

Investigating Technology Usage and Perceptions on Cyber-Mobbullying in Higher Education in the United States among College-Age Youth: A Correlational Study at a Research Institution

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Abstract – Social scientist have confirmed that bullying and mobbing occur in higher education. With advanced technology, contemporary higher education has become a technology oriented educational environment for its students. While having advanced technology makes an educational environment more effective and efficient, such technology has caused a malicious social issue, cyber-mobbullying. The purpose of the current study was to examine the perceptions of college-age-youth in higher education on cyber-mobbullying and their characterization of their technology usages by conducting correlational analyses on the data from the Cyber-mobbullying Questionnaire. Implications for educators and practitioners in adult and higher education to combat cyber-mobbullying will also be provided.

Riassunto – Le ricerche nel settore delle scienze sociali hanno confermato il verificarsi di bullismo e mobbing nei contesti di istruzione superiore. Con l'avvento delle tecnologie avanzate, l'istruzione superiore contemporanea è diventata per i suoi studenti un ambiente educativo orientato alla tecnologia. Se è vero che le tecnologie avanzate hanno reso l'ambiente educativo più efficace ed efficiente, è altrettanto vero che esse hanno causato un serio problema sociale, il “cyber-mobbullying”. Lo scopo della presente ricerca è stato quello di esaminare le percezioni dei giovani studenti coinvolti nell'istruzione superiore relativamente a questo fenomeno e le loro rappresentazioni circa gli usi delle tecnologie attraverso analisi correlazionali sui dati di un questionario sul cyber-mobbullying. Inoltre, il contributo fornisce un quadro circa le implicazioni per gli educatori e gli operatori della formazione degli adulti, indicando alcune proposte per combattere il fenomeno.

Keywords – college-age youth, cyberbullying, higher education, technology usage, the United States context

Parole chiave – studenti universitari, cyberbullismo, istruzione superiore, uso della tecnologia, contesto statunitense

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1. Introduction

In recent years, conflicts among people have increasingly emerged and appeared in our society at large. For example, there have been an increased number of critical incidents in the world like terrorism. Media report such incidents every day and media consumers gain more understanding of how such horrible and malicious actions are occurring in the world. According to Johnson¹, conflicts and fights have historically existed because people had naturally used conflicts and fights to justify their own actions to colonize weaker individuals and nations and to dominate them and eventually own them.

In contemporary society, that historical aspect of using conflicts and fights in power dynamics at macro and micro (and often in between) levels is still being repeated², and conflicts are common in contemporary society as we only need to look to media that increasingly reports every day how violent our society has become. Such reports include a macro level of violence in conflicts like global terrorism, genocides, and military invasions and a micro level of violence and conflicts in things like homicides, police brutalities, and minor community incivilities among neighbors. Whatever the degree of direct or indirect involvement, people are always impacted by malicious actions whether they are initiated by individuals or by nations at large³.

Malicious actions at the micro level are usually, by tradition, identified and corrected by parents, educators, and members of the community in our society through parenting and education⁴. However, some malicious actions seem to be, to a certain degree, normalized by so-

¹ C. E. Johnson, *Organizational ethics: A practical approach*, Thousand Oaks, CA, Sage, 2012, 2nd ed.

² C. E. Runde, T. A. Flanagan, *Building conflict competent teams*. San Francisco, CA, Jossey-Bass, 2008.

³ M. Misawa, *Cuts and bruises caused by arrows, sticks, and stones in academia: Theorizing three types of racist and homophobic bullying in adult and higher education*, in "Adult Learning", 26(1), 2015, pp. 6-13.

⁴ C. E. Johnson, *Organizational ethics: A practical approach*, cit.

ciety at large. Normalized malicious actions occur very frequently and people feel that such actions are a regular daily happening. In other words, people are accustomed to a certain degree of negative culture.

One of the contemporary socially malicious behaviors among people is bullying. Bullying is a serious global social issue even in US society because it happens almost everywhere including at playgrounds, workplaces, and educational institutions such as K-12, higher education, and clinical environments⁵. Although bullying was thought to be a childhood behavior⁶, bullying is now thought of as a lifelong phenomenon, not just a childhood behavioral problem but something that continues into higher education and perhaps throughout people's lifetimes⁷.

In addition, scholars have agreed that bullying both physically and psychologically damages the individuals who directly experience it, including perpetrators and targets. Even those who experience bullying as bystanders or who indirectly experience bullying by listening to stories of it from targets and bystanders are affected by it⁸. For some targets, they experience physical symptoms such as dizziness, rapid breathing, increased blood pressure, muscle aches, and headaches⁹. For others, bullying negatively affected cognitive and emotional abilities in people exposed to it, causing mental slowness or confusions, indecisiveness, poor concentration, nightmares, anxiety, depression, numbness, and anger. Therefore, bullying affects people negatively¹⁰.

