

STRATEGIES AND BEST PRACTICES FOR COMMUNICATING DURING AN
ACTIVE ATTACK IN HIGHER EDUCATION

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STRATEGIES AND BEST PRACTICES FOR COMMUNICATING DURING AN
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DEDICATION

Dedicated to my daughter, Lexi. You are stronger than you think.

ABSTRACT

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The purpose of this phenomenological qualitative research study was to examine communication strategies and best practices utilized by higher education leaders during and after active attacks at their institution. Four leaders who worked at 2 or 4-year institutions in the United States in the marketing and communications department and the emergency management office were interviewed regarding their communication response to the attacks that occurred on their campuses. Structural coding and content analysis was used to analyze the interviews and revealed eight themes: (a) notifications, (b) response, (c) role, (d) lessons learned, (e) preparedness, (f) rumors, (g) media, and (h) reputation. These themes highlighted the important policies, procedures, and strategies that higher education decision makers should include in their crisis communication plans. By creating and implementing plans to include strategies mentioned in this study, decision makers can protect their stakeholders and reduce reputational damage to their institution.

KEY WORDS: Crisis communications, Emergency management, Active attacks, Higher education, School shooting, Emergency notifications

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CHAPTER I

Introduction

“It was a 57-minute emergency, but it was a three-week media incident that culminated with a visit by the President of the United States” (Pryer, 1999 as cited by Stein, 2006). Although the Thurston High School shooting lasted 57 minutes, active shootings at educational institutions, on average, end within five minutes (Federal Bureau of Investigation, 2013). Five minutes may not seem like a long time, but it is enough time to change someone’s life forever. Since 2000, 171 people were killed, and 220 others were wounded from active shootings at educational institutions (FBI, 2019). The lives of these individuals, their families, friends, and those in the communities, are forever changed from these horrific acts of violence.

During a crisis such as an active shooting, an organization’s top priority is to protect stakeholders from threats (Coombs, 2007b; Khaled & Mcheick, 2019). Due to this, the need for organizations to communicate during a crisis has increased exponentially (Procopio & Procopio, 2007; Seegert, Heyart, Barton, & Bultnyck, 2001) as the information delivered can be the difference between life and death. In order for these messages to be effective in reducing the amount of harm inflicted during an active attack, institutional leaders must act quickly and send clear and accurate emergency notifications within minutes of the attack occurring (Foster, 2007a; Lawson, 2007; Lipka, 2007; Mastrodicasa, 2008; Santovec, 2012) as it will end abruptly (FBI, 2013).

Despite shootings only lasting minutes, the media frenzy that followed school shootings lasts for much longer. It is not uncommon for media frenzies to last for approximately 30 days (Chyi & McCombs, 2004; Muschert & Carr, 2006; Schildkraut &

Muschert, 2014). Once the attack is over, organizations must continue to communicate to alleviate the public's and stakeholders' feelings of "uncertainty and instability" (Stein, 2006, p. 101) resulting from the crisis. In this switch from response mode to recovery mode, institutions continue to inform the public while also rebuilding their reputation and reducing the damage of the crisis (Coombs, 2007b; Coombs & Holladay, 2002).

Responding and recovering from an emergency is easier if institutions have a crisis communication plan. To prepare for potential active attacks at an educational institution, leaders should create a crisis communication plan that is separate from, but works in conjunction with, their overall emergency disaster plan (FBI, 2019; Moore, 2018; Trump, 2015). This all-encompassing plan should include strategies, policies, and procedures for communicating to stakeholders and the public during the response and recovery phases of an active attack using a variety of communication mediums such as traditional media, social media, broadcast media, digital media, and a mass notification system (Trump, 2015). Given the importance of delivering vital information to stakeholders and the public during and after an active attack, it is imperative education officials are prepared and skilled to execute a crisis communication plan.

Statement of Problem

In comparison to the turn of the 20th century, active mass attacks on schools have increased over the past three decades (Agnich, 2015). In 2018, 87 people were killed or injured in a school shooting in the United States (FBI, 2018b). This violence in schools has led to safety fears among students, parents, educators, and the public (Kaminiski, Koons-Witt, Thompson & Weiss, 2010).

