Sulkowski, Nichols, & Storch, 2009; Patchin & Hinduja, 2006). The effects for the victim can be detrimental. Cyberbullying can lead to withdrawal from peers and school, emotional suffering, self-harm and suicidal thoughts (Conn, 2010; Hay & Meldrum, 2010; Hinduja & Patchin, 2010; Klomek et al., 2007).

Defining Cyberbullying

Cyberbullying is defined as harmful and intentional communication exploiting any form of technological device (Belsey, 2006; Patchin & Hinduja, 2006). Technology includes but is not limited to email, text messaging, instant messaging, chat rooms, cellular phones, camera phones, web sites, blogs and social networks such as MySpace or Facebook (Brown, Jackson, & Cassidy, 2006). Unique aspects of cyberbullying are the potential anonymity of bullies and the infinite audience. A single incident can be viewed repeatedly and continuously (Patchin & Hinduja, 2006). Cyberbullies are often anonymous and can reach a victim 24 hours a day seven days a week regardless of location. Unlike face-to-face bullying, cyberbullying can be anonymous, pervasive, and instantaneous (Slonje & Smith, 2008). Bullies have a sense of disinhibition and invincibility because the bully is faceless (Mason, 2008). Bullies can also reach a target in front of a larger audience (Dempsey et al., 2009).

Types of Cyberbullying

Willard (2006) authored one of the first books on the topic of cyberbullying. She defines different cyberbullying roles: entitlement, retaliators, and bystanders. Entitlement bullies are those who think they are superior to others and have the right to demean those they deem inferior. Retaliators are bullies who have been bullied by others and are reacting. Bystanders are those who encourage bullying by watching and not intervening. Willard (2006) also identified multiple forms of cyberbullying: flaming, harassment, denigration, impersonation, outing and trickery, exclusion, and cyber stalking. Flaming is sending inappropriate messages directed at one person or in a group online. Harassment occurs when a person repeatedly sends offensive messages. Denigration is sending untrue statements about someone to others. Some bullies might use impersonation by pretending to be someone else. Outing and trickery is posting material which was meant to be private or engaging in tricks to solicit embarrassment. Some bullies use exclusion to specifically leave a person out from a group. And, cyberstalking includes threats of harm or intimidation. Disinhibition is a major problem in cyberbullying. Willard (2006) identified five factors to disinhibition. Cyberbullies feel like they are virtually invisible; they cannot receive feedback from the pain they cause; social norms promote misbehavior; cyberbullies assume the role of an online personality; and cyberbullies are more comfortable online. Chibaro (2007) reported that cyberbullying was the most prevalent form of harassment among middle school students.

The majority of cyberbullying instances are anonymous, individual, and take place at home (Dehue, Bolman, & Vollink, 2008; Smith et al., 2008). Over one third of victims do not know the identity of their bully. Temporary email accounts and pay as you

go cell phones allow for bullies to remain anonymous (Patchin & Hinduja, 2006). The majority of cyberbullying is an extension of face-to-face bullying. Cyberbullies typically target children who they have previously bullied face-to-face (Juvonen & Gross, 2008; Ybarra & Mitchell, 2004).

Cyberbullies harass victims using computers and cellular phones (Patchin & Hinduja, 2006). Through these devices, bullies can send messages through email or instant messaging; post obscene, insulting, and slanderous messages; develop websites to promote defamatory content; or use social networking sites to combine features of harassment (Patchin & Hinduja, 2006).

Pervasiveness of Cyberbullying

The reported prevalence of cyberbullying fluctuates because of operational definitions (see Table 1).

Table 1: Incidences of Cyberbullying

Researcher	Year	Sample Size	Age	Victim	Offender
Nansel et al.	2001	15,686	Grades 6-10	43%	NA
Patchin & Hinduja	2006	384	11-15	29%	11%
Wolak, Mitchell, & Finkelhor	2007	1500	10-17	57%	NA
Li	2007	177	Grade 7	25%	15%
Juvonen & Gross	2008	1154	12-17	72%	NA
Popovic-Citic, Djuric, & Cvetikovic	2011	387	11-15	20%	10%
Walker, Sockman, & Koehn	2011	140	Undergrads	34%	NA

A large national study on bullying was conducted in the United States (Nansel et al., 2001). In the study, 15,686 students in grades 6 through 10 reported on their bullying experiences. This study found that middle school youth report a higher frequency of

bullying than high school youth. Forty three percent of 13 to 17 year olds report that they have experienced some form of cyberbullying, according to a 2007 study commissioned by the National Crime Prevention Council. It is more common among females than males and most prevalent among 15 and 16 year olds, according to the study (Surdin, 2009).

Wolak, Mitchell, and Finkelhor (2007) conducted a telephone survey of 1500 Internet users ages 10 through 17 and found that 9% were harassed by their peers in the last year. Additionally 57% were harassed by people they met online and 43% were harassed by known peers.

Li (2007) investigated the nature and extent of students' cyberbullying by surveying 177 seventh grade students in Canada. It showed that over 25% of students had been cyberbullied and 15% had bullied others. Walker, Sockman, and Koehn (2011) surveyed undergraduate students and concluded that 54% had known someone who had been cyberbullied and 34% had been bullied themselves.

Patchin and Hinduja (2006) studied 384 Internet using adolescents about cyberbullying and found that 29% of youths reported they were victims of online bullying, 11% admitted to bullying others online and more than 47% witnessed online bullying. These researchers found that almost 60% were negatively affected by the online behavior at school, home or with friends.

Popovic-Citic et al. (2011) sampled 387 students 11 to 15-years-old. They collected data through a short survey about the frequency of technology use and three different kinds of cyberbullying: harassment, denigration, and outing. Harassment involves repeatedly sending cruel, offensive, rude or insulting messages. Denigration is the process of making derogatory statements about the target and disseminating them

electronically. Outing is the public display, posting, or forwarding of personal communication or images, especially sensitive personal information or images that are sexual in nature. They found that 10% of students said they had cyberbullied others online while 20% said they were victims of cyberbullying. Popovic-Citic et al. (2011) found that denigration and harassment were the most common types of cyberbullying.

Popovic-Citic et al. (2011) called for a comprehensive and proactive system in order to react to cyberbullying including technical/software, legal, psychological, educational, and social intervention measures. They recommend active engagement of children, parents, and teachers. One of the implications of their study is that systematic research and intervention strategies are needed in order to ensure that cyberbullying is recognized as an important social phenomenon.

Juvonen and Gross (2008) provided data from an anonymous survey with 1,154 students to determine the extent of online bullying for 12 to17 year olds. Five forms of bullying were reported: insults, threats, sharing embarrassing pictures, privacy violation, and password theft. And, 72% of respondents reported at least one online incident of bullying.

Causes of Cyberbullying

Ybarra and Mitchell (2004) studied characteristics of youth engaging in cyberbullying by surveying 1,501 males and females 10 to 17 years old and caregivers. Twelve percent were cyberbullies, four percent were cyber victims and three percent were both. They concluded that poor parent child relationship is an identifier of cyberbullies. They also found that cyberbullies engage in frequent daily Internet use,

which leads to more opportunities for cyberbullying. Victims have been found to use the Internet more than non-victims (Smith et al., 2008; Ybarra & Mitchell, 2004).