Bullying is typically enshrined in a traditional view, where it happens in a face-to-face envi-

⁵ R. M. Kowalski, G. W. Giumetti, A. N. Schroeder, H. H. Reese, *Cyber bullying amongst college students: Evidence from multiple domains of college life*, in L. A. Wankel, C. Wankel (Eds.), *Misbehavior online in higher education*, Bingley, Emerald Group Publishing, 2012, pp. 293-321; M. Misawa, *Psychological and positional terrorism on cyber campus environments: A pilot study on cyberbullying in higher education*, in M. Misawa (Ed.), *The first bullying, incivility, and violence in adult, higher, continuing, and professional education pre-conference*, Charlotte, NC, 2016 Adult Education Research Conference, 2016, pp. 4-13; G. Namie, R. Namie, *The bully at work: What you can do to stop the hurt and reclaim your dignity on the job*, Naperville, IL, Sourcebooks, Inc., 2009, 2nd ed.

⁶ D. Olweus, *Bullying at school: What we know and what we can do*, Malden, MA, Blackwell Publishing, 1993.

⁷ C. D. MacDonald, B. Roberts-Pittman, *Cyberbullying among college students: prevalence and demographic differences*, in "Procedia Social and Behavioral Sciences", 9, 2003-2009, 2010; M. Misawa, *Cuts and bruises caused by arrows, sticks, and stones in academia...*, cit.; M. Misawa, *Psychological and positional terrorism on cyber campus environments...*, cit.

⁸ D. Lines, *The bullies: Understanding bullies and bullying*, Philadelphia, PA, Jessica Kinsley Publishers, 2008; M. Misawa, *Cuts and bruises caused by arrows, sticks, and stones in academia...*, cit.; M. Misawa, *Psychological and positional terrorism on cyber campus environments...*, cit.

⁹ T. Field, *Bully in sight: How to predict, resist, challenge and combat workplace bullying: Overcoming the silence and denial by which abuse thrives*, Oxfordshire, OX, UK, Success Unlimited, 1996.

¹⁰ G. Namie, R. Namie, *The bully at work: What you can do to stop the hurt and reclaim your dignity on the job*, cit.

ronment and the roles of perpetrators, targets, and bystanders seem to be predefined. Due to advancement of technology and prevalence of new high-tech devices, a different form of bullying has become prevalent in cyber environments. It is usually called cyberbullying or cybermobbing. For the purpose of the present study, the author will use the term “cyber-mobbullying” to capture both cyberbullying and cybermobbing. It is a similar concept of bullying that is described in Japanese, *ijime* (いじめ), which describes the bullying phenomena from both individual and group perspectives¹¹.

Hinduja and Patchin¹² stated that bullying is no longer only happening in schoolyards but also online in cyber environments. Due to technological advancements and increasing usage of technology throughout society and throughout people’s life-spans, bullying is moving from the face-to-face context to a cyber space and becoming even more clearly a lifelong issue. Because of the increasing number of online distance courses in postsecondary education each year, adult educators need to be aware of cyber-mobbullying and be prepared to have to deal with cyber-mobbullying incidents in their own online classroom environments to protect college-age-youth.

In recent years, due to an increasing number of scholars and researchers who are interested in understanding the nature of cyberbullying, there have been an increasing number of studies on cyberbullying. Conventional studies on cyberbullying and cybermobbing focused on K-12 schooling include public, private, and home school environments in order to see how children experience bullying and mobbing in cyber environments. This extensive focus on childhood trauma is because bullying behaviors still connote childhood developmental issues to most. However, often times, childhood developmental behavioral issues move into their adolescence and adulthood. That means, such developmental behavioral issues are brought from K-12 schooling into higher education.

In order to capture a general sense of cyber-mobbullying, a survey research study was conducted to examine the perceptions of college-age-youth in higher education on cyber-mobbullying and to get them to characterize their usage of technology. The research questions that guided this study were: 1) How often do college-age youth use technology in higher education? 2) What are the characteristics of cyber-mobbullying in higher education? and 3) To what degree do students experience cyber-mobbullying in higher education? While this article strives to respond to those three research questions from the survey data, it will also pro-

¹¹ N. Kawabata, *Adolescent trauma in Japanese schools: Two case studies of ijime (bullying) and school refusal*, in “Journal of American Academy of Psychoanalysis”, 29(1), 2001, pp. 85-103; M. Misawa, *Cuts and bruises caused by arrows, sticks, and stones in academia...*, cit.; P. K. Smith, H. Cowie, R. F. Olafsson, A. P. Liefooghe, *Definitions of bullying: A comparison of terms used, and age and gender differences, in a fourteen-country international comparison*, in “Child Development”, 73(4), 2002, pp. 1119-1133.

¹² S. Hinduja, J. W. Patchin, *Bullying beyond the schoolyard: Preventing and responding to cyberbullying*, Thousand Oaks, CA, Corwin Press, 2009.

vide relevant literature, theoretical framework, and discussion based on the results of the study. This article will conclude with implications for educators, researchers, and practitioners in education who deal with youths and adolescents.

