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STAYING CONNECTED DURING CRISIS:
A LOOK INTO HOW UNIVERSITIES COMMUNICATE AND NOTIFY
THEIR CAMPUS OF EMERGENCIES

By

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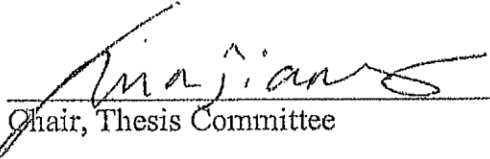
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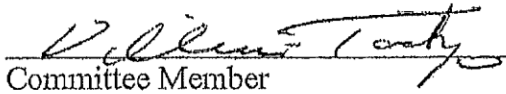
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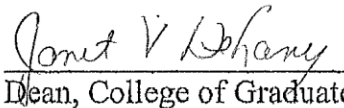
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ABSTRACT

Staying connected during crisis: A look into how Universities communicate and notify their campus of emergencies

Alexandria L. Ganzermiller

In recent years, higher education institutions have been overwhelmed by a wide variety of public safety and emergency threats – namely natural disasters and mass violence crises that have warranted mass notification. Emergency text messaging notification systems are emerging as a new form of communication that needs to be integrated into existing crisis communication plans at college and university campuses. This study discusses how text messaging notification systems aids in providing emergency alerts and information to internal stakeholders in order to reduce chaos, mitigate harm, and control crisis situations. A series of in-depth interviews were conducted with 12 faculty and staff members at a comprehensive master-level university on the east coast to obtain information and grasp how emergency text alerts are integrated in the university's overall emergency communications strategy. Using grounded theory, the data obtained offered best practices for integrating emergency text messaging in the overall crisis communication plan. Results indicated the importance of higher educational institutions employing a flexible crisis communication plan that has the capability of responding to unanticipated variables as a crisis or emergency develops. Additionally, it was concluded that using a variety of communication methods to create redundancy with stakeholders is critical to increase the likelihood of successful emergency communication and response.

Keywords: crisis communication, mass text messaging system, higher education, colleges and universities, in-depth interviews.

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Introduction

By 2050, an estimated two billion people will have been affected by some sort of disaster (Aten, Leavell, Gonzalez, Luke, Defee, & Harrison, 2011). In today's society there is a constant need for multiple forms of timely emergency preparedness information from both mediated and non-mediated communication (Vanderford, 2007). This is due in part because of natural and man-made disasters affecting the lives of citizens everywhere. Tanner, Friedman, Koskan, and Barr (2009) believed these disasters include: hurricanes, tornadoes, tsunamis, fires, earthquakes, wars, and even terrorist activities. In recent years, numerous challenges and opportunities in crisis communication have occurred at higher education institutions due to a wide variety of emergency crises, such as natural disasters and mass violence that have warranted mass notification. The continuous advancements in technology have paved the way for information to be disseminated in a very timely manner and provide more efficient coverage of the latest happenings around the world.

The Internet has the ability to send a vast amount of information to a large number of people simultaneously (Paul, 2001). Thus, it is important to assess the volume and scope of emergency information being disseminated over new media, including the Internet and all of its variations (i.e., Internet sites, blogs, YouTube, MySpace, Facebook, Twitter) and other developing media technologies like cell phone video and text messaging (Houston et al., 2008). School administrators strive to use a range of communication mechanisms that serve one goal – to alert the greatest number of people, in the quickest way possible. It is evident that the role of communicating has significantly changed over the years, especially with the growth of social media and the need to constantly be connected and plugged into mobile devices.

The U.S. Department of Education requires colleges and universities to have a way to

communicate with their students in a timely manner in the event of an emergency (2010). In our connected, 24/7 world, the definition of a timely manner has changed. Timely manner no longer means days or hours – every minute counts. Emergency messaging systems allow colleges, universities, and other educational institutions to instantly communicate with an entire campus in minutes in the event of a crisis or disaster by sending out campus-wide text alerts, which are delivered to phones immediately. There is an expanding reliance on electronic communication among students, faculty, staff, and administrators. Due to the geographic dispersion of students that attend universities, there is a direct need to communicate reliably and consistently via e-mail as well as electronic messaging. Because of this increasing reliance on and acceptance of electronic communication, it is considered an official means for communication within many universities.

During crises, the public attempts to discover disaster management information concerning how the situation at hand will affect them and to determine what they should do (Reynolds & Seeger, 2005). Studies indicated that citizens have started using end-user technologies to connect and communicate during crises or natural disasters (Houston, Pfefferbaum, & Reyes, 2008; Shankar, 2008). Because the general public so readily utilizes the Internet as an information source, accurate information should be revealed as well as clear, specific instructions to help aid in times of crisis, emergencies, and natural disasters.

This study will highlight the theories of mobilizing information (Tanner, Friedman, Koskan, & Barr, 2009; Samarajiva, 2005), situational crisis communication theory (Coombs, 2007; Coombs & Holladay, 2002), and grounded theory (Glaser & Strauss, 1967; Nicoter, 1993; Seeger, 2006). Crisis is a daily occurrence at higher education institutions; however, not all crises merit campus-wide emergency alerts. Thus, understanding the dynamics in deciding what

information is critical to relay to stakeholders and determining the media choice and effective communication and messaging efforts will prove to be instrumental when introducing new technologies within emergency notification systems in the years ahead.

This study discusses how text/e-mail notification systems aid in providing emergency alerts and information to internal stakeholders at a comprehensive master-level university on the east coast, namely faculty, administrators, and staff. It is crucial to share critical emergency information with these stakeholders and publics in order to reduce chaos, mitigate harm, and control crisis situations. To fill the aforementioned gaps in past research, this study aims to examine emergency and disaster messaging and communications available to stakeholders at comprehensive master-level university on the east coast, specifically detailing effective communication procedures. Furthermore, this study analyzes the impact and effectiveness of deploying messages. It is essential to grasp how emergency alerts are integrated in overall communications strategies. This study attempts to answer the following research questions:

RQ1: How do universities incorporate emergency text notification systems into the overall crisis communication plan to disseminate information to campus?

RQ2: What sort of situation merits a text notification alert?

RQ3: From the perspectives of internal stakeholders at universities, what are the strengths and weaknesses of using text alerts in times of crisis? How do internal stakeholders perceive text and e-mail emergency notification alerts?

Defining Crisis

The terms crisis, disaster, and emergency are all too often used interchangeably. Coombs and Holladay (2010) believed that there are distinct differences between disasters and crises. A disaster is defined as a “dangerous event that causes significant human and economic loss and

demands a crisis response beyond the scope of local and State resources” (p. 59), whereas a crisis meets one of the following four criteria: unpredictability, threat to stakeholder expectations, impact on organizational performance, and potential for negative outcomes (Coombs, 2007). Crisis can be further defined as “a specific, unexpected, and non-routine event or series of events that create high levels of uncertainty and threaten or are perceived to threaten an organization’s high-priority goals” (Seeger, Sellnow, & Ulmer, 2007, p.7). Thus, it can be concluded “since crises are by definition created due to organizational weakness they are inherently preventable, whereas disasters are inherently unpreventable since they are external to the organization and beyond control” (Coombs & Holladay, 2010, p. 98). However, many believe that both crisis and disaster can be considered an emergency. Cohen and Lemish (2004) defined emergency as something that happens suddenly without advanced warning, without being able to prepare; it can happen anywhere in unexpected places and at unexpected times.

Public relations and crisis communication. In recent years, campus tragedies have forced leaders of education to reevaluate their crisis planning and communication efforts (Badzmierowski, 2011). Many higher education institutions rely upon a publicity model of public relations in their effort to increase emergency preparedness and information to publics (Grunig, 1976, 1992). Public relations has been defined as “the management function that establishes and maintains mutually beneficial relationships between an organization and the publics on whom its success or failure depends” (Cutlip, Center, & Broom, 1994, p.6). One of the most researched and studied functions of public relations is the concept of crisis communication.