Berson, Berson, and Ferron (2002) also studied the correlation of potentially harmful cyber activities with how much parents supervise online activities and communicate about those activities. They found that when caregivers have an ongoing dialogue about cyber activities and monitor Internet use, there is a "decreased tendency to engage in cyber activities that lead to potential harm" (Berson et al., 2002, p. 51). Girls who had ongoing discussions and parent monitoring were less likely to have filled out a form that discloses personal information, had agreed to meet in person with someone they met online, told personal information, or sent suggestive email.

Pelfrey and Weber (2013) administered a survey to 3,404 middle and high school students and found that a student's participation in school violence and usage of alcohol, tobacco, and illegal drugs predicts both victimization and perpetration of cyberbullying. The authors' research suggests that school administrators should work with students who display a spectrum of problematic behavior. Although, the authors state that there is no research assessing the effectiveness of cyberbullying intervention and call for further research to ascertain effectiveness.

Accordino and Accordino (2011) investigated factors that lead to bullying. Questionnaires completed by 124 sixth graders revealed that students with close parental relationships were bullied less often. Internet frequency was positively associated with an increase in being cyberbullied, and students who participated in cyberbullying were cyberbullied themselves more often.

Hoff and Mitchell (2008) studied the pervasiveness and causes of cyberbullying, the psychological impact on students, and the responses to cyberbullying by surveying 351 students. They found that cyberbullying emerges most often from relationship problems; victims experience negative effects; and the reactive behavior from schools or students was inappropriate. They state that intermittent education such as assemblies or awareness months are not effective and call for students to be educated in more consistent ways. The National Computer Security Alliance (2011) also suggests that awareness months and assemblies are ineffective. They reported that America's young people are not receiving adequate instruction to use digital technology and navigate cyberspace in a safe, secure, and responsible manner and are ill prepared to address these subjects.

History of Digital Citizenship Instruction

Digital citizenship is a concept that identifies what people (students) should understand about technology in order to use it appropriately. It includes Digital Access, Commerce, Communication, Literacy, Etiquette, Law, Rights and Responsibilities, Health and Wellness, and Security. Most students use numerous technologies, so it is important to teach them how to use technologies responsibly and safely on different platforms. Not teaching digital citizenship can be detrimental to young people who get overly involved in the negative aspects of the digital world (Hay & Meldrum, 2010).

The federal government has attempted to enforce training teachers in cyberbullying and students to be taught about Internet safety through The Broadband Data Communication Act that was signed into law in 2008. It requires schools that receive e-Rate discounts on their telecommunications services and Internet access to educate their students about online safety, sexual predators, and cyberbullying:

Section 215 -

Amends the Communications Act of 1934 to require elementary and secondary schools with computer access to the Internet to educate minors about appropriate online behavior, including online interaction with other individuals in social networking websites and in chat rooms and cyberbullying awareness and response.

(Senate Resolution 1492, 2008)

This Act has potential to require education and training in schools, but it has been difficult to get Internet safety or digital citizenship into the curriculum nationally. There are 20 states that require anti bullying professional development or training (Zinth, 2011). Kentucky State Representative Linda Belcher has proposed legislation in the General Assembly to teach both students and teachers about digital citizenship every year from 2009 to 2015, but no legislation has been enacted.

Boards of Education are more likely to provide resources for schools to use in educating the students on these topics than a curriculum. However, there is little follow up on whether or not those resources are used. Most states have suggested programs and resources but do not require a particular curriculum or course at a certain grade level. For example in Jefferson County Public Schools in Kentucky, it is written on their website that, "In response to the new law, the Computer Education Support Unit created a resource space on JCPSOnline (internal) and CESOnline (public) for a repository of lesson plans, student activities, and other information related to internet safety and digital citizenship" (Jefferson County Public Schools, 2012). The resources are vast and valuable, but their implementation is not written into the curriculum. Schools are

currently reporting their plans for putting digital citizenship in the curriculum to the Computer Education Support department. If research demonstrates that implementation of a digital citizenship curriculum curtails cyberbullying, schools might better understand the importance of prevention and implement the curriculum with more fidelity.

Bullying Interventions

With the limited amount of literature regarding cyberbullying interventions, it is useful that research has shown a link between traditional bullying and cyberbullying **(**Brighi et al., 2012; Hinduja & Patchin, 2012; Schneider et al., 2012; Slonje, Smith & Frisen, 2013; Smith et al., 2008; Ybarra & Mitchell, 2004). Slonje et al. (2013) found a large overlap between the involvement in bullying and cyberbullying. Ybarra and Mitchell (2004) suggest that traditional face-to-face bullying victims retaliate by electric means. Smith et al. (2008) support that traditional bullying victims can oftentimes be cyberbullies. Because of the link between the two forms of bullying, traditional bullying interventions are examined.

Cross et al. (2011) tested the efficacy of the Friendly Schools program to reduce student bullying behavior. They tested fourth grade students from schools that received the Friendly Schools bullying reduction intervention program over a two-year period. They found that the intervention group was less likely than control students to report being bullied and less likely to report being bullied regularly. The study also states that the intervention group was more likely to report seeing other students being bullied.

Young et al. (2009) examined a middle school's counseling department's experiment to use data to seek more effective and efficient ways to provide counseling to students. Specifically, the study examined the details in the process used to design

focused accountability questions that measured the effectiveness of anti-bullying and harassment strategies. They used the data to track students and measure if students were using different strategies in handling bullies as a result from the counseling services. The study examined how four school counselors addressed bullying school wide. The purpose was to determine the effectiveness of the lessons, the extent of bullying at the middle school level, students' awareness of strategies to resist bullying, and teacher perception of the extent of bullying at the middle school. The counselors taught a bullying lesson for 40 minutes. After the lesson, they administered six Likert scale and one open-ended response questions.

The second year counselors created an anonymous bullying reporting website for students to access and administrators to monitor and address concerns. Teaching staff completed a survey on their perception of bullying at the school. The following year, they did a follow up lesson on bystanders and conducted a post survey. Counselors also surveyed parents who attended a presentation on cyber safety. The last year, students taught the student curriculum during an assembly, and the school added bullying intervention goals to the school improvement plan. Data related to bullying were based on incidents of discipline referrals. School climate was assessed through a survey. There was a 43% decrease in the number of students reporting bullying.

Brown, Low, Smith, and Haggerty (2011) reported on the outcomes of a trial of Steps to Respect: a bullying prevention program through 33 California schools. Significant intervention effects included increases in school anti bullying policies and strategies, student climate, staff climate, less decrease in student bullying intervention, and larger decrease in school bullying related problems.

Bowlann (2011) examined the Olweus Bullying Prevention Program. A cohort of 159 students served as the baseline group and 112 students served as the post prevention program group by receiving the intervention for one year. Multiple perspectives on bullying were collected using student questionnaires and teacher questionnaires about the prevalence of bullying and the capacity to intervene. There were statistically significant findings for seventh grade female students on the prevalence of bullying and exclusion of peers. There was variability in statistical findings for eighth grade females and no findings for males. Teachers reported an improvement on capacity to identify bullying by talking to victims and offenders.