2. Relevant Literature

Bullying is a very old phenomenon though it was not systematically investigated until the early 1970s¹³. Scholars and researchers in education have explored how prevalent and impactful cyberbullying and traditional generic bullying are and have extensively focused on cyberbullying and bullying in K-12 settings¹⁴. They generally discuss the prevalence, frequency, and characteristics of cyberbullying and bullying phenomena in school settings and talk about what teachers and parents can do to protect their students and children from bullying. One of the earlier studies on traditional bullying was conducted by Dan Olweus. He focused on it as a unique childhood phenomena and made sense of those phenomena as childhood developmental behaviors that could be fixed through education via school teachers, school counselors, and parents.

Although bullying has been a serious issue for not only children but also for adults in society¹⁵, another form of bullying, cyberbullying, has also become a sociocultural problem in contemporary society due to technological advancements. Cyberbullying usually occurs in “the digital realm/medium of electronic text”¹⁶ and is typically defined as “any behavior performed through electronic or digital media by individuals or groups who repeatedly communicate hostile or aggressive messages intended to inflict harm or discomfort on others”¹⁷.

According to the comprehensive literature review that was conducted by Notar, Padgett, and Roden¹⁸, cyberbullying was experienced by students, either victims or bystanders, and

¹³ M. Misawa, *Cuts and bruises caused by arrows, sticks, and stones in academia...*, cit.; D. Olweus, *Bullying at school: What we know and what we can do*, cit.; S. Shariff, *Cyber-bullying: Issues and solutions for the school, the classroom and the home*, New York, NY, Routledge, 2008.

¹⁴ O. Erdur-Barker, *Cyberbullying and its correlation to traditional bullying, gender and frequent and risky usage of internet-mediated communication tools*, in “New Media & Society”, 12(1), 2010, pp. 109-125.

¹⁵ M. Misawa, *Outsiders within: Power dynamics and sociocultural experiences of gay male students of color in adult and higher education*, in “Society for International Education Journal”, 7(1), 2013, pp. 24-49; M. Misawa, *Cuts and bruises caused by arrows, sticks, and stones in academia...*, cit.; G. Namie, R. Namie, *The bully at work: What you can do to stop the hurt and reclaim your dignity on the job*, cit.; P. Randall, *Bullying in adulthood: Assessing the bullies and their victims*, New York, NY, Brunner-Routledge, 2001.

¹⁶ C. E. Notar, S. Padgett, J. Roden, *Cyberbullying: A review of the literature*, in “Universal Journal of Educational Research”, 1(1), 2013, p. 2, doi: 10.13189/ujer.2013.01010101.

¹⁷ C. Zalaquett, S. J. Chatters, *Cyberbullying in college: Frequency, characteristics, and practical implications*, SAGE Open, 2014, p. 1.

¹⁸ C. E. Notar, S. Padgett, J. Roden, *Cyberbullying: A review of the literature*, cit.

has been “the unfortunate by-product of the union of adolescent aggression and electronic communication”¹⁹. They stated that it is widely prevalent in our society because cyberbullying does not require direct contact and “anyone can be a cyberbully”²⁰. Hinduja and Patchin²¹ identified that between 10 % and 27 % of the students experienced cyberbullying. So, cyberbullying is widely prevalent in the US schools.

While researchers and scholars confirmed that cyberbullying has existed for a long time and has widely been prevalent in educational settings, research on cyberbullying in colleges and universities has not been widely conducted yet²², probably because bullying and cyberbullying have been associated with childhood development issues that would decline and even disappear when children enter into adulthood²³. MacDonald and Roberts-Pittman²⁴ stated that 21.9% of the college students had been cyberbullied and 8.6% of the college students in their study had also reported that they had cyberbullied someone else. Cyberbullying and bullying are serious contemporary social issues that negatively affect people involved. Although there have been many definitions of cyberbullying, cybermobbing, bullying, and mobbing, the researcher decided to use a modified version of his comprehensive definition of bullying²⁵.

For the purpose of the current study, the following operational definition of cybermobbing was utilized: *An incident of cyber-mobbing involves a victim who is somehow less powerful than the bully or bullies psychologically or by their sociocultural position or who fits the bully’s or bullies’ stereotype of a victim of bullying or harassment in a cyber environment, and perpetuate recurrent or singular; unwanted or unwarranted; publicly humiliating, intimidating, offensive, threatening or exclusionary conduct on the part of the bully that sustains the bully’s position of power by intentionally maliciously utilizing email, instant messaging (IM), social networking websites, chat rooms, or digital messages or images sent to computers, cell phones, or other digital communication devices that destroys the victim’s well-being, dignity, and safety or is significant enough to cause the victims physical and/or psychological harm.*

¹⁹ *Ibidem*, p. 1.

²⁰ *Ibidem*.

²¹ S. Hinduja, J. W. Patchin, *Bullying beyond the schoolyard: Preventing and responding to cyberbullying*, cit.

²² C. Zalaquett, S. J. Chatters, *Cyberbullying in college: Frequency, characteristics, and practical implications*, cit.