According to Avery, Larisey, Kim, and Hocke (2010), “very few topics have been so fully embraced within public relations as crises” (p. 190). By transmitting critical information to

stakeholders about threats during and after a crisis, effective crisis communication aims to protect an organization as well as its constituents. It is believed that early roots of crisis communication placed an exclusive focus on the needs of the organization, while more modern-day crisis communication recognizes the importance of planning for crisis with publics in mind (Gilpin & Murphy, 2010). Essential contemporary public relations tenets include providing open and transparent communication to express both outcomes and practical expectations (Coombs, 2007; Heath & Palencher, 2008; Pauly & Hutchinson, 2005). Public relations practitioners are able to demonstrate and validate the importance of the field during a crisis through maintaining and restoring order, promoting safety of a variety of publics, and producing trust among various stakeholders.

Crisis management and communication. The best way to handle a crisis communication situation is to have a plan in place for managing a crisis situation. Crisis management refers to the actions taken by an organization during a crisis in an effort to minimize any negative effects upon the organization itself, stakeholders, or the industry as a whole (Coombs, 2007). According to Cho and Gower (2006), crisis management involves planning applicable and appropriate responses to a particular crisis situation. Jaques (2007) proposed a relational model of crisis management including four categories: crisis preparedness, crisis prevention, crisis incident management, and post-crisis management. He stressed that crisis incident management (including during-crisis emergency communication) is critical. Because each organization and crisis is unique, it is difficult to develop appropriate responses to a given situation; however, it is important to properly manage the crisis and communicate fittingly to all stakeholders. Effective communication in and during a crisis involves extensive planning, preparation, and training.

During crises, the public attempts to discover disaster management information concerning how the situation at hand will affect them and to determine what they should do (Reynolds & Seeger, 2005). People react to crisis in a variety of ways, but there are many ways to prepare and encourage citizens to proceed and take the most effective action. According to Badzmirowski (2011) it is essential to consider human factors in crisis management plans, especially at higher education institutions.

Proper planning and management in a crisis can have a great affect on an organization. Coombs (2007) stated that immediate crisis prevention and response protects lives, health, and environment. It can also have an effect on an organization financially, by attempting to limit the amount of lost revenue, facilitating reputation management, and saving money and time spent addressing a crisis. Waymear and Heath (2007) emphasized that an organization's legitimacy is at risk when the public believes that the level of response is not fitting with the event taking place. Thus, the ramifications of proper crisis response and communication can be profound. Existing literature further deduces that crisis communication is a means used by organizations to better control how crisis events are framed (Waymer & Heath, 2007). Responsible crisis communication includes how an organization responds in crisis by releasing thorough, accurate, and timely information to stakeholders, concerned publics, the media, and specifically those who are potentially bearing the risk. It includes various strategies and tactics employed to disburse messages. Crisis management refers to the actual methods performed by an organization to remedy a crisis. It is a continuous process in which all phases of the plan are being reviewed and revised. Mitigation and prevention planning requires agencies and organizations to work together and share information. Consequently, communication among stakeholders is critical. Mitroff, Diamond, and Alpaslan (2006) stated, "crisis management must be undertaken and practiced

systematically because crises are systemic in both their nature and impacts” (p. 66). Both crisis management and crisis communication are crucial to crisis planning and preparation.

Crisis planning. Keeping an entire city safe and constantly alerted is nearly impossible; keeping a campus informed is just as difficult (Nolan, 2007). A well-developed crisis communication plan trains and informs staff and employees of their roles and responsibilities during a crisis. Effective crisis planning begins with leadership at the top. Top leadership helps set the policy agenda, secures funds, and brings the necessary people together. Training and practice are essential for the successful implementation of crisis plans. A crisis-management team should be created and undergo training together in order to function as a cohesive unit in the heat of an actual disaster. A vital part to any organization’s crisis management plan includes a comprehensive and well-thought-out communications plan to relay information to a variety of publics. However, predicting and planning for every possible situation is nearly impossible (Mitroff et al, 2006). No campus professional can ever fully be prepared for all potential crises that occur on college campuses. However, there are basic steps that can be translated and incorporated into any campus. Although schools have no control over some of the hazards that may impact them, they can take actions to minimize or mitigate the impact of such incidents.

Mileti (1999) proposed a four-phase model of crisis/disaster management including mitigation, preparedness, response, and recovery, which defines the communication that planners, responders, and authorities use when discussing and planning unforeseen disasters. To ensure that disaster preparedness plans are sufficiently comprehensive, it is extremely important to include a variety of stakeholders. Crisis planning involves the administration, operations, and management officials to properly propagate information to the people at large. Past scholars believe that the crises with the largest impact and highest likelihood of occurrence warrant the

most comprehensive planning (Coombs, 2007; Palenchar, 2009). Some crises are more likely to occur based on geographic location. Coombs (2007) composed a list of the most common forms of crisis to assist organizations in developing plans in times of crises. He stressed that most crises derive from negligent, intentional, accidental, or naturally occurring events and include natural disasters, workplace violence, rumors, malice, human-error product harm, human-error accidents, and organizational misdeeds (p. 65). Additionally, acts of terror have recently become a common form of crisis (Heath & Palenchar, 2008).

All institutions of higher education must have a plan in place to address key issues that might arise if a crisis occurs. How an institution defines a crisis has an effect on the system it develops. A small higher education institution more than likely has different crisis criteria than a larger university. Regardless of size, thousand of colleges and universities must transcribe their own institutional needs into a crisis plan in order to respond correctly to future emergencies. Zdziarski, Dunkel, Rollo, and Associates (2007) stressed that the single most important crisis management tool a campus can have is a written crisis communication plan. Without proper planning, a campus' ability to communicate effectively will be limited and could increase the level of crisis. Despite best efforts of crisis prevention, it is a certainty that crises will occur. Good planning will facilitate a rapid, synchronized, effective response when a crisis occurs. Being well prepared involves an investment of time and resources—but the potential to reduce injury and save lives is well worth the effort. Ultimately, a crisis plan is designed to provide guidelines and steps that are adaptable for any crisis situation. However, it is important to recognize that they are living documents and they need to be reviewed and revised regularly.

Crisis Communication in Campus Settings

To better understand crises occurring at institutions today, it is helpful to explore past crisis situations that have occurred on campuses across the nation. Higher education institutions experience hundreds of emergencies each year, but only a few have had a long-lasting impact and extreme ramifications that affected higher education crisis planning. As technology advances and media coverage has become more widespread, campus tragedies and crises have become far more prevalent.

UT Austin incident. One of the earliest examples of a tragedy or crisis occurring at a university occurred on August 1, 1966. Charles Joseph Whitman, a former sharpshooter in the U.S. Marine Corps, went on a shooting rampage at the main tower building at the University of Texas Austin. In 96 minutes, he fired 150 rounds of ammunition and ultimately killed 14 people and injured 32 others (Laverne, 2007; Zdziarski et al., 2007). According to Laverne (2007), the Texas bell tower shooting performed by Whitman was our introduction to public mass murder and school shootings. Despite this event happening before the advances of technology that currently exist, the nation felt its impact. This tragic incident was one of the few that laid the foundation for an increase of safety and crisis planning at higher education institutions. College campuses today are forced to develop a communication plan and have a standard response in light of any incident that might occur on the campus.

Hurricane Katrina. Not all crises that affect higher education institutions are man-made; some are caused by natural disasters. Earthquakes, tornadoes, and hurricanes can all have a tremendous effect on an area and some regions of the country are more susceptible to natural disasters than others. Several southern Florida campuses dealt with ramifications from Hurricane Andrew in 1991 and as a result many institutions developed preliminary plans for evacuation and

emergency. However, many institutions had no idea what Hurricane Katrina would bring in 2005.

Katrina struck the central U.S. Gulf Coast on August 29, 2005, causing massive destruction from Alabama to Louisiana (Laverne, 2007; Mastrodicasa, 2008; Zdziarski et al., 2007). Katrina struck land as a Category One hurricane but hit the majority of the Gulf Coast as a Category Three. It was the largest hurricane of its strength ever recorded, nearly destroying the city of New Orleans and leaving over 800 people dead (Zdziarski et al., 2007). The impact of the storm on New Orleans was unprecedented. Several institutions of higher education in the Gulf Coast area were greatly affected – Tulane, Loyola University, Xavier University, Dillard University, Southern University, and the University of New Orleans. College students who were enrolled in these institutions fled to other institutions, attending as transient or non-degree-seeking students (Rollo & Zdziarski, 2007).