Given these active attacks, education leaders and scholars have focused their attention on how to prevent attacks and improve school safety (Wike & Fraser, 2009). Little attention, however, has been given to responding and communicating effectively when an attack happens (Thompson et al., 2017). Communication is a critical component to responding to an active attack as the information shared can be lifesaving (Barker & Yoder, 2012; Galuszka, 2008). In order to deliver emergency messages to stakeholders in a timely manner, education officials should be well-versed in communicating through various mediums including emergency systems, digital media, and traditional media outlets.

Communicating through various mediums is essential to delivering a message to all stakeholders, however, all communication platforms are unique and require different strategies to communicate through them effectively. For example, when school officials send emergency notifications via text messages, email, or social media, the officials are able to control the messages being delivered. In contrast, the messages delivered via traditional media outlets (e.g., television and radio) are not directly controlled by the institutions communicators or leaders. Instead, media frame the message to influence their audience's perception of the situation (Muschert & Carr, 2006). Additionally, media tend to release unverified information from unofficial sources if they cannot quickly obtain the information from official sources (Berkowitz & Liu, 2016; Murray, 2017; Wigley & Fontenot, 2009). Due to media framing and releasing rumors, decision makers need to develop a communication strategy to successfully utilize all communication mediums to effectively inform their stakeholders.

Despite the importance of emergency communications, educational public relations departments' staff are not always involved in the crisis response (Barker & Yoder, 2012; Leeper & Leeper, 2006). Even if these departments are involved, most institutions and personnel have not experienced a large-scale emergency such as an active attack. Due to this lack of experience, education leaders are unprepared to communicate information about the attack both during and after the incident to their stakeholders as well as the general public (Payne, Jerome, Thompson, & Mazer, 2018).

Not helping the unpreparedness of leaders, there is a lack of literature regarding communicating during and after an active attack in educational settings in general and even a more limited amount focusing specifically on higher education. An examination of the literature related to active attacks revealed most researchers examined the reasons the attacks occurred or preventative measures of the attacks. Additionally, the research related to active attacks in education focused on primary schools versus higher education institutions. Of the research related to crisis communication, most researchers studied communicating during the prevention and recovery stages of an ongoing crisis (Hale, Dulek, & Hale, 2005), instead more attention should be given to communicating during a crisis (Barker & Yoder, 2012; DeVries & Fitzpatrick, 2006; Sparks, Kreps, Botan, & Rowan, 2005; Ulmer, 2001). Of the minimal research related to crisis communications and active attacks, little research included interviews with those involved in the crisis and communications process (Thompson et al., 2017, Coombs, 2007). Given this inadequate amount of literature, more evidence-based research is needed to examine communication and crisis communication strategies in an active attack at higher education institutions (Coombs, 2007b).

Purpose Statement

During an attack, effective communication can save the lives of students and employees (Khaled & Mcheick, 2019). Despite Virginia Tech University having emergency response and communication plans in place, the leaders failed to effectively communicate vital information to their stakeholders about the 2007 shooting, which resulted in the death of 30 students and the injury of 17 students (Barker & Yoder, 2012; Galuszka, 2008). Although the decision makers knew about the assailant being in close proximity to campus for two hours, they waited until thirty minutes prior to the second attack to send a mass email to students and employees. No follow up communication was sent until after the attack was finished. Due to this inadequate communication and decision to act, the leadership was criticized for failing to notify their constituents (Barker & Yoder, 2012).

After an attack, effective communication is essential to rebuilding a community and an organization's reputation (Barker & Yoder, 2012). For Virginia Tech, the leadership failed to manage media as different stations announced victims' death prior to the official family notice and then proceeded to bombard the family with interview requests (Barker & Yoder; Fahmy & Roedl, 2008). Once Virginia Tech moved into recovery mode, however, the university and their reputation began to rebuild as a memorial service for the community aroused school spirit across the country (Barker & Yoder, 2012). After university leaders started focusing on recovering, the university recuperated with record-breaking enrollment and donations (Barker & Yoder, 2012).