Cyberbullying Interventions

There have been a limited number of studies concerning cyberbullying interventions in particular. These studies are mostly on a small scale and in countries outside of the United States. Each of these studies called for more research such as the one described in this dissertation.

Kraft and Wang (2009) examined teenagers' perspectives on the effectiveness of cyberbullying prevention strategies. The study surveyed students on their role in cyberbullying and their perspective on the effectiveness of a prevention strategy. Their goal was to determine what strategies are considered most effective from the students' point of views. Researchers grouped 713 participants in four categories: pure offender, pure victim, both offender and victim, and neither offender nor victim. This study compared the perspectives of each group and explained correlations between a student's role in cyberbullying and his or her views of the effectiveness of various cyberbullying prevention strategies. The purpose was to measure the perceived effectiveness of the 14

strategies presented. A correlation between a student's role in cyberbullying and his perspective of the effectiveness of the prevention strategy was studied. The study found positive correlations: no extracurricular activities for offender; offender doing presentation about cyberbullying; offender attending netiquette classes; taking away offender's computers and cell phones; no computer use in school and home for offender; and offender paying victim money. Researchers also found a negative correlation (offenders seeing as better consequence than victim) for setting clear rules and enforcing penalties on offender and ongoing cyberbullying prevention programs.

Williford et al. (2013) did a study in Finland on the effects of the KiVa Anti bullying Program on the frequency of cyberbullying and cyber victimization among elementary and middle school youth. Students involved in the intervention reported lower incidences of cyberbullying in the posttest than students in the control group. Williford et al. (2013) used only a single item to measure cyber victimization and cyberbullying and a homogeneous group of students.

In a rare U.S. study, Toshack and Colmar (2012) conducted a small-scale evaluation of five sixth grade girls to examine effects of cyberbullying interventions. The participants were interviewed on their knowledge of cyberbullying, its effects, management, and safety strategies pre and post intervention. After the intervention, Toshack and Colmar (2012) found increases in knowledge of cyberbullying and safety strategies.

Palladino, Nocentini, and Menesini (2012) evaluated a peer led intervention model against cyberbullying with Italian high school students. The study found no changes in cyberbullying in the experimental group in comparison to the control group.

The researchers also studied student coping strategies. They found an increase in students' problem solving strategies dealing with cyberbullying and a decrease in the coping strategy of avoidance.

A similar study was conducted in Taiwan amongst 61 seventh grade students. Lee et al. (2012) conducted an eight-week Web Quest course with a control and experimental group. They found that the intervention was effective in enhancing knowledge of cyberbullying and reducing students' intentions to cyberbully others, but there was no impact on students' attitudes towards cyberbullying. The author suggested further studies be conducted with larger number of students and in different countries.

Summary

A substantial amount of researchers have defined cyberbullying (Belsey, 2006; Brown et al., 2006; Conn, 2010; Dempsey et al., 2009; Patchin & Hinduja, 2006; Slonje & Smith, 2008; Surdin, 2009). Other researchers have examined what kinds of cyberbullying exist (Dehue et al., 2008; Juvonen & Gross, 2008; Patchin & Hinduja, 2006; Smith et al., 2010; Willard, 2006). Many studies are concerned with the pervasiveness of cyberbullying (Li, 2007; Nansel et al., 2001; Patchin & Hinduja, 2006; Popovic-Citic et al., 2011; Surdin, 2009; Walker et al., 2011). Other researchers have studied the causes of cyberbullying (Accordino & Accordino, 2011; Berson et al., 2002; Hoff & Mitchell, 2008; Pelfrey & Weber, 2013; Ybarra & Mitchell, 2004). The federal government has recognized the problem of cyberbullying and other digital issues and called for schools to educate students about digital citizenship (Senate Resolution 1492, 2008). Schools are determining how to do this successfully (Jefferson County Public Schools, 2012). Studies have considered what kinds of bullying interventions work but

do not address cyberbullying in particular (Bowlann, 2011; Brown et al., 2011; Cross et al., 2011; Young et al., 2009). The research that has been conducted on cyberbullying interventions is limited and calls for more empirical studies (Kraft & Wang, 2009; Lee et al., 2012; Palladino et al., 2012; Toshack & Colmar, 2012; Williford et al., 2013). Research, like this dissertation, is considered necessary to narrow the gap in the literature and discover whether educating students about cyberbullying has an effect.

Chapter 3: Methodology

The research questions guiding this dissertation ask (1) Does instruction of the dangers of cyberbullying and how to avoid cyberbullying have an effect on the victims and offenders of cyberbullying? (2) Does direct instruction change cyberbullying victimization and offending over time? (3) Is the change in cyberbullying victimization and offending over time dependent on the intervention? The conceptual framework guiding this study is that the medium itself creates the unique phenomena of cyberbullying (McLuhan & Fiore, 2001). The medium of the Internet provides an impersonal and distant social context but yet also a very personal message. It was hypothesized that students who are given digital citizenship instruction would have fewer incidences of being involved in cyberbullying either as a victim or bully than students who received no cyberbullying instruction. It was also hypothesized that the results would be sustained over time.

Design Description

In order to test the hypotheses that students given cyberbullying instruction would have less incidences of cyberbullying than students who receive no interventions, a factorial design with a between-groups factor (intervention) and a within-groups factor (time) was planned. There are three levels of the within-groups factor (time): pre intervention, post intervention, and three months post intervention. The dependent variable is the incidences of cyberbullying. The level of the between subjects factor is whether the students receive the instruction or do not receive the instruction. The independent variable is cyberbullying prevention instruction. Students in the experimental group received three 45-minute lessons about how to deal with a cyberbully

and the consequences of cyberbullying. These lessons were conducted during the homeroom time that is approximately 20 minutes each morning equating to approximately 135 minutes of instruction. Students in the control group did not receive this instruction but did regular homeroom activities.

Data Collection

To investigate research questions, sixth grade students attending a middle school where approximately 49.6% of students receive free-or reduced-price lunch were assessed on multiple measures of cyberbullying incidences. Approximately 35.6% of students in the school are of African –American ethnicity, about 46.7% of European American ethnicity, with the remaining 17.7% of another ethnicity. The control group was made up of students at another middle school where approximately 58.4% of students receive free-or reduced-price lunch. Approximately 33.1% of students in the school are of African –American ethnicity, about 59.6% of European American ethnicity, with the remaining 7.3% of another ethnicity.

In the control school, there are 14 sixth grade homerooms with approximately 20 students in each room. Every teacher was asked to participate in the study and seven homerooms agreed to assist providing a potential subject pool of 140 students. All students in the homerooms were asked to return a signed consent generated and approved by the local school district and university Internal Review Board. Seventy-eight students (56%) in these classrooms returned the permission forms (see Table 2). These students completed pre and post surveys but did not receive any intervention. The school was given the intervention after the research was completed.