Louisiana State University (LSU), located in Baton Rouge, an area that was less directly affected by the hurricane, enrolled, registered, and housed visiting students. Additionally, LSU cared for the mental health of the visiting and current students and staff members who had worked for weeks without much of a break (Babcock, 2005). Several institutions across the nation collaborated to provide what assistance they could and offered courses for displaced students so they could continue their education. Additionally, they offered admission to undergraduate and graduate students, offered help with financial aid arrangements, and some institutions even offered temporary positions to faculty members employed at the institutions that were affected by Hurricane Katrina (Biemiller, 2005).

Because the hurricane struck at the beginning of the semester for most institutions, timing was absolutely critical in terms of communication. The magnitude of the crisis made the need for

constant communication crucial, but the reality was that such communication was difficult because power lines and cell phone towers were destroyed by the hurricane. The initial source of information for many faculty, staff, students, parents, and other stakeholders became the Web. At Tulane, the university's emergency website became the official source of information (Cherry, 2006; Mastrodicasa, 2008). However, post-Hurricane Katrina, Tulane expressed the need to still maintain personal contacts to answer questions and acknowledge concerns rather than simply relying on a website to provide one-way information. Reaching out to new or first-year students, addressing concerned parents, and having some sort of hotline where current displaced students can find information is crucial.

Almost immediately after Hurricane Katrina, the American Council on Education (ACE) and the National Association of College and University Business Officers (NACUBO) created a website, campusrelie.org, to assist students, faculty, and staff during the recovery and relocation process (Mastrodicasa, 2008). This site has since expanded to include other hurricanes that have struck and it is the foremost example of a means for direct campus-to-campus disaster assistance.

Virginia Tech. Emergency preparedness and crisis planning has existed on college campuses for many years; however, it was put to a real test on April 16, 2007 at Virginia Tech and the university was completely unprepared. A student, Seung Hui Cho, assassinated 32 people in two buildings of Virginia Polytechnic Institute and then proceeded to take his own life in a shooting rampage that lasted nearly eleven minutes. (Mastrodicasa, 2008; Virginia Tech Review Panel, 2007). The pre-existing emergency notification system at Virginia Tech deployed information through the university's main homepage, sent mass e-mails to university accounts, left phone messages to campus phones, and notified media support outlets – local radio and television (Riveria, 2007).

The Virginia Tech Review Panel (2007) issued an irate criticism of the communication plan and emergency notification system put in place by Virginia Tech as a result of this crisis. They stated that the protocol for sending an emergency message was “cumbersome, untimely, and problematic when a decision was needed as soon as possible” (p.17). Virginia Tech University’s crisis plan included multiple communication tools; however, it was scrutinized for not being timely enough. It had an emergency warning system, but it did not send out the first tentative warning until two hours after the shootings began.

Virginia Tech administrators recognized the need to streamline their emergency notification and communication protocols, and they were in the process of implementing a new multimedia messaging system, which was to include text messaging capabilities. However, the system was still being tested and was not available during the crisis. The Virginia Tech Review Panel (2007) revealed that much of the communication that provided law enforcement and emergency response teams with information regarding the crisis situation at hand came from cell phone calls placed by individuals located where the shootings took place. The Virginia Tech tragedy served as the force to begin adapting text notification into the discourse of crisis planning on college campuses throughout the nation. Although many crises, both natural and man-made, have occurred on higher education campuses prior to and after 2007, the massacre at Virginia Tech remains the benchmark against which crisis communication responses are evaluated. In 2007, very few higher education institutions had integrated text notification systems into their emergency communication plans; however, as of 2010, nearly 88 percent of all colleges and universities have implemented emergency text messaging systems into their crisis communication (Lipka, 2010). As a result of the Virginia Tech incident combined with the overwhelming popularity of cell phone usage among college students, higher education

institutions across the country have examined the implementation of emergency text notification systems on campuses.

Campus safety and security. In addition to the destruction on campuses from natural and man-made disasters, there have also been events in terms of student safety that have affected crisis communication planning over the years. In April 1986, Jeanne Clery, a nineteen-year-old freshman at Lehigh University, was raped and murdered in her residence hall room (Asmussed & Creswell, 2005). Perhaps the most pivotal event affecting crisis and emergency communication on campuses of higher education institutions was the passage of the Crime Awareness and Campus Security Act of 1990, which is also known as the Jeanne Clery Disclosure of Campus Security Policy and Crime Statistics Act (Zdziarski et al, 2007).

As a result of this legislation, all post-secondary institutions that are eligible for Title IV funding for student financial aid must:

1. disclose public safety procedures for addressing and reporting criminal activity;
 2. collect, retain, and report current and historical records of criminal activity on or near campus; and
 3. disseminate information about criminal activity both during and after reported events
- (U.S. Department of Education, 2005).

One flaw in the Clery Act is that it does not provide a clear definition of what amount of time is constituted as being acceptable between when the crime occurred and when stakeholders within the University are notified. Each institution's emergency management team is given the freedom to interpret the principles mandated by the Clery Act and apply it to its own campus within the context of each given situation that arises.

Additionally, in 1989, the Student Right-to-Know and Campus Security Act was passed,

which requires higher education institutions to make available to students, employees, and applicants an annual report on security policies and campus crime statistics (Jackson & Terrell, 2007). Further, the Secretary of Education is required to identify exemplary programs that have proved effective in reducing campus crime (Jackson & Terrell, 2007). All of these actions taken at the federal level demonstrate a variety of ways that campus communities are alerting various publics of emergency situations.

Higher education institutions have unique needs when they are involved in crisis. There is a significant priority in ensuring the safety of students at all times, which requires extraordinary security measures and comprehensive emergency, risk, and crisis communication strategies (Barker & Yoder, 2012).

Campuses today are taking precautions and have developed measures to communicate campus safety advice to students. Moreover, they are promoting and installing security measures to make their campuses feel safer to students – such as blue-light emergency telephones and smart cards that make building entry difficult for unauthorized persons. One of the most important decisions during a crisis is when to turnover security operations from a campus service to the entity that mandates the entire university. Extremely difficult decisions occur regarding when and how to notify stakeholders. Many university officials are now working with outside agencies to secure a campus. Being able to communicate with local police and fire departments is essential should the need arise for outside contributions. A well researched crisis communications plan can aid in determining when local off-campus entities should be brought in to work with campus services.

Emergency Communication Methods Used on Today's Campuses

The aftermath of the Virginia Tech shootings made campus leaders nationwide think about how they could make campuses safer. Many leaders recognized the use of technology and integrated systems to get important information to students and other members of the campus community quickly and efficiently. Technology, particularly information and communication technology (ICT), has been fundamental to recent research in regards to emergency management and response (Wu, 2009). New technologies have provided modern, innovative ways to reach students and those communication methods are constantly evolving with user preferences. Some of the key elements of current emergency communication tools that higher education institutions are using include: e-mail, campus web sites and portals, campus phone services, notification to off-campus phones, and notification to cell phones (Campus Security Report, 2008).

The concept of mass notification has long been used and implemented by the federal government and is now being seen on college campuses. There are two types of mass notification systems. One system involves alerting people in the immediate vicinity where the emergency occurred. This includes public address announcements, fire alarms, tornado sirens, etc. The second type of mass notification involves electronic mass messages. When using electronic mass messaging, word can reach a variety of stakeholders in a very timely manner. Many schools do not use one singular means of communicating; rather, they use combinations of multiple tools to make sure the message is transmitted to as many people as possible.

E-mail. When a student enrolls at a university, they are given a campus e-mail account. Email is one form of communication on a college campus, yet e-mail relies on the recipient regularly checking and reading it. Salaway, Caruso, and Nelson (2007) stated that e-mail is vastly preferred by students as the primary means of communication with an institution, even

though they are demonstrating interest in more instant forms of communication. Students are steering away from using e-mail and are not checking it as frequently as they are checking social networking sites, text messaging, and instant messaging systems for communication with their peers (Mastrodicasa, 2008). One criticism of the Virginia Tech response was the use of e-mail to communicate the threat on campus more than two hours after the shooting had occurred rather than a quicker method (Lipka, 2007). Students want to see faster and more effective means of communicating with them under emergency situations (Salaway, et al., 2007). With the advancement of cellular devices there is the option to sync various e-mail accounts to one's phone; however, higher education institutions cannot rely or assume that all students can send and receive e-mail on their phones.