²³ M. Misawa, *Cuts and bruises caused by arrows, sticks, and stones in academia...*, cit.; P. Randall, *Bullying in adulthood: Assessing the bullies and their victims*, cit.

²⁴ C. D. MacDonald, B. Roberts-Pittman, *Cyberbullying among college students: prevalence and demographic differences*, cit.

²⁵ M. Misawa, *Cuts and bruises caused by arrows, sticks, and stones in academia...*, cit.

3. Method

The methodology for the current study to examine technology usage and cyber-mobbullying among undergraduate students was survey research and the method used to gather data was the online questionnaire. Survey research usually provides a quantitative description of trends by examining a sample of the population²⁶. So, by conducting survey research on cyber-mobbullying in higher education, the researcher should be able to look at general trends, prevalence, characteristics, and impact of cyber-mobbullying²⁷. Because the current study was interested in looking at the behaviors of undergraduate students in cyber space and their usage of technologies, the survey research methodology was chosen for the current study. This study can provide a “numeric description of trends, attitudes, or opinions”²⁸ of the populations in relation to cyber-mobbullying by studying a sample of college populations. It was thought to be the preferred method of data collection because it could be used to gather information to learn about the population, and it is an economical method for data collection since a questionnaire could be created and administrated by a researcher at nominal cost²⁹. Due to the relevance of this issue, it seemed that it would be valuable to gather data directly from undergraduate students in higher education as a sample of the study versus interpreting or trying to understand existing data related to undergraduate students.

4. Population and Sample of the Current Study

For the current study, the convenience sampling approach was used to gain participants. This sampling approach was chosen for this study because the researcher could get people who would be willing to complete the survey when needed³⁰. The sample of the study population was undergraduate students at an urban research university in the southeastern region of the United States. This population was conveniently selected because they are the most likely

²⁶ M. Balnaves, P. Caputi, *Introduction to quantitative research methods: An investigative approach*, Thousand Oaks, CA, Sage, 2001; J. Creswell, *Research design: Qualitative, quantitative, and mixed methods approaches*, Thousand Oaks, CA, Sage, 2014, 4th ed.

²⁷ C. D. MacDonald, B. Roberts-Pittman, *Cyberbullying among college students: prevalence and demographic differences*, cit.; C. Zalaquett, S. J. Chatters, *Cyberbullying in college: Frequency, characteristics, and practical implications*, cit.

²⁸ J. Creswell, *Research design: Qualitative, quantitative, and mixed methods approaches*, Thousand Oaks, CA, Sage, 2009, 3rd ed., p. 12.

²⁹ L. Anders, *Designing & doing survey research*, Thousand Oaks, CA, Sage, 2012.

³⁰ E. Blair, J. Blair, *Applied survey sampling*, Thousand Oaks, CA, Sage, 2015.

to be using electronic and mobile devices on campus. Ultimately, a convenience sample of 400 undergraduate students was examined. The sample size was determined by the size of the population with consideration of the margin of error and the confidence level. The margin of error is the amount of error that the researcher can tolerate and is usually 5%³¹. The confidence level is the amount of uncertainty the researcher can tolerate and is typically 90%, 95%, or 99%³². So, for the current study, the researcher used 5% for the margin of error and 95% for the confidence level to calculate the appropriate sample size for the population of 15,600 undergraduate students, which was the total student population at the research site. Based on that, the recommended sample size for the current study was 375. With a sample size of 375 or more, the current study would be generalizable, and since a sample size of 400 was obtained, this study contained an appropriate sample size.

5. Procedure

Institutional review board (IRB) approval was obtained from the researcher's university. After having obtained the IRB approval, the study was advertised via email to Student Affairs leadership, faculty, and student groups such as the Student Government Association (SGA) general members and executive officers. In addition, student organizations' Facebook pages were utilized to advertise the study. Facebook was chosen because student groups such as SGA have student Facebook pages and it was an efficient way to reach students. The study population that was sampled were provided with a link to the questionnaire for completion and submission online with data collected electronically and anonymously.

The questionnaire was administered using an electronic mechanism, Qualtrics, which was supported by the university when this study was conducted. The survey instrument was made available to students via the Internet, social media and various student organizations and was available for one month. One month was chosen because it provided sufficient time for the researcher to make contact with a sample of the study population via email in addition to time to follow-up and increase participation levels.

6. Measures

The Cyber-mobbullying Questionnaire was developed by the author³³ and was validated by the survey committee that consisted of experts in academic fields such as measurement,

³¹ *Ibidem*.

³² A. Fink, *How to conduct surveys: A step-by-step guide*, Thousand Oaks, CA, Sage, 2013, 5th ed.

³³ M. Misawa, *Psychological and positional terrorism on cyber campus environments...*, cit.

quantitative research, social and behavioral sciences, adult education, and higher education. There were three main sections that dealt with questions about demographics, personal experience, and bullying behavior for the purpose of the current study.