There are also 14 sixth grade homerooms in the experimental school. Every teacher was asked to participate, and three teachers agreed to assist in the study. Average class size within the study school is 28, providing a potential subject pool of 84. All students in the homerooms were asked to return a signed consent generated and approved by the local school district and university Internal Review Board. Forty-five students (54%) returned permission forms and participated in the pre and post surveys. Due to attendance, mobility, and distribution issues, 30 participated in the follow up study (see Table 2).

Table 2: Sample Sizes

	Pre Test	Post Test	Follow Up
Experimental	45	45	30
Control	78	78	78

A post hoc power analysis was conducted for the Mann-Whitney test between the experimental and control groups to determine if it was an appropriate sample size. A total of 45 and 78 in control and experimental groups results in power estimates of .83 at a one sided 5% significance level. A post hoc power analysis was also conducted for the Wilcoxon Signed-rank test (matched pairs) for the experimental group to determine if (n=30) is an appropriate sample size. This sample size results in power estimates of .83 at a one sided 5% significance level.

The methodology is data collected from the responses on the survey. The incidences of cyberbullying were examined utilizing Hinduja and Patchin's Cyberbullying and Online Aggression Survey Instrument, 2013 version. The rationale for inclusion of the items in the survey was based on existing literature on cyberbullying. Berne et al. (2013) performed a systematic review on the structural and psychometric

properties of cyberbullying instruments such as validity and reliability as well as the conceptual and definitional basis. They computed and expressed Cronbach's alpha reliability coefficient to be a .93 on the cyberbullying victimization scale and a .96 on the cyberbullying offending scale.

In order to gather the data required for the study, teachers administered the surveys in homerooms. Administration took approximately 10 minutes and occurred on a group-administered basis supervised by the homeroom teachers. The primary challenges in collecting participant data was the retrieval of student forms and teachers' administering of the surveys. There were three levels of time (the within factor): pre intervention, post intervention, and three months post intervention.

Threats

There are several threats to internal and external validity that may weaken the study's ability to draw generalizing conclusions. One threat to internal validity is history. Students may have less incidences of cyberbullying because of the intervention or because over a period of time, they learn more about digital citizenship. Another threat to internal validity is testing. If students become aware that cyberbullying is something teachers deem important, they may change their responses based on what has been emphasized in class. Students' knowledge about digital citizenship could naturally increase. This threat to validity is maturation. In order for this study to be credible, it relies heavily on the cooperation of the teachers. The study depends on the experimental group of teachers to administer the instruction and all teachers to administer the surveys. Teachers were interviewed at the end of the experiment to determine their fidelity of implementation.

Chapter 4: Findings

Introduction

Cyberbullying is one of the most pervasive problems amongst teenagers (Hinduja & Patchin, 2012; Kowalski et al., 2014; Popovic-Citic et al., 2011; Slonje & Smith, 2008; Smith et al., 2008). Studies show cyberbullying can cause students to become depressed or suicidal (Conn, 2010; Hay & Meldrum, 2010; Hinduja & Patchin, 2010; Klomek et al., 2007). Research suggests that educators must intervene in educating students about cyberbullying (Hoff & Mitchell, 2008; Popovic-Citic et al., 2011). However, there is not a body of research that examines whether educating students about digital citizenship decreases cyberbullying. This study investigates the relationship between the instruction and the incidences of cyberbullying victimization and offending over time.

The objective of this dissertation is to investigate the impact of the designed intervention on the incidences of cyberbullying victimization and offending. The research questions guiding the study are: (1) Does instruction of the dangers of cyberbullying and how to avoid cyberbullying have an effect on the victims and offenders of cyberbullying? (2) Does direct instruction change cyberbullying victimization and offending over time? (3) Is the change in cyberbullying victimization and offending over time dependent on the intervention?

It was hypothesized that students who are given digital citizenship instruction would exhibit fewer incidences of cyberbullying offending and victimization than students who received no instruction and that these findings would be sustained over time. Three cyberbullying lessons were administered to 45 students in three homerooms over a two-week period totaling approximately 135 minutes of instruction. There were 78

students from seven homerooms in the control group who received no cyberbullying interventions.

Test and Data Collection Methods

Incidences of cyberbullying were examined in both groups of students using Hinduja and Patchin's Cyberbullying and Online Aggression Survey Instrument, 2013 version. The rationale for inclusion of the items in the survey was based on existing literature on cyberbullying (Berne et al., 2013). In order to test the hypothesis that students' incidences of cyberbullying would decrease for students who are given the cyberbullying intervention, a factorial design with a between-groups factor (intervention) and a within-groups factor (time) was planned. Exploratory data analysis revealed that there was not a normal distribution in the data (see Table 3).

Table 3: Descriptive Statistics

	Victimization Pretest	**Offending Pretest**	**Victimization Posttest**	**Offending Posttest**	**Victimization Follow up**	**Offending Follow Up**
Mean	.20	.09	.09	.04	.10	.03
Median	.00	.00	.00	.00	.00	.00
Standard Deviation	.523	.340	.340	.235	.403	.183
Quartile Value 0	105	113	114	120	28	29
Quartile Value 1	13	7	9	3	1	1
Quartile Value 2	4	2	1	1	1	NA
Quartile Value 3	1	NA	NA	NA	NA	NA

In all incidences, there were a large number of students who responded that they had never experienced cyberbullying. As a result, the distribution had a strong positive skew (see Table 4).

Table 4: Response Skewness		
	Skewness Statistic	**Skewness Standard Error**
Victimization Pretest	3.012	.218
Offending Pretest	4.079	.219
Victimization Posttest	3.707	.217
Offending Posttest	6.467	.217
Victimization Follow up	4.281	.427
Offending Follow up	5.477	.427

The normal distribution (skewness of 0) of responses was violated. A factorial design would not be appropriate for this data, thus nonparametric alternatives were used. The Wilcoxon Signed-rank test and the Mann-Whitney test have been shown to be more robust to the violations of normality in the data. They are the nonparametric analogues of the *t* test for related and independent samples (Howell, 2010).

The control and experimental groups were assessed at the beginning of the study to be equal using the Mann-Whitney test. The results indicate there were no significant differences between the control and experimental groups for victimization or offending. According to the non-significant findings, the two groups were comparable at pretest, indicating a successful matching procedure before the onset of the study.

At the conclusion of the cyberbullying intervention, a post survey was conducted using Hinduja and Patchin's Cyberbullying and Online Aggression Survey Instrument, 2013 version. The experimental group was assessed at the end of the study to determine if there were any differences before and after the intervention for victimization and offending using the Wilcoxon Signed-rank test.

A Mann-Whitney test was also performed on the experimental and control group posttests for victimization and offending to assess whether there was a significant

difference in the two groups after the intervention. And finally, a Mann-Whitney test was conducted on the control group pre and post surveys to indicate if there was a significant difference in their responses for victimization and offending.