Text messaging. Text messaging is the use of cell phones, or other cellular handheld devices, to send and receive short messages (Mastrodicasa, 2008). Research indicates that the vast majority of today's college students own cell phones (Mastrodicasa, 2008; Frank, 2007). Further, Salaway et al. (2007) found that nearly one-third of students prefer to learn information through text-based conversations via e-mail, text messaging, or instant messaging. The ability to instantly notify individuals on campus, who may not be sitting at a computer, checking e-mail, provides a new advantage. Campuses have found that Net generation students are willing to voluntarily provide their cell phone number for an emergency notification system in the interest of safety (Frank, 2007).

The use of text messaging mass notification systems has resulted in some areas of concern. Some researchers have concluded that there are drawbacks to these mass notification systems. Among those concerns include: short messaging services' ability to handle increased volume in short time periods, potential to interfere with voice communication, limitations in

message length, and delays in message reception (Frank, 2007; Mastrodicasa, 2008; Traynor, 2008). The nature of the technology is not as instantaneous as one might assume – for example, there are varying rates at which text messages can be sent out. It can take nearly thirty minutes to notify 50,000 students, which is rather lengthy in an emergency situation (Mastrodicasa, 2008). Additionally, the perpetrator of a crime, as a subscriber, might receive the same text alert and the message might send him or her to a place where students are hiding (Frank, 2007).

Existing literature has indicated that emergency notification via text messaging is an effective means of communicating some crisis-related information on higher education institutions; however, it should be used in concurrence with other traditional communication channels to ensure that the message is reaching stakeholders and those at risk (Coombs & Holladay, 2010; Naismith, 2007). Stakeholders expect fast, accessible information during a crisis and this new technology can improve the rate at which messages are dispersed. Gordon (2007) noted that emergency notification through cellular text messaging (SMS) or multimedia messaging (MMS) has become a reliable, and even expected, form of disseminating basic critical information to a large amount of people in a short amount of time.

Social networks and web presence. The social media networks Facebook and Twitter have become extremely popular sites amongst college students (Mastrodicasa, 2008; Veil, Buehner, & Palenchar, 2011). Due to the heavy usage on college campuses, many higher education institutions use Facebook as a means of advertising events or communicating with students. The social networking site Twitter has been used to share initial information about past disaster and crisis situations including the California wildfires, the 2009 crash of US Airways Flight 1549, the 2010 Haiti earthquake, and the 2011 Tunisian uprising (Veil et al., 2011). Providing updates on incidents on social networking sites, like Facebook and Twitter, provides

almost instantaneous news and spreads rapidly among peoples' networks.

The use of multiple new media outlets and networking sites allows individuals to communicate with each other or to the greater community in the case of campus crises. For example, more than 3,000 students joined a Facebook group called "I'm OK at VT" which allowed students to let others know that they were safe after the Virginia Tech incident (Read, 2007). Additionally, within a day of the Virginia Tech shootings, more than 54,000 students and alumni joined the Facebook group VT Unite, which offered students a place to grieve and show solidarity (Read, 2007). Social media possesses characteristics such as participation, openness, conversation, community, and connectedness (Veil et al., 2011). In using social media, consumers of information become contributors of information; thereby social networks are considered user-generated.

These new media outlets allow individuals to become sources of information who share insights, opinions, experiences, and perspectives with an entire online community. Furthermore, news of a crisis can potentially be shared with millions of others without journalists intervening. Colley and Collier (2009) stated that word-of-mouth news has become tremendously influential and at times is perceived to be trustworthier than mainstream media. Due to the overwhelming popularity of these social networking sites, it is crucial that higher education institutions incorporate social media in their crisis communications plans.

Additionally, it is crucial that a university provide updates on their institution's website regarding a crisis or disaster as soon as possible. With ever-evolving technology, the Internet is becoming one of the first places that individuals go to seek news. Technological advances have transformed how crisis management professionals disseminate information to affected publics in a crisis situation (Veil et al., 2011). Today's campuses are incorporating a wide variety of

communication vehicles, including social networking, Internet, mass notification systems, etc. so they reach as many constituents as possible. Using technology for crisis communication can provide a continuous flow of information throughout a wide variety of communication channels.

Managing parent involvement. When dealing with crisis communication at a higher institution, one of the most challenging issues is how and when to communicate with parents of students. Modern day parents are extremely involved in their children's lives and often expect to be communicated to and provided answers when crisis strikes. Fulfilling parents' needs often complicates the job of school officials. Higher education administrators typically think broadly about campus crisis, while parents think specifically about the health and safety of their child (Merriam 2008). It is important that crisis communication and planning considers a plan to communicate to parental units. College administrators must develop a plan of when a situation merits notifying parents. Additionally, most institutions should be attempting to collect contact information for someone outside the campus. Students should be encouraged to list the names and contact information of outside contacts in case of emergency, and update it regularly as part of the university student record.

It is important that an institution finds ways to educate students and their families about the institution's emergency plans for preparedness. Openly providing information and demonstrating care and attentiveness on evacuation plans to parents is imperative. Parents should know where to look for information in light of an emergency situation. Some institutions have developed a parent website as a part of their communication plan. Websites directed at parents are helpful so long as the information is continuous. Merriam (2008) asserted that campus emergency responders need listening skills, patience, effective communication skills, and problem-solving skills to address parents' concerns.

Theoretical Framework

According to Tanner et al. (2009) the concept of mobilizing information in terms of disaster management is information that “provides cues to action on how to prepare and behave in response to a disaster.” Crisis preparedness and response can be affected by the amount of information found online by an individual prior to or during an emergency or natural disaster (Kittler, Hobbs, Volk, Kreps, & Bates, 2004). Laituri and Kodrick (2008) stated that online disaster mitigation information is often “not easily identified ahead of time, nor is it complete” (p. 3049). This current study is one of a select few that focus on assessing the content of emergency information being disseminated through a variety of new technologies. It is important to recognize that this information may be an individual’s sole resource in preparing for and responding to various disaster situations.

Situational Crisis Communication Theory (SCCT) provides a framework for understanding how to increase the reputational protection of post-crisis communication (Coombs, 2007). Strategic crisis responses should be matched to the level of crisis and the respective responsibility and threat posed by a crisis. SCCT recognizes how key components of a crisis situation influence attributions about the crisis. Understanding how stakeholders will react to a crisis informs the post-crisis communication. Evaluating the crisis history and type as well as prior relationship reputation helps emergency responders predict the level of reputational threat an organization might receive and how that organization’s publics will perceive the crisis and attribute crisis responsibility (Coombs, 2007).

It is very important to consider SCCT in regards to crisis communication in higher education settings. There are numerous stakeholders and publics involved when a crisis occurs at an institution of higher learning, and how an institution communicates with its publics can affect

those publics' perceptions of the university. Perceptions can shape how an institution's publics emotionally react to or behave toward an institution. Therefore, the communication decisions crisis managers make during a crisis could have significant consequences, both positive and negative. It is essential that crisis managers act strategically to save an institution's reputation.

This study will use the grounded study approach to analyze data. Corbin and Strauss (2008) specified that grounded theory is "used in a more generic sense to denote theoretical constructs derived from qualitative data" (p. 1). This grounded theory approach is rooted in the original work published by Glaser and Strauss (1967). Given the lack of academic research available in crisis communication in higher education institutions, the grounded theory approach served as an appropriate method for generating research-based theory applicable to practitioners of crisis communication on campuses. The purpose of grounded theory research in communication management is to develop new theories and concepts grounded in qualitative data. With little existing research conducted on the effectiveness of mass notification through emergency text messaging in times of crisis, amalgamated with the rapid evolution of technology, the grounded theory approach provided a suitable framework for this study. Because technology is constantly evolving, it is important to recognize that many theories related to the text messaging and social media are still being formed or altered to make theories applicable to the new technologies.