Communicating to stakeholders is essential both during the response and recovery stages in from a crisis. Therefore, it is imperative scholars study the communication

responses of official university leaders during and after these active attacks. By applying the knowledge and developing best practices for emergency notification, crisis communicators can reduce the casualties of these attacks and fear among stakeholders. Similarly, by using communication strategies, executive leaders can rebuild their school community and trust among their stakeholders after an attack occurred. This research study sought to assist higher education leaders by providing insight into crisis communication strategies for communicating to stakeholders during and after active attacks. By applying the findings of this study, higher education leaders will have the necessary knowledge to create crisis communication plans that describe necessary processes to effectively disseminate information, protect their stakeholders, and reduce reputational damage during and after an attack on their campuses.

To analyze the effectiveness of crisis communication strategies, a phenomenological design was used to examine the communication best practices and experiences of executive university leaders in communications and emergency management departments who have responded to active attacks on their campus. Semi-structured, qualitative interviews were conducted to allow the researcher to gain a holistic view of the interviewee's perceptions and experiences (Creswell, 2013). Interview responses were interpreted using first and second cycle coding (Saldaña, 2013). The purpose of this research was to provide crisis communication recommendations and strategies for university decision makers to utilize in preparing for, responding to, and recovering from active attacks on university campuses. Although research on active attacks in educational settings is in abundance, there is a lack of research specifically related to crisis communications during such a tragedy. Through this study, the

researcher attempted to expand the topic and provide future research opportunities on communicating during an active attack in an education setting.

Theoretical Framework

This research study was rooted in Coombs' (2007a) Situational Crisis Communication Theory (SCCT). SCCT is a framework used to protect reputations by utilizing effective post-crisis communications (Coombs, 2007b). Instead of using case studies to determine crisis communication strategies, SCCT identifies strategies based on specific factors of the crisis and the stakeholders' perceptions (Coombs, 2007b). By analyzing the beliefs and behaviors of stakeholders as it relates to the crisis, communication managers can select the best strategies to protect the organization's reputation.

SCCT stems from Weiner's (1985) Attribution Theory, which theorizes people seek the cause of and have emotional responses to unexpected, negative events (Coombs, 2007a; Coombs, 2007b). In Attribution Theory, an organization is viewed positively and given sympathy if they are deemed not responsible for the event (Coombs, 2007b). An organization is viewed negatively and anger is evoked if they are deemed responsible for the event (Coombs, 2007b). Based in Attribution Theory, there are three factors examined in SCCT to determine the threat of a crisis to an organization's reputation: "(1) initial crisis responsibility, (2) crisis history, and (3) prior relational reputation" (Coombs, 2007a, p. 166). The first factor, *initial crisis responsibility*, is the stakeholders' perception of whether or not the organization caused the crisis. The more stakeholders attribute the organization to the cause of the crisis, the higher chances of the organization's reputation being damaged (Coombs, 2007b). The second factor, *crisis*

history, is an organization's history with crises, specifically if a similar crisis previously occurred (Coombs, 2007b). A history of crises by an organization would suggest an underlying, ongoing problem that an organization should address (Coombs, 2007b; Kelley & Michela, 1980; Martinko, Douglas, Ford, & Gundlach, 2004). If the organization is consistently having problems, the crisis history is deemed high and is more likely to damage an organization's reputation (Coombs, 2007a). The third factor, *prior relational reputation*, examines an organization's previous treatment of stakeholders (Coombs, 2007b). If an organization has a history of treating stakeholders poorly, the prior relational reputation is deemed unfavorable. "An unfavorable prior relational reputation suggests an organization shows little consideration for stakeholders across a number of domains, not just in this crisis (Coombs, 2007b, p. 167).

The previous three threat-level factors are used to determine an organization's responsibility level for the crisis. There are three types of crises and responsibility levels: (1) in the *victim crisis*, the organization is regarded as the victim and there is little responsibility attributed to the organization; (2) in the *accidental crisis*, the event is seen as unintentional or uncontrollable and there is minimal responsibility attributed to the crisis; and (3) in the *preventable crisis*, the organization intentionally caused an event and there is strong responsibility attributed to the organization (Coombs, 2007b). A history of crises or a history of treating stakeholders poorly intensifies the reputational threat of the current crisis (Coombs, 2007b). For example, if a crisis is deemed a victim crisis, where the organization has no control of the incident, but the organization has a history of crises or treating stakeholders poorly, the crisis is elevated in scale and should be treated as an accident crisis. If the crisis was viewed as an accident crisis, but the organization

has a prior history of crises and treating stakeholders poorly, it should be treated as an intentional crisis (Coombs, 2007a).