Data Analysis

The research questions guiding the study focus on the effect of cyberbullying intervention on the incidences of cyberbullying offending and victimization. In order to determine if there were any differences in the groups before the study, a Mann-Whitney test was conducted. A Mann-Whitney test is appropriate because it is the nonparametric analogue of the *t* test for two independent samples (Howell, 2010). The Mann-Whitney test indicated that in incidences of cyberbullying victimization, there were no significant differences in the experimental group (n=45) and the control group (n=78) before the intervention, U=1603.5, p=.195. A Mann-Whitney test also indicated that in incidences of cyberbullying offending, there was no significant difference for the experimental (n=45) group and the control group (n=78) before the intervention, U=1650.00, p=.334. Since there were no significant differences between the groups before the intervention, it was an adequate sample to test (see Table 5).

Table 5: Pretest Comparisons

	Group One (sample size)	**Group Two (sample size)**	**Test**	**Test Static Value (*U*)**	**P Value**	**Outcome**
Pretest Victimization	Experimental (45)	Control (78)	Mann-Whitney test	1603.5	.195	No difference
Pretest Offending	Experimental (45)	Control (78)	Mann-Whitney test	1650	.334	No difference

After the intervention, Wilcoxon Signed-rank tests were conducted to determine if there were any statistically significant differences for the experimental group during pretest, posttest, and follow up (see Table 6). The Wilcoxon Signed-rank tests are an appropriate method because the data was skewed for one of the variables. This test is the most popular nonparametric test for matched groups (Howell, 2010). The Wilcoxon Signed-rank test indicated that in cyberbullying victimization, the median posttest ranks were statistically significantly lower than pretest ranks (n=45), Z=-2.762, p= .006, with a medium- small effect size (r=.29). There was no statistically significant difference between the posttest and the follow up test (n=30), Z=-1.342, p= .180. The Wilcoxon Signed-rank test also indicated that follow up ranks were statistically significantly lower than pretest ranks (n=30), Z=-1.994, p= .046, with a medium-small effect size (r=.23). The experimental groups' scores for cyberbullying victimization significantly decreased between the pretest and the posttest. The scores did not increase or decrease between the posttest and follow up test meaning the effect of the intervention was sustained after three months.

The Wilcoxon Signed-rank test was conducted for the experimental group for cyberbullying offending as well (see Table 6). The results indicate that the median posttest ranks were not statistically different than pretest ranks (n=45), Z=1.414, p= .157. The median follow up ranks for offending were not statistically significant than the pretest ranks (n=30), Z=-.577, p= .564. The Wilcoxon Signed-rank test also indicated that the median follow up ranks were not statistically significantly than posttest ranks (n=30), Z=-1.000, p= .317. For cyberbullying offending, there were no statistically significant differences between any of the tests.

Table 6: Experimental Findings						
	Group One (sample size)	**Group Two (sample size)**	**Test**	**Test Static Value (*Z*)**	**P Value**	**Outcome**
Experimental Victimization	Pre (45)	Post (45)	Wilcoxon Signed-rank tests	-2.762	.006	Difference (.29 effect size)
Experimental Victimization	Pre (45)	Follow (30)	Wilcoxon Signed-rank tests	-1.994	.046	Difference (.23 effect size)
Experimental Victimization	Post (45)	Follow (30)	Wilcoxon Signed-rank tests	-1.342	.180	No Difference
Experimental Offending	Pre (45)	Post (45)	Wilcoxon Signed-rank tests	1.414	.157	No difference
Experimental Offending	Pre (45)	Follow (30)	Wilcoxon Signed-rank tests	-.577	.564	No difference
Experimental Offending	Post (45)	Follow (30)	Wilcoxon Signed-rank tests	-1.000	.317	No difference

A Mann-Whitney test was conducted to determine if there were any differences between the experimental and control groups after the posttest (see Table 7). The Mann-Whitney test indicated that incidences of cyberbullying victimization were significantly lower for the experimental group (n=45) than for the control group (n=78) victimization after the intervention, *U*=1552.5, p=.013, with a small effect size (r=.105). For cyberbullying offending, there were no significant differences for the experimental group (n=45) than for the control group (n=78) victimization after the intervention, *U*=1687.5, p=.126. This again shows that the intervention had an effect on cyberbullying victimization for the experimental group but not for offending.

Table 7: Post Comparisons						
	Group One (sample size)	**Group Two (sample size)**	**Test**	**Test Static Value (*U*)**	**P Value**	**Outcome**
Post Victimization	Experimental (45)	Control (78)	Mann-Whitney test	1552.5	.013	Difference (.105 effect size)
Post Offending	Experimental (45)	Control (78)	Mann-Whitney test	1687.5	.126	No difference

As a final step, a Mann-Whitney test was conducted on the control group to determine if there were any differences between their pre and posttests (see Table 8). The Mann-Whitney test indicated that in incidences of cyberbullying victimization, there were no significant differences in the pre and posttests (n=78), U=3052.5, p=.860. There were also no significant differences for the offending (n=78), U=2918.5, p=.326. This indicates that the differences that the experimental group exhibits in victimization are due to the intervention and not due to changes over time such as history, testing, and maturation.

Table 8: Control Group Comparisons						
	Group One (sample size)	**Group Two (sample size)**	**Test**	**Test Static Value (*U*)**	**P Value**	**Outcome**
Control Victimization	Pre (78)	Post (78)	Mann-Whitney test	3052.5	.860	No difference
Control Offending	Pre (78)	Post (78)	Mann-Whitney test	2918.5	.326	No difference

Summary and Conclusion

The research study demonstrated a significant difference between the experimental and control groups for cyberbullying victimization but no significant difference for offending. Tests for group equivalence indicated there were no significant differences between the experimental and control groups before the intervention. Threats to validity and reliability were controlled through the study design and data analysis.

In regard to research question one, does instruction of the dangers of cyberbullying and how to avoid cyberbullying have an effect on the victims and offenders of cyberbullying? In cyberbullying victimization, the instruction had a statistically significant effect of less incidences of cyberbullying. The null hypothesis was rejected because there was a significant difference between the experimental and control groups after the intervention. In cyberbullying offending, the instruction did not have a statistically significant effect of less incidences of cyberbullying offending. The null hypothesis fails to be rejected because there was not a significant difference between the experimental and control groups after the intervention.

The second research question asks if the direct instruction changed cyberbullying victimization and offending over time. In cyberbullying victimization, the instruction had a statistically significant effect of less incidences of cyberbullying over time. The incidences did not continue to decrease over time, but they did not increase or reach the pretest incidences. The null hypothesis was rejected because there was a significant difference between the experimental and control groups three months after the intervention. In cyberbullying offending, the instruction did not have a statistically significant effect of less incidences of cyberbullying offending over time. The null

hypothesis fails to be rejected because there was not a significant difference between the experimental and control groups three months after the intervention.

The final research question examined whether cyberbullying victimization and offending over time was dependent on the intervention. There was no difference in cyberbullying offending. In cyberbullying victimization, the experimental group had a statistically significant effect of less incidences of cyberbullying over time and the control group did not. The control group and experimental group were not statistically different at the onset of the study but were significantly different at the end of the study. This shows that the intervention change in time was dependent on the intervention. The null hypothesis was rejected because there was a significant difference between the experimental and control groups after the intervention.