Method

A qualitative study provided the most appropriate means of solving the proposed research questions for this study. Yin (2004) explained that a case study is intended to examine "a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident" (p. 13). The present study aimed to examine

and explore emergency and disaster messaging and communication to faculty and staff at a comprehensive master-level university on the east coast. Additionally, it analyzed the impact and effectiveness of reaching faculty and staff through various communication vehicles in an emerging media revolution; thus, in-depth interviews are most appropriate. This qualitative method allowed the researcher to acquire various descriptive accounts from participants that are rich in content and determine causal links among variables (Babbie, 2010; Lindlof & Taylor, 2002; Rubin & Rubin, 1995). Additionally, it provided participants the opportunity to self-define their responsibilities and speak openly and in depth about their role within an organization. However, an added challenge to avoid bias in the interpretation of data as well as protecting the privacy of participants arose as a result of using in-depth interviews for qualitative analysis (Babbie, 2010). Furthermore, a small group of interviewed individuals cannot be taken as representative or generalized (Babbie, 2010; Lindlof & Taylor, 2002).

Of the 12 interviewees, four were male and the remaining eight were female. Participants included the following: seven faculty members and five staff members. Positions included everything from full-time faculty, adjunct faculty, library staff, career center staff, community outreach coordinator, and administrators. Length of employment ranged from three to 25 years. Upon completion of the 12 interviews, repeating patterns revealed saturation.

Project research began by acquiring study approval from the institutional review board of the researcher's respective institution. To recruit potential interviewee candidates, the author sought out various resources and colleagues to acquire the names of faculty and staff members representing a variety of departments within the participant university. After interviewing, snowball sampling was used to ask the participants if they could recommend other professionals that were somewhat familiar with the emergency messaging systems used on the participant's

campus. E-mail inquiries were sent to the list of acquired individuals requesting their participation in the study. The individuals were then contacted by phone or e-mail to arrange an interview. These in-depth interviews (Lindlof & Taylor, 2002; Rubin & Rubin, 1995) provided data and perceptions of how faculty and staff members employed at this comprehensive master-level university on the east coast view and respond to the current emergency notification systems that are integrated into the emergency crisis communication plan on campus.

A total of 12 interviews were performed representing seven various departments within the university. Among the 12 interviews, two were done face-to-face, while the remaining ten were done via telephone. During the interviews, in addition to moderator journaling, all audio was recorded with the consent of the interviewees. All face-to-face interviews took place in an office and on average ranged from 25 minutes to 55 minutes. Follow-ups were conducted via e-mail thanking the interviewees for contributing to the study.

Three research questions were designed to reveal information about the impact of the current emergency notification systems used at the comprehensive master-level university on the east coast, as well as the various communication mechanisms that are used to notify individuals on that particular campus of an emergency or crisis-related situation. The interview question “what changes have you seen with technology advancements over the years regarding to how your campus notifies individuals on campus of emergency or crisis information?” provided a glimpse of what interviewees have witnessed in terms of technology enhancements and capabilities both on a personal and professional level. Furthermore, the author asked interviewees to talk about the situations or scenarios that merit one alert over another. Additionally, the interviewees were all asked about overall strengths and weaknesses of emergency notification systems. These interview questions provided further insight to how a

specific institution is impacted by the current emergency communication mediums and the ongoing challenges communication and public safety professionals are experiencing.

Furthermore, interviewees were asked to speak about the various alerts they were receiving and how that has potentially affected their behavior. Participant responses offered qualitative information to provide context for implications to be drawn from the results of the study. The open-ended questions allowed the interviewees to shed light on and justify how they felt the current emergency notification systems were implemented.

The in-depth interviews were transcribed for thematic analysis and the author used the research questions as the framework for developing a coding scheme. Transcriptions were dissected through a textual analysis in search of common themes and relevant insights (Weston, Gandell, Beauchamp, et al., 2001). According to Weston et al. (2001), “the development of a coding system is a critical analysis tool that leads to an ongoing evolution in understanding the phenomenon.” Interview data analysis included insertion of interviewee comments regarding potential emerging themes during transcription. Each interviewee was assigned as Participant A, B, C, D, etc. During each interview the researcher had a separate notes page for every interview question. A coding scheme with corresponding data numbers recorded from the interview categorized and organized recurring themes for interviews, evidenced by the researcher's notes and participant quotes. Comparison was performed of emerging themes with relevant literature-guided analysis to address the research questions. Following analysis, researchers will better understand the general feeling that faculty and staff members employed at a higher education institution view the importance of integrating various emergency notification systems to stakeholders, as well as the use and importance of emergency messaging and communications

at a specific institution, and will thereby be able to better formulate an overall communication strategy that the faculty and staff members prefer when a emergency occurs in the future.

Results

Although text messaging has improved greatly since its introduction to college campuses after the Virginia Tech incident in the mid 2000s, crisis communication and emergency management professionals continue to learn more and more about this means of technology as new situations arise. Many of the individuals that were interviewed for this study shared similar perceptions regarding the use of text messaging in crisis situations, yet they all emphasized how effective crisis communication involves a variety of communication mediums.

The results were obtained through using grounded theory. The collected raw data from the interviews was used to determine meaningful results and repetitive themes. Through grounded theory, data systematically obtained and analyzed offers both running theories related to crisis communication theories and models as well as best practices that can be applied in a university setting regarding to emergency response.

RQ1: How do universities incorporate emergency text notification systems into the overall crisis communication plan to disseminate information to campus?

The participant university was a comprehensive master-level university on the east coast. The faculty and staff members employed at the participating university had limited knowledge of the current communication methods used in emergency and crisis situations occurring on campus. Some individuals had a much greater understanding than others. Overall, some major themes and key findings were discovered through the interviews.

Current emergency communication. The comprehensive master-level university on the east coast has implemented a variety of communication vehicles to use when a crisis situation

occurs on campus property. In general, nearly all respondents named text notifications, e-mail notifications, and pop-up desktop computer notifications when asked what sorts of communication methods were used in light of a crisis. Five respondents recalled other communication mediums, but mentioned that those methods had not been used since they had been employed on the campus. Those methods included: an indoor and outdoor public announcement system, sirens, voice message system for campus phones, blue safety lights on campus, and the campus website. Only four of the twelve respondents mentioned the automated voice system that is on the new campus telephones. It became apparent that all respondents were familiar with the forms of communication that the campus uses more frequently. The respondents revealed that the participating campus has only experienced very minor crisis situations, and if an employee has been employed for a short time and/or is not on campus all the time, they would not be as familiar with various communication tactics.

Nearly all of the study's participants referred to the Virginia Tech incident during the interview, citing it as the most recent and horrific modern crisis situation. Participant G specifically cited the Virginia Tech tragedy as being the driving force to seek a text messaging service for emergency notifications on the comprehensive master-level university on the east coast campus. Additionally, there was a resounding reference to two specific incidents that occurred on the campus over the past two years. Most respondents felt like they were communicated to well in these incidents and in a timely fashion using the emergency text notification system.

Preferred method of communication. By and large, the preferred method of communication among faculty and staff members employed at the participating university during a crisis situation included both text messaging and the pop-up desktop computer notifications.

Many participants listed both of these communication methods as the preferred methods of getting in touch with them while on campus.

The system used by the comprehensive master-level university on the east coast to notify its campus community about emergencies and weather-related closings via text messaging is e2campus. e2campus will notify students, faculty and staff if an emergency situation occurs on campus. The alerts provide real-time information as a text message to cell phones in the event of an emergency. Individuals must register their personal device to receive text alerts; it is not something that is automatic. According to the university's Public Safety Officials, the most reliable and timely method of learning about campus emergencies on campus is text messaging. For those individuals who had been on campus since e2campus was integrated into the communications plan, they have seen a rather significant change. Participant L mentioned, "At first it was almost too much – we were getting too many alerts. It seems to be minimized now for true emergency situations." The campus has become cognizant of not inundating those that are signed up for the text alerts with information. All information is verified before sending out mass notifications.