After determining the threat of the crisis to the organization's responsibility, crisis managers use SCCT to respond to the crisis (Coombs, 2007b). "Crisis response strategies are used to repair the reputation, to reduce negative affect, and to prevent negative behavioral intentions" (Coombs, 2007b, p. 170). There are four groups of crisis response strategies based on the level of responsibility: (a) denial, (b) diminish, (c) rebuild, and (d) bolster (Coombs, 2007b).

Denial strategies distance an organization from the crisis and remove any blame (Coombs, 2007b). An organization can deny involvement with the crisis, blame someone else for the crisis, or confront the accuser for the accusations (Amaresan, 2019). If a denial strategy is used, stakeholders must accept the denial in order to spare reputational damage to the organization (Coombs, 2007b).

Diminish strategies minimize an organization's role in a crisis or minimize the negative perception of the crisis (Coombs, 2007b). The goal of the strategy is to reduce the organization's relationship to the crisis or change stakeholder's opinion about the severity of the crisis. During a crisis, stakeholders will be presented with numerous narratives from media, the organization, and other stakeholders, and they must choose the most credible narrative describing the crisis and how it occurred (Coombs, 2007b). To reduce damage, communication managers should develop a narrative and present evidence diminishing their role of the crisis to stakeholders.

Rebuilding strategies repair relationships with stakeholders (Amaresan, 2019). In this strategy, communication managers seek to change stakeholders' negative perceptions

of the organization by communicating positive information about the organization (Coombs, 2007b). In a crisis, this strategy typically involves apologizing to the victims and offering compensation for the incident (Coombs, 2007b).

Bolster strategies rely on the previous goodwill of an organization (Coombs, 2007b). These strategies are used to remind stakeholders of the previous good deeds of the organization and praise stakeholders for their loyalty to the organization. The bolstering strategy typically is used in conjunction with one of the other three strategies (Coombs, 2007b).

Ethically, the first job of a manager during a crisis is to address the needs of the stakeholders (Coombs, 2007b). Similarly, university emergency managers must first address the safety needs of their stakeholders during an active attack. Once addressed, executive leaders and communicators then can work on protecting their reputation and rebuilding their organization. SCCT was an appropriate evidence-based framework for this study as it is used to predict stakeholders' responses to crises and protect reputation through proper communication (Coombs, 2007). In relation to active attacks, university officials should use SCCT to predict their stakeholder's response to the attack and respond accordingly using an appropriate communication strategy.

Research Questions

To understand how to communicate effectively with stakeholders during an active attack, a qualitative research design was used to answer the following questions: (a) What crisis communication strategies did higher education leaders experience during and after active attacks at higher education institutions? and (b) What were the best practices for communicating during and after active attacks at higher education institutions?

Significance of Study

Educational institutions are the second-most common location of mass shootings in the United States and have the highest casualty rates (FBI, 2013). Due to this increase in violence, school shootings have instilled fears among students, parents, and institutional executive leadership (Kaminiski, et al., 2010). Administrators in communications and emergency management are charged with connecting with stakeholders to keep them safe, reduce fears, and rebuild the community. Despite this responsibility, Payne et al. (2018) discovered that educational leaders are unprepared to handle the media firestorm following a crisis such as an active attack.

The significance of this research study was to assist higher education leaders in their communication through an examination of strategies previously utilized by higher education leaders during and after active attacks at higher education institutions. Based on the effectiveness of these strategies, best practices for communicating throughout the crisis were presented in this research study. With these recommendations, higher education leaders will have a better understanding of communication strategies and can use this information to create their own crisis communication plan and improve their overall communications to their stakeholders. By increasing the effectiveness of their communication, university leaders will be able to better protect their stakeholders and reduce the reputational damage to their institutions.