Chapter 5: Conclusions and Recommendations

Summary

One of the greatest problems for adolescents is cyberbullying (Hinduja & Patchin, 2012; Kowalski et al., 2014; Popovic-Citic et al., 2011; Slonje & Smith, 2008; Smith et al., 2008). Cyberbullying can lead to depression and suicide (Conn, 2010; Hay & Meldrum, 2010; Hinduja & Patchin, 2010; Klomek et al., 2007). Researchers recommend that teachers intervene in educating students about cyberbullying (Hoff & Mitchell, 2008; Popovic-Citic et al., 2011). However, there is a paucity of research which examines whether direct digital citizenship instruction decreases cyberbullying. This study investigates the relationship between the instruction and the incidences of cyberbullying victimization and offending over time. The objective of this dissertation is to increase digital citizenship knowledge among adolescents via a standardized curriculum and thus diminish incidences of bullying in the digital world after its implementation.

The research questions guiding the study are: (1) Does instruction of the dangers of cyberbullying and how to avoid cyberbullying have an effect on the victims and offenders of cyberbullying? (2) Does direct instruction change cyberbullying victimization and offending over time? (3) Is the change in cyberbullying victimization and offending over time dependent on the intervention? The conceptual framework guiding this study is that the medium itself creates the unique phenomena of cyberbullying (McLuhan & Fiore, 2001). The medium of the Internet provides an impersonal and distant social context but yet also a very personal message.

It was hypothesized that students who are given digital citizenship instruction would have fewer incidences of being involved in cyberbullying both as a victim or

offender than students who received no cyberbullying instruction. It was also hypothesized that the results would be sustained over time. The decision to accept or reject the null hypothesis of no difference between the control and experimental groups at posttest was based on the statistical analyses of the assessment data. Three cyberbullying lessons were administered to 45 students in three homerooms over a two-week period totaling approximately 135 minutes of instruction. There were 78 students from seven homerooms in the control group who received no cyberbullying interventions.

Students from both the experimental (n=45) and control (n=78) groups were surveyed with Hinduja and Patchin's Cyberbullying and Online Aggression Survey Instrument. The data analysis demonstrated a significant difference between the control and experimental groups in cyberbullying victimization. This outcome supports the decision to reject the null hypotheses as it indicated a significant difference between the control and experimental groups. The data suggests that cyberbullying interventions have a significant effect on cyberbullying victimization. The data analysis did not demonstrate a significant difference between the control and experimental groups in cyberbullying offending. This outcome supports the decision to fail to reject the null hypotheses, as it did not indicate a significant difference between the control and experimental groups. The data suggests that cyberbullying interventions have no significant effect on cyberbullying offending.

Conclusion

Cyberbullying is a devastating phenomenon. Four in ten teenagers report that they have experienced some form of cyberbullying, according to a 2006 study commissioned by the National Crime Prevention Council. Additionally, children who are

cyberbullied are more likely to induce self-harm or contemplate suicide (Conn, 2010; Hay & Meldrum, 2010; Hinduja & Patchin, 2010; Klomek et al., 2007). In January 2010, The National Computer Security Alliance surveyed teachers, administrators, and technology coordinators about online safety and security education attitudes and practices and found that students are not prepared to deal with the digital world. This emphasizes the importance for educators to intervene and provide instruction on how to deal with cyberbullying and why it is important not to cyberbully (Hoff & Mitchell, 2008; Popovic-Citic et al., 2011).

Schools, teachers and students need strategies to curtail cyberbullying that have been proven to make a difference. Because this study shows that interventions can make a difference in cyberbullying victimization, schools should be more purposeful in making sure that students are receiving digital citizenship instruction. More importantly, state educational legislative bodies can use studies like this one to implement legislation requiring digital citizenship instruction.

This dissertation supports other research that shows intervention programs can reduce bullying victimization. Studies by Cross et al. (2011), Young et al. (2009), and Brown et al. (2011) indicated a decrease of bullying reports after school interventions. These findings support that research in bullying can be transferred to cyberbullying (Slonje et al., 2013; Smith et al., 2008; Ybarra & Mitchell, 2004). The research in this dissertation also supports studies such as Kraft and Wang (2009) and Williford et al. (2013) that found students involved in cyberbullying prevention programs curtail cyberbullying occurrences.

The findings of this dissertation contrast the research that found no change in cyberbullying behaviors after interventions (Palladino et al., 2012). This dissertation also contrasts Lee et al. (2012) who found that interventions reduced students' intentions to cyberbully.

The results of this study showed that a few weeks of intervention could curtail cyberbullying victimization. This finding differs from Hoff and Mitchell (2008) who claimed that awareness months did not have long-term effects. This research also contradicts the National Computer Security Alliance's (2010) statement that cyberbullying interventions were not working. The findings of this dissertation suggest that administering intervention lessons to students can reduce cyberbullying victimization.

Recommendations and Limitations

For cyberbullying victimization, the statistical design and analysis reported a significant difference between the experimental and control groups at posttest as the between effect of the independent variable, cyberbullying intervention. For cyberbullying offenses, the statistical design and analysis reported no significant difference between the experimental and control groups at posttest as the between effect of the independent variable, cyberbullying intervention.

This study would be strengthened by implementing the program more widely perhaps in more schools and at a variety of grade levels. Although the outcomes of this particular implementation were positive, the generalizability of these results merits further investigation. A plan for sustainability and implementation in school districts is warranted. The current implementation and design relied largely on the cooperation of a

small number of teachers; that poses a threat to treatment sustainability. One possible threat to the integrity of future implementations of the cyberbullying interventions could be changes made in the delivery that would impact the program's effectiveness.

The research that suggests that the education is not curtailing cyberbullying may be a result of teachers not actually implementing digital citizenship instruction. More research is needed to determine if schools are providing students with digital citizenship skills through lessons.

Additional research is needed to track the cyberbullying instances throughout middle and high school. Students may have reported more incidences in higher grades, because of the increased amount of time that they have to get involved in the digital world. Reports of cyberbullying in this study were lower than similar studies conducted (see Table 9).

Table 9: Incidences of Cyberbullying with Current Research

Researcher	Year	Sample Size	Age	Victim	Offender
Nansel et al.	2001	15,686	Grades 6-10	43%	NA
Patchin & Hinduja	2006	384	11-15	29%	11%
Wolak, Mitchell, & Finkelhor	2007	1500	10-17	57%	NA
Li	2007	177	Grade 7	25%	15%
Juvonen & Gross	2008	1154	12-17	72%	NA
Popovic-Citic, Djuric, & Cvetikovic	2011	387	11-15	20%	10%
Walker, Sockman, & Koehn	2011	140	Undergrads	34%	NA
Bumpas	2015	123	Grade 6	15%	7%

The low responses may have been a result of testing younger students (Hinduja & Patchin, 2012). However, it is important to educate students at young ages, so they learn about the dangers of cyberbullying before they get involved. The low incidences of

cyberbullying reported on the surveys could also be attributed to students answering in extremes because of the self-reported data (Fan et al., 2006).

Additional research is needed to determine why the cyberbullying intervention had no significant difference on diminishing cyberbullying offending. This may be a result of the self-reported data. It also may be an indication that cyberbullying instruction needs to start even earlier to make an impact on students becoming offenders. Perhaps Common Sense Media is not the right program to stop cyberbullying offenses. It could be that these are distinct behaviors which require differing interventions.