The participating university is fully aware that it does not have 100% of its campus community signed up to receive the alerts. They have taken note that some members of the community do not sign up for the text alerts because of privacy issues, but more because of apathy and lack of interest. Several participants noted that because the entire campus community is not signed up for these alerts, the text alerts are just one mechanism that is used on campus. It can be assumed that those that do receive the text message often spread the message via word of mouth. Many participants mentioned that they would speak to their students and/or co-workers after immediately receiving an alert to ensure that they received the message or to provide them

with the information.

Additionally, research findings revealed that faculty and staff members at the comprehensive master-level university on the east coast were not aware who can sign up for the emergency text alerts. Most assumed that all students, faculty, and staff members could receive alerts but were not 100 percent confident in their response. Participant C stated, “I think the campus just has to provide a person with a netID, I’m not sure if you have to be affiliated with the University or not.” One participant was not even aware that the university had an emergency text notification alert system in place. “If they have that, the information about it being available [to faculty and staff] is not being put out there well enough.” Furthermore, when asked if parents could sign up to receive alerts only one participant knew that a second number could be registered to receive alerts from the university. Participant G stated,

“That parents can sign up, but they have to sign up under their student’s netID. Up to two numbers can be added per netID. So I could add my spouse or a student could add their parent. Or if the parent wanted to sign up they would have to ask the student for their netID, so essentially the student would know that ‘Hey mom is getting all these alerts too’. ”

It became evident that more information about signing up for the text alerts is needed by the general university community. Do students know that they can sign up their parents? Do students, faculty, and staff know that they can sign up their spouse or someone else so they can be aware of emergency and weather-related happenings at the university? With technology improvements and societal expectations, this is something that should be considered when communicating with internal stakeholders.

The second most common preferred emergency communication medium among faculty

and staff members at the comprehensive master-level university on the east coast is the popup desktop computer notification. Participants mentioned that they do not always have their phones with them or do not receive the best cell phone reception on campus. Texts are great, but in a classroom setting, faculty and staff members do not always have a cell phone on them.

Additionally, one participant stated,

“I am at my computer all the time – whether I am in my office doing research, grading, etc. or in the classroom. I do all my teaching via the computer so I see those alerts regardless of where I am on campus. I like knowing that those alerts are available when I don’t necessarily have my phone on me.”

These intrusive alerts act as partial-screen pop-up notifications, taking precedence over all other open windows and programs. One participant did note that the popup notification alerts only appeared on those computers that are University-owned and connected with the University networks. Additionally, another participant stated that incorporating the desktop notification alerts rounds out the multi-channel emergency alerts that are used on campus. Overall, it was apparent that faculty and staff really value the popup desktop computer notifications.

RQ2: What sort of situation merits a text notification alert?

It can be assumed that higher education institutions are continually refining their methods of emergency communications. As previously mentioned, the participating university has polished their emergency text notification alerts since their inception. In general, faculty and staff members employed at the comprehensive master-level university on the east coast believe that real-time, urgent reports should be the only situations in which they receive a text alert. Many participants agreed that this would include weather-related alerts and campus emergencies, not crimes.

Text alert situations. Based on the interviews it can be concluded that the overall consensus is that the comprehensive master-level university on the east coast does a relatively good job of sending texts for a situation that requires immediate attention or action. For the most part, faculty and staff members are pleased with the way that the emergency text system is implemented. Participant I stated, “I get a sense that campus only sends information via text for those things that are immediate emergencies, whereas the e-mail alerts are more theft alerts, general FYIs, seeking more information.” It is important to note that Participant C mentioned that the e-mail notifications were more revealing police activity, crime alerts, and statistics and fulfilling an obligation to report on the crime. Students, faculty, and staff who opt for the text notifications also have the opportunity to sign up for e-mail notifications. The e-mails will often include more detailed information, since text messages are limited to a certain number of characters. Participant A summarized it well by stating that texts are viewed as more immediate and pertain to actual crisis situations whereas e-mails are more of a public announcement.

More guidance requested. While performing the interviews, it became apparent that over half of the respondents would like to see the text provide more direction and guidance on what to do in light of the particular situation that is addressed via the text. Participant F provided an example, “If a shooter is on campus. Some people might need to know to turn out all the lights, shut and lock the door, etc. People tend to freak out and need further direction in emergency situations.” One participant mentioned that the texts are sent and the public safety officials are operating on the assumption that one would know the safety measures to take. Participant H said, “People don’t necessarily know how to respond to a situation and it causes undue anxiety. Some people will panic and do the opposite of what you should be doing.” Several participants mentioned that every faculty member receives an emergency resource guide

but they were concerned with the amount of people who are actually reading it. Perhaps University administrators should consider adding a URL or hyperlink within a text message that directs recipients to the web for further direction. Most universities have emergency response guides online so providing the link might be useful. More direction on what to do for certain situations was clearly a concern and repetitive theme of the participants. This is a very enlightening finding and perhaps the comprehensive master-level university on the east coast should provide a more in-depth and mandatory training session for faculty and staff members as well as providing more direction via the text notifications in crisis situations.

High amount of trust in text messages. Overall, the participants believed that university leadership uses their best judgment when utilizing the text messages as a communication tool. Participants trust that the university officials are acquiring accurate information and do not send out information before it is verified. It is evident that there are ample checks to make sure that incorrect information is not delivered. Participant D emphasized this by stating, “The information always seems to be accurate, in fact I have never had a text alert message that has been retracted.” Additionally, Participant C said, “I have to have a lot of trust in it, essentially my life depends on it...I need information that is current, useful, and helpful to get me through crisis situations.” By and large, the respondents have a huge amount of trust in the validity of the text alerts.

RQ3: From the perspectives of internal stakeholders at universities, what are the strengths and weaknesses of using text alerts in times of crisis? How do internal stakeholders perceive text emergency notification alerts?

The use of text messaging emergency notification has emerged as a primary issued surrounding modern-day crisis communication. Text message alert systems are one of the most

powerful and fastest emergency notification systems used today. However, it is not without strengths and weaknesses.

Weaknesses in emergency text notifications. Participants revealed that there are several weaknesses that exist in using text messaging to deliver emergency notification to community members during crises on higher education campuses. The concerns mentioned by participants included: the ability to handle increased volume in a short period of time, limitations in message length, delays in message reception, deliverability issues, limited reach, and potential fraud messages. Participant K was familiar with the comprehensive master-level university on the east coast using a third party to send out text messages, and mentioned that because the university relies on a third party to deliver messages, a malicious individual could hack into the system and send a fake emergency text message without difficulty. Additionally, this participant mentioned that because the university is relying on an outside system to send the message there is a lapse in time. Timing and speed can be very crucial and one does not want to hold onto information when it can tremendously affect the outcome.

Another weakness that has been revealed in sending emergency notifications via text is the detail of the message itself. Text messages are limited to 160 characters; thus the messages can be cryptic. Public Safety and campus administrators struggle to find way to develop clear, consistent messages within the character limit. If too much information is put into the message, information will be cut off; too little information may cause confusion.

Additionally, several participants noted that there are parts of campus that do not receive the best cell phone reception, thus the lack of reception could have an impact on the deliverability. Participant E said,

“I don’t get cell coverage in my office, so I am constantly relying on other forms of

communication when a crisis-like situation is happening on campus. I am always on the computer so getting the e-mail notifications and the popup alerts on my work computer are tremendously helpful to someone like myself. I have expressed my concern for the lack of cell phone reception [in my building] and hope that it is remedied in the near future.”

Lastly, the comprehensive master-level university on the east coast requires individuals to sign up in order to receive the text alerts, and perhaps not everyone on campus has a cell phone. Because it is a voluntary, opt-in option, there are many people not being reached with the text messages. Thus, it remains important to use more than one communication medium in emergency and crisis-related situations.

Strengths of emergency text alerts. Despite the fact that the text message alerts are a device-dependent communication vehicle, there are also several strengths to using this communication method. The comprehensive master-level university on the east coast is able to provide information instantaneously to individuals who are signed up to receive the alerts. Additionally, several participants explained the importance of immediacy of information. By incorporating emergency text alerts into the overall crisis communication plan the master-level university on the east coast is able to relay information quickly to the greatest amount of people both on and off campus. Many participants mentioned that these text emergency notifications are the most rapid form of communication that currently exists. An added benefit that one participant noted was the fact that everyone is receiving the same information, so the information is equally accessible. Participant I said, “Having updated information as it becomes available is important for people to stay calm or knowing what to do. Keeping people informed so that they can make good decisions about their own personal safety is crucial.”