This study was unique because few evidence-based studies have focused on the communication to stakeholders during and after an attack to reduce harm and protect an institution's reputation. Instead, literature related to active attacks at educational institutions has focused on school safety and mental health related topics. In addition,

literature related to crisis communications focused on brand management after accidental or preventable crises. Of the literature related to crisis communications and active attacks at educational institutions, little research included interviews with those involved in the crisis and communication process (Coombs, 2007a; Thompson et al., 2017).

Definition of Terms

Many areas of higher education rely upon specific jargon and marketing and communication offices are no different. Key terms used throughout the study are defined below.

Active shooter. The Federal Bureau of Investigation (FBI) defines an active shooter as “an individual actively engaged in killing or attempting to kill people in a confided and populated area” (FBI, 2013, p. 5). By definition, the subject uses a firearm in these violent actions (FBI, 2013).

Crisis. A crisis is “a sudden or unexpected event that threatens to disrupt an organization’s operations and poses both a financial and reputational threat” (Coombs, 2007b, p. 164). There are two key traits to a crisis (a) it is unexpected and (b) it is considered negative (Coombs, 2007b). For an organization, a crisis could consist of a natural disaster, scandal, terrorist attack, environmental problem, or another random event that jeopardizes the organizations reputation (Stein, 2006). Most crises involve a “complex chain of crises that the originating catastrophe sets off” (Mitroff, Diamond, & Alpaslan, 2006).

Crisis management. Crisis management is “thinking about and planning for a wide range of crises and especially for their interactions” (Mitroff et al., 2006, p. 62).

Crisis management is typically broken into three phases: preparation, or before; response, or during; and recovery, or after (Mitroff et al., 2006).

Mass killing. The federal definition of a mass killing is defined as any attack that results in three or more people killed during a single incident (FBI, 2013).

Reputations. Reputations are “intangible” and “valuable” assets that are essential to attracting new and retaining old customers, creating a competitive advantage, recruiting high-level employees and students, and improving financials (Coombs, 2007b). Reputations are perceived as positive or negative based on information and experiences stakeholders receive from the organization (Coombs, 2007b).

Risk communication. Risk communication is used to notify the general public about necessary information they need to make informed decisions about risks related to their health, safety, and the environment (Morgan, Granger, Fischhoff, Bostom, & Atman, 2002).

Social media. Social media are applications where the user creates and distributes content such as blogs or social networking sites (Wildman & Obar, 2015).

Stakeholders. Stakeholders are “any group that can affect or be affected by the behavior of an organization” (Coombs, 2007b, p. 164). For a university, stakeholders include “students, faculty, staff, parents, governing bodies, regulatory agencies, vendors, and athletic organizations” (Mitroff et al., 2006, p. 64).

Delimitations

Delimitations are decisions made by the researchers to define the boundaries of the study (Creswell, 2013). Based on the choices made, this study was limited to active

attacks at higher education institutions. Delimitations of this study included crisis type, setting, and population.

A crisis caused by an organization, whether intentionally or unintentionally, is handled differently than a crisis not caused by the organization (Coombs, 2007b). According to SCCT (Coombs, 2007b), one type of crisis is a victim crisis. In both active attacks and natural disasters, organizations are considered the victims as the crisis is unpreventable. Natural disasters are broad and effect multiple organizations in the geographic location. Although the physical damage can be debilitating, the reputational damage is typically minor and handled at the state or federal government level. Active attacks, however, are more narrowed in its effect of one or a small number of organizations. The reputational damage can be large due to organization's duty to protect stakeholders, response related to the crisis, and the fear among the public. Because of the potential reputational damage and the nature of the crisis, this study focused on active attacks.

Educational institutions have higher casualty rates and are the second largest location to have mass shootings (FBI, 2013). Higher education institutions differ from primary schools because of the campus setup, lecture-style classes, and limited interaction between faculty, staff, and students (Drysdale, Modzeleski, & Simons, 2010). In addition, higher education institutions must follow the federal mandates of the Clery Act, which requires institutions to utilize mass notification systems to communicate as soon as an emergency is confirmed (Connolly, 2013; Drysdale et al., 2010). Due to the differences of educational structure and federal mandates, the decision was made to focus solely on higher education institutions.