The research indicated that poor parent and child relationships were an indicator of cyberbullies (Accordino & Accordino, 2011; Berson et al., 2002; Ybarra &Mitchell, 2004). Cyberbullies engage in more frequent Internet use (Accordino & Accordino, 2011; Ybarra &Mitchell, 2004). And, students' participation in violence, usage of alcohol, tobacco and drugs predict the perpetration of cyberbullying (Pelfrey & Weber, 2013). Future research needs to be conducted to determine if perhaps there needs to be a more complex and intense intervention in addition to education in order to diminish the aggressive behavior of cyberbullying.

The National Computer Security Alliance (2010) found that students are ill prepared to deal with the digital world. Cyberbullying is a detrimental problem for students (Hinduja & Patchin, 2012; Kowalski et al., 2014; Popovic-Citic et al., 2011; Slonje & Smith, 2008; Smith et al., 2008). Cyberbullying can lead to depression and suicide (Conn, 2010; Hay & Meldrum, 2010; Hinduja & Patchin, 2010; Klomek et al., 2007). Researchers recommend that teachers intervene in educating students about cyberbullying (Hoff & Mitchell, 2008; Popovic-Citic et al., 2011). The findings in this

dissertation support the need for teachers to educate students about digital citizenship. This 135-minute program found statistically significant effects in curtailing cyberbullying victimization. Since the research yields positive results as defined by fewer incidences of cyberbullying as the victim, teachers should be more likely to implement the instruction. More importantly, state educational legislative bodies can use this research as evidence on cyberbullying prevention to inform legislative policy regarding digital citizenship instruction in schools.

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LESSON PLAN

UNIT 1

Cyberbullying: Be Upstanding

Essential Question

How do you judge the intentions and impact of people's words and actions online?

Lesson Overview

Students learn about the difference between being a passive bystander versus a brave upstander in cyberbullying situations.

Students reflect on what it means to be brave and to stand up for others. They fill out the **Why Care? Student Handout**, create a diagram of the players involved, and generate ideas about how bystanders can become upstanders. They then identify concrete solutions for dealing with cyberbullying situations.

Learning Objectives

Students will be able to ...

- reflect on what it means to be brave and stand up for others offline and online.
- learn to show empathy for those who have been cyberbullied.
- generate multiple solutions for helping others when cyberbullying occurs.

Materials and Preparation

- Drawing paper and markers (for all students)
- Copy the **Why Care? Student Handout**, one per group of four or five.

Family Resources

- Send home the **Cyberbullying Family Tip Sheet (Middle School)**.

Estimated time: 45 minutes

Standards Alignment –

Common Core:

grade 6: RI.2, RI.3, RI.7, RI.8, RI.10, SL.1a, SL.1b, SL.1c, SL.1d, SL.2, SL.6, L.6

grade 7: RI.2, RI.3, RI.8, RI.10, SL.1a, SL.1b, SL.1c, SL.1d, SL.2, SL.5, SL.6, L.6

grade 8: RI.2, RI.3, RI.8, RI.10, SL.1a, SL.1b, SL.1c, SL.1d, SL.2, SL.5, SL.6, L.6

NETS·S: 2a, 2b, 5a, 5d

Key Vocabulary –

bystander: someone who sees cyberbullying happening, but does nothing to help

upstander: someone who helps when they see cyberbullying occur

empathize: to imagine the feelings that someone else is experiencing

LESSON PLAN

UNIT 3

The Reality of Digital Drama

Essential Question

Does the way we think about digital drama have anything to do with gender?

Lesson Overview

Students discuss their impressions of peer drama, both online and as depicted on reality TV. They compare and contrast two videos — one featuring a candid discussion between middle school students about online drama and the other featuring clips from *The Real Housewives* reality TV series. Students are encouraged to analyze generalizations about men and women in both videos, and to think critically about the ways that gender stereotypes can play out in mass media, as well as in their own lives online.

Learning Objectives

Students will be able to ...

- reflect on their own impressions of digital drama.
- compare underlying messages about drama on reality TV with "real world" digital drama among young teens.
- think critically about the gender stereotypes associated with drama.

Materials and Preparation

- Review the **Gender and Digital Life Teacher Backrounder (Middle School)**.
- Preview the videos "**Discussing Digital Drama**" and "**The Real Housewives Series Video Clips**," and prepare to show them to students.
- Copy the **Dissecting Drama Student Handout**, one for each student.

Estimated time: 45 minutes

Standards Alignment –

Common Core:

grade 6: RI.4, RI.7, RI.10, W.4, W.7, W.10, SL.1a, SL.1b, SL.1c, SL.1d, SL.4, SL.6, L.6

grade 7: RI.4, RI.7, RI.10, W.4, W.7, W.10, SL.1a, SL.1b, SL.1c, SL.4, SL.6, L.6

grade 8: RI.4, RI.7, RI.10, W.4, W.7, W.10, SL.1a, SL.1b, SL.1c, SL.1d, SL.4, SL.6, L.6

NETS·S: 1a-d, 2a-b, 2d, 3a-d, 4a-d, 5a-d, 6a-b, 6d

Key Vocabulary –

generalization: an assumption made about a whole group of people based upon your experiences with a few

stereotype: a widespread belief about a group of people – often negative – that influences how members of that group are perceived and treated

Family Resources

- Send home the **Dealing with Digital Drama Family Tip Sheet (Middle & High School)**.

Note: *Digital drama* describes the everyday tiffs and disputes that occur between friends or acquaintances online or via text. For example, a teen may post a comment about someone else online knowing that people will see it, that friends may chime in, and that people will talk about it. Unlike cyberbullying, which involves repeated digital harassment towards someone, drama is broader and more nuanced. That being said, teens sometimes use the term drama to distance themselves from emotionally difficult behavior. Digital drama can still feel very real to students, lead to hurt feelings, and even damage friendships. In some cases, digital drama can escalate into an offline fight – either verbal or physical.

LESSON PLAN

UNIT 3

Cyberbullying: Crossing the Line

Essential Question

When does inappropriate online behavior cross the line to cyberbullying, and what can you do about it?

Lesson Overview

Students learn to distinguish good-natured teasing from cyberbullying. Students learn about serious forms of cyberbullying, which include harassment, deception, "flaming," and threats to safety.

Students watch the video **"Stacey's Story – When Rumors Escalate,"** a documentary-style story in which a girl reflects on what it was like to be the target of cyberbullying. Students then discuss the video and related case studies in the **Cyberbullying: Crossing the Line Discussion Guide**.

Learning Objectives

Students will be able to ...

- analyze online bullying behaviors that "cross the line."
- learn about the various ways that students can be cyberbullied, including flaming, deceiving, and harassing.
- adopt the point of view of teens who have been cyberbullied, and offer solutions.

Materials and Preparation

- Preview the video, **"Stacey's Story – When Rumors Escalate,"** and prepare to show it to students.
- Copy the **Cyberbullying: Crossing the Line Student Discussion Guide**, one for each student.
- Review the **Cyberbullying: Crossing the Line Student Discussion Guide – Teacher Version** and select which case study you would like students to analyze.