Furthermore, this study confirmed the thought that the reach of text messaging is much greater among the student population than traditional communication channels. The reach of the system promotes the message to then be spread to additional modes of communication. For example, if a student receives a text alert regarding a crisis communication occurring on campus, they might interrupt a teacher or spread it on social media, explained participant B. Additionally, Participant G said, “Students always have their phones on them. Texting is a way of reaching the students through a medium that they are using all the time.” Because students are constantly using their phones to stay connected, it has been assumed by higher education institutions that this is the best way to reach them through a medium that they will actually pay attention to.

Lastly, it can be concluded based on the findings that having a consistent way to notify the campus community of emergency and crisis related situations is imperative. Individuals begin to recognize the importance of the text alert and associate it with something that they should read right away. Several participants mentioned that the text emergency notification alerts have become a resource that they constantly rely upon to receive information, especially when it comes to weather-related alerts. It can be concluded that the faculty and staff members employed by the comprehensive master-level university on the east coast find the text alerts extremely helpful and vital to taking action. Additionally, sending the text alerts illustrates the care and concern that the University has for the safety of its internal stakeholders.

Perception of text alerts. Based on the interviews, it can be concluded that faculty and staff members know that when they receive a text from the comprehensive master-level university on the east coast it is something important that they should pay attention to and act accordingly. Participant B said, “I don’t respond to a text alert, I modify my behavior. Normally the texts are just information and they don’t solicit any sort of response.” Because the amount of

texts sent from the participating university are limited to emergency and real-time situations, all respondents confirmed that they read the texts to see what is happening on campus and take the texts seriously. People pay attention to the alerts and know that the text tends to signify something important. The respondents verified that there is an overall sense of urgency to read the message and to make sure it is nothing tragic or needs immediate action.

As technology increases and new methods are introduced to do what is necessary to get the word out, participants believed that the comprehensive master-level university on the east coast is doing a good job. For example, participant K said,

“I think the university administration and police are trying to keep up-to-date with the latest technology to keep people informed of situations of emergency. They are continually thinking about new technologies that can be used now and in the future.”

It can be presumed that much of the internal community relies on text messages because it is a good way to stay in touch and stakeholders view the text notification alerts as a helpful resource. Participant E said, “I feel safer knowing that they are keeping us informed of what is happening. It is their job and they are responsible for a lot of people – they know they have to be on their game.” However, many participants emphasized that although text notification alerts are a very useful and important tool, they are just one of the many ways the comprehensive master-level university on the east coast should be communicating to the campus population in regards to campus emergency and crisis situations. Participants agreed that the emergency text messaging system is one very important part of the comprehensive crisis communication plan, but they also expect redundancy in communications tactics. Emergency notification via text messaging is an effective means of communicating crisis-related information, but it should be used in conjunction with other traditional communication channels to increase message reception.

Ultimately, there is value in redundancy and using various communication methods to alert individuals of a campus crisis or emergency situation.

Discussion and Conclusions

The purpose of this study was to investigate and identify the methods of communication faculty and staff members employed at a comprehensive master-level university on the east coast receive during an emergency or crisis and how they receive various communication techniques, especially text messages. The themes already identified in the results section were repeated throughout the in-depth interviews, but thematically they all pointed to a key premise. The principle theme to emerge throughout the interviews was that crises are situational and vary in their predictability. Thus, crises require a flexible, yet purposeful, crisis communication plan that is able of responding to a wide array of variables. This finding affirmed Zdziarski, Dunkel, Rollo, and Associates (2007) belief that the single most important crisis management tool a campus can have is a written, yet adaptable crisis communication plan. The benefits of crisis planning are repeatedly cited in crisis literature (Coombs, 2007; Seeger, 2002; Waymear and Heath, 2007). The respondents in this study emphasized the importance of routine testing of the emergency text messaging system being a key component of a crisis communication plan. Testing to ensure various communication vehicles are used correctly and as planned is essential when a real emergency situation occurs. There is an increasingly amount of pressure on higher educational institutions to get information out that is clear and concise, quickly and accurately.

The respondents acknowledged that a multi-channel communication response is essential in crisis planning. Every form of notification has its strengths and weaknesses however respondents emphasized the immediate needs of timeliness and breadth of the notification. Participants identified the need to create redundancy in a crisis communication plan by referring

to numerous incidents in which one communication vehicle might be more effective than another in a given situation. Thus confirming existing literature, which indicated that emergency notification via text messaging is an effective means of communicating however; it should be used in accord with other traditional communication channels to ensure that the message is reaching stakeholders and those at risk (Coombs & Holladay, 2010; Naismith, 2007). Given potential variables, it is crucial to have all communication vehicles occurring simultaneously to notify stakeholders of crises. Respondents repeatedly noted that the layered approach to communication dissemination allows channels to work in tandem and allow as many individuals to receive information.

Another prominent theme that emerged was deciding when various situations warrant the deployment of a text or e-mail notification. Respondents assumed and agreed that the decision was largely based on the frequency, immediacy, reach, and severity of a crisis situation. The respondents revealed that the primary reason to disperse a mass text notification was an incident deemed causing risk or danger to members of the university community. In general, the respondents believed this included any crisis or weather-related alert. However, some respondents also noted that they receive various notification alerts referring to campus related crimes and incidents, which is mandated by the government through the Clery Act. The Clery Act does not provide a clear definition of what amount of time is constituted as being acceptable between when the crime occurred and when stakeholders within the University are notified (U.S. Department of Education, 2005; Zdziarski et al, 2007). Compelled by the longing to remain in compliance with the Clery Act, a higher education institution is given the freedom to interpret the principles mandated by the Clery Act. Respondents revealed that typically these crime-related incidents are sent via e-mail once all information has been confirmed and to inform

the university community rather than deploying the information using text notifications.

The research questions posed in this study, grounded in crisis, risk, and emergency management theory (Coombs, 2007), addressed how the participating university has incorporated emergency text messaging into the overall crisis communication plan; how faculty and staff members distinguish text messages; what gaps exist between faculty and staff expectations and actual practices; and perceived strengths and weaknesses of using text messages to communicate with the campus in a crisis situation.

The findings of this study have important implications for both theory and practice within disaster communication and emergency planning. Coombs' SCCT model has become a prototype for post-crisis communication response strategies, as he stresses that the actions an organization takes post-crisis depends on the crisis situation. While Coombs' work provides directional value for organizational success following a crisis, it lacks to acknowledge that good public relations result in recognizing the best interest of the audience. Thus, the researcher used grounded theory to analyze the data until theoretical themes were developed. With little existing research conducted on the effectiveness of mass notification through emergency text messaging in times of crisis, the grounded theory approach provided a suitable framework for this study. The data collected in the interviews was classified under various categories. A comprehensive analysis was performed to determine which categories or themes achieved greatest salience, only those with the greatest salience were included in the results and discussion. Lastly, the theory of mobilizing information is critical in crisis communication. Mobilizing information in terms of disaster management is essentially providing prompts, reminders, and guidance as to how one should prepare and behave in response to a disaster. Respondents revealed that they did not feel they were receiving enough guidance or direction from emergency notifications sent from the

participating university. This discovery should not be taken lightly and mobilizing information and clearly stating further direction that one should take in the particular emergency situation would be greatly valued.

By linking theoretical ideology in the literature with the findings, the researcher has developed the following practical implications. The most common recommendation amongst participants in this study stressed the importance of having a flexible crisis communication plan that has the capability of responding to unforeseen variables as a crisis or emergency develops (Vanderford, 2007; Zdziarski et al, 2007). Respondents believed it is critical to use a variety of communication methods with publics to create redundancy, thus creating a catalyst that accelerates the time it takes to reach people and expand its range. Some respondents noted that emergency text messages have failed to reach them due to varying reasons – bad reception in areas on campus, having the phone turned off, system error, and other unforeseen circumstances. Combining communication tactics mitigates the known limitations of text messaging while also increasing the speed and reach of the message. This affirms the previous literature that list some of the key elements of current emergency communication tools that higher education institutions are using include: e-mail, campus web sites and portals, campus phone services, notification to off-campus phones, and notification to cell phones (Campus Security Report, 2008; Colley and Collier, 2009; U.S. Department of Education, 2005). Lastly, the respondents acknowledged that overuse of the emergency text messaging system can lead to a desensitized audience in the event of a real emergency thus other tactics such as desktop notifications, emerging social media, and word of mouth provide excellent platform to disburse crisis related information.