– *Demographics questionnaire.* Students' self-reported demographic information was collected from the questionnaire by asking their birth assigned sex, gender identities, sexual orientation, age, and race/ethnicity. As for their birth assigned sex, they were asked to respond to one of four options (male, female, intersex, and prefer not to answer). Students were also asked to identify their gender identity by indicating one of four options (male, female, gender non-conformity, and prefer not to answer) and sexual orientation by selecting one of seven options (straight, lesbian, gay, bisexual, pansexual, asexual, and prefer not to answer). This distinction between gender identity and sexual orientation is important³⁴ in studies that deal with gender identity and sexual orientation because these aspects are pivotal to a person's identity and feelings of wholeness and have to be considered separately unlike traditional studies where gender and sexual orientation were often deemed to have no differences between them.

Students were asked to respond to their age by choosing their age from a drop-down menu. If they were under 18 years old, then they were led to the end of the survey because this study was allowed to have research participants only over 18 years old. Unlike traditional higher education institutions, there have an increasing number of nontraditional students in the US higher education³⁵. Since this study focused on technology usage of college aged students and the perceptions and experiences of cyber-mobbullying on campus, this let the author screen out nontraditional age undergraduate populations.

– *Personal experience.* To assess undergraduate students' cyber-mobbullying experiences, students were asked to respond to four questions regarding their cyber-mobbullying experiences: cyber-mobbullying awareness with technology, cyber-mobbullying experiences, frequency of cyber-mobbullying, and duration of cyber-mobbullying. As for assessing their cyber-mobbullying awareness with technology, students were asked to answer the question, "Which of the following venues are you aware of that are used to cyberbully? And, they were asked to respond to 14 items such as Facebook, Twitter, instant messaging, and YouTube whether or not they were aware of the means of cyber-mobbullying in the cyber environment.

Students were also asked to respond to whether or not they had been cyberbullied since

³⁴ M. Misawa, *Cuts and bruises caused by arrows, sticks, and stones in academia...*, cit.; M. Misawa, *Psychological and positional terrorism on cyber campus environments...*, cit.; S. Rankin, G. Weber, W. Blumenfeld, S. Frazer, *State of higher education for lesbian, gay, bisexual & transgender people*, Charlotte, NC, Campus Pride, 2010.

³⁵ S. B. Merriam, R. S. Caffarella, L. M. Baumgartner, *Learning in adulthood: A comprehensive guide*, San Francisco, CA, Jossey-Bass, 2007, 3rd ed.

enrolling at the university. If they selected a no to this question, then they were directed to the next section about suicidality. If they selected a yes to this question, they were guided to the next two sub questions that focused on their cyber-mobbullying experiences in terms of the frequency and duration. As literature suggested, this study focused on their cyber-mobbullying experiences within the past six months in terms of the frequency and duration of their cyber-mobbullying experiences. To gauge the frequency, the question that asked was, "Within the past six months, how often were you cyberbullied?" In response to that question, students reported on an eight-point Likert-type scale (1 = never to 8 = more than 10 times a week). The next sub question was about the duration of cyber-mobbullying that they had experienced, "If you were cyberbullied within the last six months, how long did the cyber-mobbullying last?" To assess the impact of cyber-mobbullying on victims, they were asked to respond on a five-point Likert scale from 1 (did not occur in the last six months) to 5 (occurred between three and six months ago).

– *Bullying behavior.* This section of the questionnaire asked students to identify whether they had been cyberbullies by having sent a harmful, cruel, or false message or image to someone at the university. Students were asked to indicate a yes or no response to the question, Have you ever sent a harmful, cruel, or false message or image to someone else at the university? If the answer to this question was "no," then the participants would skip the follow-up sub questions with regard to cyberbullies' behaviors and would be guided to the next question of the section. If the answer to this question was "yes," then the participants were guided to two sub questions that deal with cyberbullies' behaviors. One of the questions was about their intention in cyberbullying others. There were nine yes/no statements like "I did not like them because they were different from me" or "I wanted revenge after being mistreated by others" and "I was jealous of them" for them to respond to. The other question was about methods that they used to cyberbully others. There were 28 yes/no statements for them to respond to. Those statements were like: "sending harassing emails," "sending harassing pictures," "posting harassing pictures on Facebook," and "spreading rumors or lies online."

7. Results

A sample of 400 undergraduate students (120 females, 260 males, 20 gender nonconforming people) ranking in age from 18-25 at a research institution located in the southern region of the United States participated in the current study. Table 1 shows the demographic information about the study sample.