Family Resources

- Send home the **Cyberbullying Family Tip Sheet (Middle School)**.

Estimated time: 45 minutes

Standards Alignment –

Common Core:

grade 6: RI.7, RI.10, SL.1a, SL.1b, SL.1c, SL.1d, SL.2, SL.6, L.6

grade 7: RI.10, SL.1a, SL.1b, SL.1c, SL.1d, SL.2, Sl.6, L.6

grade 8: RI.10, SL.1a, SL.1b, SL.1c, SL.1d, SL.2, SL.6, L.6

NETS·S: 2a, 2b, 5a, 5d

Key Vocabulary –

harassing: bombarding someone with messages over digital media, or repeated contact when it is least expected

deceiving: using fake names, posing as someone else, or creating a fake profile about someone else

flaming: saying mean things, usually in ALL CAPS, and often in a public forum with the intention to humiliate

hate speech: a verbal attack targeting someone because of their race, gender, religion, ability, or sexual orientation

Appendix B. Cyberbullying and Online Aggression Survey Instrument

Cyberbullying Victimization

Cyberbullying is when someone repeatedly harasses, mistreats, or makes fun of another person online or while using cell phones or other electronic devices.

1. I have seen other people being cyberbullied:
   Never Once A few times Several times Many times

2. In my lifetime, I have been cyberbullied:
   Never Once A few times Several times Many times

3. In the last 30 days, I have been cyberbullied:
   Never Once A few times Several times Many times

4. In the last 30 days, I have been cyberbullied in these ways:
   Never Once A few times Several times Many times

4a. If you have been cyberbullied in the past 30 days, please check all the ways that you have been cyberbullied:

- o Someone posted mean or hurtful comments about me online
- o Someone posted a mean or hurtful picture online of me
- o Someone posted a mean or hurtful video online of me
- o Someone created a mean or hurtful web page about me
- o Someone spread rumors about me online
- o Someone threatened to hurt me through a cell phone text message
- o Someone threated to hurt me online
- o Someone pretended to be me online and acted in a way that was mean or hurtful to me

5. In the last 30 days, I have been cyberbullied in these online environments
   Never Once A few times Several times Many times

5a. If you have been cyberbullied in the past 30 days, please check all the places you have been cyberbullied:

- o In a chat room
- o Through email
- o Through computer instant messages
- o Through cell phone text messages
- o Through cell phone
- o Through picture or video mail
- o On Facebook
- o On a different social networking web site (other than Facebook)
- o On Twitter
- o On YouTube
- o On Instagram
- o In virtual worlds such as Second Life, Gaia, or Habbo Hotel

- While playing a massive multiplayer online game such as World or Warcraft, Everquest, Guild Wars, or Runnescape
- While playing online with Xbox, Playstation, Wii, PSP or similar device

Cyberbullying Offending

Cyberbullying is when someone repeatedly harasses, mistreats, or makes fun of another person online or while using cell phones or other electronic devices.

1. In my lifetime, I have cyberbullied others:
   Never Once A few times Several times Many times

2. In the last 30 days, I have cyberbullied others:
   Never Once A few times Several times Many times

4. In the last 30 days, I have cyberbullied others in these ways:
   Never Once A few times Several times Many times

4a. If you have cyberbullied in the past 30 days, please check all the ways that you have cyberbullied:

- I posted mean or hurtful comments about someone online
- I posted a mean or hurtful picture online of someone
- I posted a mean or hurtful video online of someone
- I created a mean or hurtful web page about someone
- I spread rumors about someone online
- I threatened to hurt someone through a cell phone text message
- I threated to hurt someone online
- I pretended to be someone else online and acted in a way that was mean or hurtful to them

5. In the last 30 days, I have cyberbullied others in these online environments:
   Never Once A few times Several times Many times

5a. If you have cyberbullied in the past 30 days, please check all the places you have cyberbullied:

- In a chat room
- Through email
- Through computer instant messages
- Through cell phone text messages
- Through cell phone
- Through picture or video mail
- On Facebook
- On a different social networking web site (other than Facebook)
- On Twitter
- On YouTube
- On Instagram
- In virtual worlds such as Second Life, Gaia, or Habbo Hotel
- While playing a massive multiplayer online game such as World or Warcraft, Everquest, Guild Wars, or Runnescape
    - While playing online with Xbox, Playstation, Wii, PSP or similar device

Appendix C. Survey Instrument Psychometric Properties

Psychometric Properties

Utilized in 5 different studies (2007-2013)
Over 12,000; 11-18-year-old youth; over 90 schools
Coefficients represent range across the 5 studies

Internal Reliability

Cyberbullying Victimization Scale – previous 30 days
(Cronbach's Alpha range 0.905-0.935)
1. I have been cyberbullied
2. Someone posted mean or hurtful comments about me online
3. Someone posted a mean or hurtful picture online of me online
4. Someone posted a mean or hurtful video online of me online
5. Someone created a mean or hurtful web page about me
6. Someone spread rumors about me online
7. Someone threatened to hurt me through a cell phone text message
8. Someone threatened to hurt me online
9. Someone pretended to be me online and acted in a way that was mean or hurtful

Cyberbullying Offending Scale – previous 30 days
(Cronbach's Alpha range 0.935-0.969)
1. I cyberbullied others
2. I posted mean or hurtful comments about someone online
3. I posted a mean or hurtful picture online of someone
4. I posted a mean or hurtful video online of someone
5. I spread rumors about someone online
6. I threatened to hurt someone online
7. I threatened to hurt someone through a cell phone text message
8. I created a mean or hurtful web page about someone
9. I pretended to be someone else online and acted in a way that was mean or hurtful to them

Factor Analysis

Cyberbullying Victimization Scale	Loadings
1. I have been cyberbullied	.686-.744
2. Someone posted mean or hurtful comments about me online	.770-.813
3. Someone posted a mean or hurtful picture online of me online	.793-.861
4. Someone posted a mean or hurtful video online of me online	.753-.900
5. Someone created a mean or hurtful web page about me	.750-.910
6. Someone spread rumors about me online	.771-.802
7. Someone threatened to hurt me through a cell phone text message	.808-.855
8. Someone threatened to hurt me online	.784-.870
9. Someone pretended to be me online and acted in a way that was mean or hurtful	.756-.866

All loaded onto 1 component; Eigenvalue range 5.51-6.40 (61.22-71.52% of variance)

Cyberbullying Offending Scale	Loadings
1. I cyberbullied others	.537-.762
2. I posted mean or hurtful comments about someone online	.780-.857
3. I posted a mean or hurtful picture online of someone	.919-.949
4. I posted a mean or hurtful video online of someone	.910-.949
5. I spread rumors about someone online	.742-.916
6. I threatened to hurt someone online	.853-.923
7. I threatened to hurt someone through a cell phone text message	.910-.930
8. I created a mean or hurtful web page about someone	.910-.942
9. I pretended to be someone else online and acted in a way that was mean or hurtful to them	.877-.933

All loaded onto 1 component; Eigenvalue range 6.31-7.34 (70.08-81.57% of variance)