As the purpose of this research was to provide recommendations and strategies for communication during a crisis, the decision was made to limit the population to only executive leaders, who have experience responding to active attacks on their campus, with positions in the (a) President's Office, (b) Marketing, Communications, or Public Relations Office; (c) Emergency Management Office; (d) Student Affairs Office; or (e) Academic Affairs Office. These administrators who have responded to active attacks have invaluable experience to share regarding the incident and their failed and successful communication strategies. This information was used to curate the recommendations future administrators can utilize when creating their crisis communication strategies. In addition, the specific departmental areas were chosen as these departments are typically the ones behind the scenes creating a communication response strategy on behalf of the institution.

Limitations

Limitations are factors uncontrollable by the researcher (Creswell, 2012). The biggest limitation to this study was the amount of time that may have passed between the active attack and the time of completing the study. Over the years, technology has evolved, and different tools are available now that may not have been available at the time of the attack. Specifically, technology has rapidly advanced in the widespread use of social media and mobile devices.

Additionally, given the time elapsed between the attacks and this study, access to the population was another limitation. The population of this study was executive leaders in the President's Office; Public Relations, Marketing, and Communications; Emergency Management; Student Affairs; or Academic Affairs who have experienced an active

attack. Some of these executive leaders were working in different roles or institutions, which limited the ability to interview them. Given the research occurred at the height of the novel coronavirus pandemic, another limitation was the availability of participants to interview. Those administrators working in the selected population were busy due to the additional workload of operating an institution during a worldwide crisis. In addition, given the geographical location of the participants and the researcher residing in Texas, interviews occurred over video conferencing. This limited the observation of nonverbal cues.

Another potential limitation was the different types of active attacks. Although the most common types of active attacks at educational institutions are school shootings, other attacks such as knifings and bombings have occurred (Agnich, 2015). Due to the variety of attacks, the communication strategies used by educational leaders and the success of those strategies may differ. Thus, there was a limitation in the generalization of the data based on the variety of active attacks and strategies used.

Assumptions

Assumptions are defined as a certain set of beliefs or views the researcher brings into their research (Creswell, 2012). These assumptions can influence the research and should be stated and considered for biases. For this study, my assumptions were axiological and social constructivism (Creswell, 2012). In axiological assumptions, the researcher brings their values and biases into the study and uses them to characterize and interpret the information from the participants (Creswell, 2012). In social constructivism, individuals use their experiences to develop their understanding of the world (Creswell, 2012). As these meanings differ, social constructivist researchers “look for the

complexity of views rather than narrow the meanings into a few categories or ideas” (Creswell, 2012, p. 20). The researcher relies on the participants’ viewpoints, which are subjective to their previous social and historical experiences. Social constructivists recognize their personal background influences their interpretation of the participants’ viewpoints, thus influencing the study.

As a researcher with both axiological and social constructivism views, it was my assumption that biases can influence research. Therefore, my biases, as it relates to this study, were identified. As a social constructivist communicator who managed crisis communications for a higher education institution, my interpretations of this study were impacted by my “personal, cultural, and historical experiences” (Creswell, 2012, p. 21). Over my five-years of experience in university marketing departments, I have assisted in a range of crises including sexual assaults, natural disasters, global pandemics, racial incidents, and a potential intruder on campus. Specifically, my role on the crisis communications team was to draft and send emergency notifications, develop communication strategies, assist with media, monitor social media channels, and brief leaders on the situation. To focus more on the participants and less on my interpretations as the researcher, *epoche*, or bracketing, was used. Bracketing out personal experiences allowed the researcher to understand the participants’ experiences and perspectives (Creswell, 2012).

Given these personal constructs, the assumptions for this study were that all participants were willing to share their personal experiences related to the attack at their institution. Additionally, it was assumed that all information presented by participants related to their experiences and the attack was accurate. Given the amount of time that

has passed between the incidents and the time of the interviews, it was also assumed that participants have had time to reflect upon the incident. With this reflection, it was assumed participants would share the successes and failures of their communication strategies throughout the incident and provide insight into strategies and techniques they would have done different.