Table 1 – Demographic Characteristics of All Respondents (N = 400)

Demographic Characteristics	N	%
Gender		
Male	260	65.0%
Female	120	30.0%
Gender Nonconforming	20	5.0%
Race		
American Indian	0	0.0%
Alaskan Native	0	0.0%
Asian	20	5.0%
Pacific Islanders	20	5.0%
Black/African American	140	35.0%
Latino/a	100	25.0%
White	100	25.0%
Others	20	5.0%
Education Level		
Freshman	20	5.0%
Sophomore	0	0%
Junior	160	40.0%
Senior	180	45.0%
5+ Year Senior	40	10.0%
Sexual Orientation		
Straight/Heterosexual	320	80.0%
Gay	40	10.0%
Lesbian	20	5.0%
Bisexual	20	5.0%

Of the 400 participants, the majority of the study participants (80%) in the sample were Black/African American (n=140, 35%), Latino/a (n=100, 25%), and White (n=100, 25%). An overwhelming majority of the participants were heterosexual/straight (n=320, 80%) while lesbian, gay, and bisexual (LGB) participants were 20% (n=80). Gate (2011) has calculated that an estimated 3.5% of US adult populations identify as LGB, and this study remarkably had

greater LGB representation than that. The participants were students in the freshman (n = 20, 5%), junior (n = 160, 40%), and senior (n = 220, 55%) classes. In this study, there were no sophomore level students, and a majority of the participants were students at the senior level. The institution the students are part of has both undergraduate and graduate (both master's and doctoral) programs in a variety disciplines from social sciences to technologies and is classified as a research high institution by the Carnegie classification system.

8. Data Analysis

– *Descriptive analyses of cyber-mobbullying experiences.* As scholars and researchers in cyberbullying and bullying described, bullying behaviors in face-to-face and cyber environments are not new and have impacted victims daily³⁶ (Hinduja & Patchin, 2009; Misawa, 2015; Randall, 2001). Table 2 shows the number of the self-reported cyber-mobbullying victims. In this current study, one-quarter of the participants had experienced being cyber-mobbullied since they had enrolled at the university (n = 100, 25.0%). Of the 100 participants, 40 male (40.0%), 40 female (40.0%), and 20 gender non-conforming (20.0%) students reported that they were cyber-mobbullied. Interestingly, all the participants who identified themselves as gender nonconforming students reported that they were cyber-mobbullied. This indicates that gender nonconforming students are more likely to become cyber-mobbullying victims in higher education. Education levels of the participants also indicated that senior students (n = 60, 60.0%), which accounted for over half of the study population, seem to experience cyber-mobbullying more than other educational levels. This may indicate that longer students are on campus in higher education, they are more likely they are to experience cyber-mobbullying and that higher education seems to somehow help cyber-mobbullying proliferate as long as it is not prevented.

³⁶ S. Hinduja, J. W. Patchin, *Bullying beyond the schoolyard: Preventing and responding to cyberbullying*, cit.; M. Misawa, *Cuts and bruises caused by arrows, sticks, and stones in academia...*, cit.; P. Randall, *Bullying in adulthood: Assessing the bullies and their victims*, cit.

Table 2 – Victims of Cyber-Mobbullying (N = 400)

	N	%
Overall	100	25.0%
Gender		
Men	40	40.0%
Women	40	40.0%
Gender Non-Conforming	20	20.0%
Education Levels		
Freshman	20	20.0%
Sophomore	0	0.0%
Junior	20	20.0%
Senior	60	60.0%

Note: The current study did not have any participants from the sophomore educational level.

– *Descriptive analyses of technology usage frequency among undergraduates.* As technology advances, our daily life has become more convenient. In higher education, various technologies have been recently used in both face-to-face traditional and cyber educational environments to educate their students³⁷. Undergraduate students in this study indicated a highly frequent use of technology. Table 3 shows the frequency of technology usage and devices. Most people (90%) use cell phone more than once a day on campus. When considering smartphones, students could use them to access the Internet and are often required to use their smartphones to participate in class surveys. So, using cell phones has become a pivotal part of their academic lives on campus. Also, about 85% of the undergraduate students in this study indicated that they use their own personal computers at least once a day and some of them (70%) use their personal computers more than once a day. This means that their academic life requires using computers to complete their assignments throughout the semester and that their courses often have online and/or hybrid components so that they have to use their own computers on campus. While usage of computer seems to be very frequent, the un-

³⁷ C. D. MacDonald, B. Roberts-Pittman, *Cyberbullying among college students: prevalence and demographic differences*, cit.; M. Misawa, *Psychological and positional terrorism on cyber campus environments...*, cit.

dergraduate students in the current study seem not to be using public computers or school computers that are usually located at multiple places on campus like the university library and student union. This indicates that the undergraduate students in this study use their own personal computers on campus.

Table 3 – Usage Frequency of the Technology (N = 400)

	Frequency of technology usage % (N)				
	Never or less than once a month	Multiple times a month	At least once a week	At least once a day	More than once a day
Cell phone	5.0 (20)	0.0 (0)	5.0 (20)	0.0 (0)	90.0 (360)
Personal computer	5.0 (20)	0.0 (0)	10.0 (40)	15.0 (60)	70.0 (280)
School computer	25.0 (100)	10.0 (40)	15.0 (60)	10.0 (40)	40.0 (160)
Other public computer	55.0 (220)	15.0 (60)	5.0 (20)	0.0 (0)	25.0 (100)
Tablet	35.0 (140)	20.0 (80)	10.0 (40)	0.0 (0)	35.0 (140)

– *Descriptive analyses of methods used in cyber-mobbullying among undergraduates.* As stated above, the undergraduate students in the current study had high usage of cell phones and personal computers. As their technology usage increases, their purpose of using the technologies changes. There are many ways to cyberbully someone or to be cyberbullied. Some of the ways for cyberbullies to bully a target or victim is to use variety of online sites and social media. Based on the knowledge of the previous researchers' and of the researcher of this study, 13 cyber-related environments and kinds of social media were identified. Table 4 demonstrates the strategies of cyber-mobbullying.