Results of this study helped explicate the specific impact that emergency text notifications have on faculty and staff members at the comprehensive master-level university on

the east coast. There were many consistencies that appeared among the results and past research. The findings supported the notion that individuals want to know immediately how the situation at hand will affect them and to determine what they should do (Reynolds & Seeger, 2005). This theme was supported by the findings. Wu (2009) noted that technology has been fundamental to recent research in regards to emergency management and response. Results further indicated that faculty and staff members employed at the comprehensive master-level university on the east coast have very high expectations and a high reliance on the emergency notification alerts implemented on campus.

The researcher discovered that social media was not mentioned by the participants of the study. Recent studies have indicated that information spreads at a much faster rate via online word of mouth than traditional word of mouth (Totka, 2013). There was clearly a lack of not engaging social media in times of emergency situations at the university, which was studied. The power of social media is significant in modern society and people will try to find out information any way that they can. It is almost a given that someone would seek social media outlets pertaining to a certain organization in times of crises. University administrators should embrace social media and realize that students are interconnected and that information can spread to hundreds if not thousands of individuals within minutes.

Additionally, university officials should consider adding the ability for individuals in the local community to sign up for text alerts that the University sends out. Many universities are located among residential areas and it would be in the best interest of the higher educational institution to keep the local community informed especially as it relates to campus-related emergencies. For example if a shooter is on campus and runs into the local, residential streets, those people should know that the individual is at-large. Some state and local counties have

implemented texting as part of a “wireless emergency alert” (WEA) notification system (Jones, 2013). WEA is a service that wireless carriers rolled out across the nation in 2012. WEA is a partnership between FEMA, the Federal Communications Commission (FCC), and wireless carriers, to enhance public safety (fema.gov, 2103). WEA are not the same as text messages, the alerts will “pop up” on the device’s screen. A key differentiator between the WEA capability and the existing text messaging systems is that WEA uses SMS-Cell Broadcast, which simultaneously delivers messages to multiple recipients in a specified area. WEAs avoid the congestion issues currently experienced by traditional SMS-PP alerting services, which translates into faster and more wide-ranging delivery of messages during times of emergency. The WEAs are sent for life-threatening storms, including tornadoes, presidential alerts, and Amber Alerts for missing children. The presidential alert system, which the White House could use in a national emergency like a terrorism incident, has been tested but never used. This further proves the expectation that people have today and that individuals are not bothered when they receive more than one warning or redundancy about a particular situation, especially in times of emergencies or crises.

This study confirms the importance of public safety and crisis communication officials at the comprehensive master-level university on the east coast. Although a systematic way of providing information to various internal stakeholders is in place, modifications can be made prior to future campus crisis or emergencies. This research is significant because it identifies expectations and preferences of internal faculty and staff at the university in relation to communication during a campus crisis or emergency event. Additionally, a common opinion shared amongst many respondents was that although text messaging has become an excellent means of communication deployed in times of crises, effective crisis communication was

practiced before these technological advances and it is essential to use a variety of communication vehicles to reach the maximum amount of people. Overall, the research confirms the importance of emergency communication redundancy and it will assist with developing and providing guidance to the preferred communication and expectations of faculty and staff members should a crisis or emergency situation occur.

Limitations

While these interviews yielded great amounts of relevant and meaningful data, they were not without their limitations. First, it is important to note that this research was a case study; the sample of interviewees was taken from a single higher education institution, a comprehensive master-level university on the east coast. It is possible that these interviewees were not representative of all faculty and staff members at the comprehensive master-level university on the east coast. The small sample size used in this study may not be large enough to create an accurate portrayal of how emergency communication for internal stakeholders at the participating university is being used. For these reasons, results cannot necessarily be generalized. Furthermore, the amount of interviewees and the amount of time to perform the research served as another limitation; perhaps more interviews and time would have provided further results. Another limitation relates to the collection of data and the methodology in analysis. Strauss and Corbin (1998) stressed the importance of analyzing data based on what interviewees said and how they said it, thus allowing the researcher to use the tone of interviews as a part of the coding process. The current study lacks those variables that could have affected the analysis to a certain degree.

Further limitations include the lack of research studies on disaster preparation and communication using emergency messaging notifications as a single communication resource

and the lack of specific theories used to prove integration of new technologies. There are very few studies that pertain to specific deployment and communication vehicles that work best when planning for a disaster or in times of crisis.

Future Research

Future studies could expand upon the direction of this study and could include observing how various institutions foster emergency communication with their employees. It is imperative to monitor and examine relationship-building efforts and make employees feel safe. This research would provide scholars with a greater understanding of relationship building's role as an essential component of the crisis plan and communication process.

Additionally, the researcher could perform future research that takes geographic location into consideration and expands areas to include additional college campuses, perhaps both private and public institutions. Subsequent studies should be conducted that include numerous students, faculty, staff, and other members of the higher education community to gain a better understanding of expectations for recipients of emergency notifications.

Moreover, one of the biggest challenges university officials face is making sure the message is received, understood, and interpreted correctly by recipients. This research can be expanded upon by adding a survey or focus group component to investigate what the University's wants and needs are when preparing for a disaster, interpretation, receiving disaster-related news, and participating in disaster relief efforts. Further research could help identify faults within the system and determine internal stakeholders' expectations and preferred methods of communication in terms of emergency preparedness and crisis situations. Emphasizing continuous contact and information sharing, as well as providing and asking for feedback on the material, is paramount because it adds productive, inventive, and creative input

to ensure the information meets the target audience's needs.

Effective, resourceful, and robust emergency communication mediums will remain a powerful tool for years to come. In a time of crisis uncertainty, it is imperative for higher educational institutions to continue to seek new ways of communication that meet the needs of all stakeholders in a timely manner.

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APPENDIX A

Interview Questions

1. How are you doing today?
2. How has everything been with you recently? Had any recent emergencies on campus?
3. Thank you for having agreed to participate in this research project. I have explained what the project is about in e-mails and phone calls to you. If you have any concerns or questions before we get started, I will be happy to answer them.

Background interview questions

1. What is your current title? Please describe your current role.
2. What changes have you seen with technology advancements over the years regarding to alerting individuals on campus regarding emergencies or crisis?
3. Describe an instance in the past few years in which the emergency text messaging system was used during a real emergency. What happened? What do you remember?

Questions for answering research question 1

1. Describe how you believe the university crisis plan involves the use of an emergency text messaging system.
2. What other methods of communication are used and/or available to use on campus? What method do you prefer or feel you pay attention to the most?
3. Do you feel like you get alerts in a timely manner? Explain.
4. What percentage of the university community is subscribed to the emergency alert system? (if possible, separate faculty, staff, student, parent, and other populations).
5. Who can sign up for emergency text alerts? Can parents sign up for them? How can parents/guardians receive information regarding to campus emergencies?
6. What do you believe are the benefits of signing up for the emergency text alerts?

Questions for answering research question 2

1. What sort of messages can you recall that merit a text notification?
2. What sort of message can you recall that receive an email alert?
3. Do you view one alert different over any other? If so, what?
4. What is your immediate reaction upon receiving an alert?
5. How often do you recall receiving various alerts from the university in which you are employed?

Questions for answering research question 3

1. How do you personally view or respond to text and email emergency notification alerts?
2. How do you think your fellow co-workers and internal stakeholders view these messages?
3. What have been the benefits, or potential benefits, of using emergency text messaging system during a crisis? What about email?
4. What have been the problems, or potential problems, if any, in delivering crisis related information via text during a crisis?
5. Explain the trust you have in the validity of the alert systems.
6. Do you recall emergency text messages direct recipients to another source for more detailed information?
7. Have you participated in an official University survey to gather feedback from stakeholders in how they view emergency alerts? If not, do you think it would be beneficial?

Any additional comments or thoughts?

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