Table 4 – Some of the Strategies of Cyber-Mobbullying (N = 400)

Strategies	N (male/female/gender non-conforming)	% (male/female/gender non-conforming)
Facebook	380 (240/120/20)	95.0% (92.3/100/100)
Twitter	380 (240/120/20)	95.0% (92.3/100/100)
Instagram	360 (220/120/20)	90.0% (84.6/100/100)
Texting	340 (220/100/20)	85.0% (84.6/83.3/100)
Instant Messaging	340 (220/100/20)	85.0% (84.6/83.3/100)
Email	280 (180/80/20)	70.0% (69.2/66.7/100)
Snapchat	280 (200/80/0)	70.0% (76.9/66.7/0)
Tumblr	200 (140/60/0)	50.0% (53.8/50.0/0)
YouTube	200 (120/80/0)	50.0% (46.2/66.7/0)
Online Gaming	160 (100/60/0)	40.0% (38.5/50.0/0)
Dating Sites	160 (120/40/0)	40.0% (46.2/33.3/0)
Online Classes	140 (80/40/20)	35.0% (30.8/33.3/100)
Reddit	60 (60/0/0)	15.0% (23.1/0/0)

While there are many cyber-based means and kinds of social media, Facebook and Twitter were the most utilized means of cyber-mobbullying in this study. It is obvious that Facebook is popular and well-used by many people including college students (MacDonald & Roberts-Pittman, 2010). Almost all the participants (n = 380, 95.0%) were aware that Facebook and Twitter were utilized to cyber-mobbully in higher education. In addition, the participants in the current study indicated that Instagram, texting, and instant messaging were also heavily used to cyber-mobbully in higher education.

– *Descriptive analyses of frequency of cyber-mobbullying among undergraduates.* Table 5 provides data about frequency of cyber-mobbullying among undergraduates in the past six months. Although majority of the participants had not experienced cyber-mobbullying in the past six months, one-quarter (25%, n = 100) had experienced cyber-mobbullying in higher education in the past six months. It is crucial to say that 20% of those people had at least experienced cyber-mobbullying once a month and 5 % of them had experienced several incidents of cyber-mobbullying in a week. That means that many students experience some sort of cyber-mobbullying in higher education within one month.

Table 5 – Frequency of Cyber-Mobbullying in the past six months (N = 400)

	Frequency of cyber-mobbullying in the past six months % (N)				
	Never	Less than once a month	Once a month	2-3 times a month/Once a week	2-3 times a week
Overall	75.0% (300)	5.0% (20)	5.0% (20)	10.0% (40)	5.0% (20)
Male	84.6% (220)	7.7% (20)	0% (0)	0% (0)	7.7% (20)
Female	66.7% (80)	0% (0)	16.7% (20)	16.7% (20)	0% (0)
Gender Non-Conforming	0% (0)	0% (0)	0% (0)	100% (20)	0% (0)
Freshman	0% (0)	100% (20)	0% (0)	0% (0)	0% (0)
Junior	87.5% (140)	0% (0)	0% (0)	0% (0)	12.5% (20)
Senior	72.7% (160)	0% (0)	9.1% (20)	18.2% (40)	0% (0)

When looking at the gender groups, all of them indicated that they frequently experienced cyber-mobbullying in the past six months. However, male undergraduate students (15.4%) in this study reported that they had experienced cyber-mobbullying less than female (33.4%) and gender non-conforming students (100%). For gender non-conforming undergraduate students in the current study, they had always experienced cyber-mobbullying.

– *Correlational analyses of cyber-mobbullying perpetrators and technology usage.* Correlations were performed to determine the interrelationship between cyber-mobbullies or cyber-mobbullying perpetrators and technology usages (cell phone, personal computer, school computer, public computer, and tablet). For this study, the point-biserial r was utilized because the researcher was interested in measuring the strength of a relationship between one continuous variable and one dichotomous variable³⁸. Table 6 shows correlations between cyber-mobbullies/ cyber-mobbullying perpetrators and technologies. All of the technological devices had positive interrelationships with cyber-mobbullying perpetrators. In particular, higher usages of tablets positively correlated with the perpetrators' cyber-mobbullying behaviors ($r_{pb} = .470$, $n = 400$, $p = 0.00$). Also, high usage of their personal computers and computers at school on campus moderately correlated positively with the perpetrators' cyber-mobbullying behaviors [personal computer ($r_{pb} = .310$, $n = 400$, $p = 0.00$) and school computer ($r_{pb} = .386$, $n = 400$, $p = .001$)]

³⁸ A. Field, *Discovering statistics using SPSS*, Thousand Oaks, CA, Sage, 2009, 3rd ed.

Table 6 – Correlations between cyber-mobbullying perpetrators and technology usage

	Cell phone	Personal computer	School computer	Public computer	Tablet
Cyber-mobbullying perpetrators	.163**	.310**	.386**	.329**	.470**

** $p < 0.01$

9. Implications and Conclusion

The results of the current study showed that undergraduate students, mostly aged 18-22, utilized technology very frequently on campus in higher education. Unfortunately, although having advance technology makes our daily life more convenient and more comfortable, such technology could be often utilized in a wrong way³⁹. Also, in the contemporary classrooms, undergraduate education emphasizes technology usage in the classroom environments. Education is becoming more and more a technology oriented environment where both educators and students use technology in a learning transfer process. However, as this study stated, the more technology is utilized, the more cyber-mobbullying seems to occur. So, it is important for educators and practitioners to understand how technology influences students' lives in classrooms and on campus.

One of the ways that educators can understand such technology usage by their higher education students would be to implement a needs-assessment as a formative evaluation throughout the educational process in higher education. When educators assess students in terms of their knowledge about the subjects that they are studying, educators should also ask them about their technology usages and their means of using the technology inside and outside of higher education. That should help educators understand who might be at risk of being cyber-mobbullied and how their students play out power dynamics in the higher education context.

The current study also revealed how prevalent cyber-mobbullying was in higher education among college aged students and provided some analyses on relationships between cyber-mobbullying perpetrators' behaviors and their technology usages and revealed that there were positive associations between them. That means, cyber-mobbullying perpetrators use technology very frequent to cyber-mobbully others. One of the characteristics of cyber-mobbullying

³⁹ O. Erdur-Barker, *Cyberbullying and its correlation to traditional bullying, gender and frequent and risky usage of internet-mediated communication tools*, cit.

is its anonymity, which does not require cyber-mobbullies to confront the victims⁴⁰. This anonymity in cyber-mobbullying seems to make cyber-mobbullies meaner and nastier towards their victims. As mentioned, cyber-mobbullying is a serious social problem as bullying itself has been a serious problem. So, it is important for educators and practitioners to point out cyber-mobbullying behaviors as soon as possible and to make serious efforts to reduce and ultimately eliminate cyber-mobbullying from their own campuses.

In order for educators in higher education to make progress in reducing and ultimately eliminating cyber-mobbullying, they need to create an educational culture where cyber-mobbullying is not acceptable. That means, they must implement *anti-mobbing*, *anti-bullying*, and *anti-cyber-mobbullying practices* in higher education. They can set ground rules and online etiquette not only formed by the educators themselves but also with the collaboration of students. Also, educators should spell out the consequences for when cyber-mobbullying incidents happen. By setting up such ground rules, online etiquette, and consequences at the beginning of the semester or the school year, both educators and learners can see and understand how to interact with each other civilly.

This study has another implication for educators and practitioners in adult and higher education. Adult and higher education has traditionally been focused on diversity, equality, and social justice⁴¹. Cyber-mobbullying is not a form of justice. It degrades and damages cyber-mobbullying victims. It is uncivil and unjust behavior that comes not only from children and adolescents but also from adults. In order to reduce cyber-mobbullying, it is important for educators and practitioners in adult and higher education to understand its characteristics, prevalence, and impact of technology usages and cyber-mobbullying behaviors.

The current study and other studies have shown that cyber-mobbullying has negative psychological and physical effects on learners who are perpetrators, victims, and bystanders and that more research on bullying, mobbing, and cyber-mobbullying need to be conducted to capture the depth and impact of cyber-mobbullying. Since cyber-mobbullying psychologically negatively affects victims and bystanders and often leads to suicidal idealizations and attempts by these individuals⁴², adult educators should have some strategies in place to create learning environments where caring and both physical and psychological safety are emphasized. By doing that, they should be able to create an anti-mobbullying and anti-cyber-mobbullying environment for all.

Adult educators and learners, whose job it is to bring a bright future to our society at large,

⁴⁰ S. Hinduja, J. W. Patchin, *Bullying beyond the schoolyard: Preventing and responding to cyberbullying*, cit.; C. D. MacDonald, B. Roberts-Pittman, *Cyberbullying among college students: prevalence and demographic differences*, cit.; M. Misawa, *Cuts and bruises caused by arrows, sticks, and stones in academia...*, cit.

⁴¹ M. Misawa, *Outsiders within: Power dynamics and sociocultural experiences of gay male students of color in adult and higher education*, cit.

⁴² M. Misawa, *Psychological and positional terrorism on cyber campus environments...*, cit.

will have to be ready to combat against cyber-mobbullying. Education for adults will be a key battleground in the fight against this new form of psychosocial terrorism.

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Received June 5, 2017
Revision received June 16, 2017 / June 19, 2017
Accepted June 23, 2017