Chapter Summary

Mass attacks on schools have increased over the past three decades compared to the turn of the century (Agnich, 2015). During an attack, institutions must communicate information effectively to their stakeholders to reduce the amount of harm inflicted. Once the attack is finished, institutions must continue their communication efforts to reduce the instability and rebuild their reputation among stakeholders (Coombs, 2007b). Given the importance of communicating to stakeholders throughout the stages of an active attack, it is imperative education officials are prepared and skilled to execute a crisis communication plan. This study examined strategies previously utilized by higher education leaders during and after active attacks at higher education institutions. Based on data collected, best practices for communicating throughout the crisis were presented. Higher education leaders can use this information to create their own crisis communication plan and improve their overall communications to their stakeholders. By communicating more effectively and timely, university leaders will be able to better protect their stakeholders and reduce the reputational damage to their institutions.

CHAPTER II

Literature Review

Introduction

Violence at educational institutions undermines the basic principles of education (Agnich, 2015). When an attack occurs at a higher education institution, officials must immediately start communicating to stakeholders (e.g., students, employees, parents, and the community) first about safety information (Barker & Yoder, 2012; Coombs, 2007b) and then about rebuilding the institution (Coombs, 2007b; Coombs & Holladay, 2002) so the institution can resume its mission of teaching students. Most institutions, though, are unprepared to handle the media firestorm following a tragedy (Payne et al., 2018).

The purpose of this literature review was to provide fundamental knowledge to assist higher education leaders in preparing and developing strategies for communicating during and after an active attack. This literature review was divided into eight main segments related to communication strategies, active attacks, response structures, technology, and media. To introduce readers to active attacks, the first section of the literature review detailed the history, prevalence, and types of active attacks in higher education and primary schools. With this foundational knowledge of attacks, the communication strategies and processes used by school officials in active attacks such as Columbine High School, Virginia Technical Institute, and Sandy Hook Elementary were examined. Subsequently, media responses to active attacks at schools were reviewed, focusing on the stages of media coverage and media framing of these tragedies. Following, a brief review of active attacks at other agencies was explored. Focusing on communication response, the next two sections detailed crisis communication strategies

(e.g., emergency and disaster communication strategies and reputational crisis communication strategies) as well as the structure of a disaster response. After a review of strategies, an examination of the technology used to disseminate messages was conducted. The literature review concluded with an evaluation of media and the processes for handling media.

Literature Review Search

To gain knowledge about crisis communication strategies as a response to an active attack, a comprehensive search of the literature was conducted. Using an electronic search of databases, 132 journal articles, magazine articles, and books were reviewed and used in this literature review. The databases Education Source, ERIC, PsycARTICLES, and PsychINFO were searched using multiple combinations of keywords. A search of peer-reviewed articles using the terms *crisis communication*, *disaster communication*, *emergency communication* along with *higher education*, *education*, *university*, or *college* was conducted. In addition to the previously mentioned databases, Newspaper Source Plus and Newswire databases were searched for the terms *Columbine*, *Sandy Hook*, and *Virginia Tech* along with the terms *media* and *communications*. After reading the articles and books retrieved from the previous searches, other sources cited in the original documents were read for clarification and more information. Based on these search terms and articles, themes emerged related to the history and prevalence of active attacks, preparing for an active attack, public relations crisis communication strategies, tips for communicating after a school shooting, and tools to send emergency notifications.

Prevalence of Active Attacks in Schools and Universities

Educational institutions have a history of mass attacks, with the first occurrence dating back to the beginning of the 20th century (Boissoneault, 2017). Not a new phenomenon, Agnich (2015) discovered that mass attacks on schools have increased over the past three decades compared to the turn of the century. From 2000 to 2013, there were 12 school shootings that occurred at a higher education institution (FBI, 2013). These 12 massacres left 60 people killed and 60 people wounded (FBI, 2013).

Specifically, attacks at educational institutions have a higher casualty rate than attacks at other locations such as businesses, open spaces, and government properties (FBI, 2013). An FBI (2013) study of active shootings between 2000 and 2013 found that of the top 10 incidents with the highest casualties, four of the incidents occurred in an educational setting (78 killed and 26 wounded), three of the incidents occurred at a place of business (33 killed and 66 wounded), and two of the incidents occurred at a government building (25 killed and 39 wounded), and one of the incidents occurred at a healthcare facility (8 killed and 3 wounded). Incidents such as Virginia Tech (32 killed, 17 wounded) and Sandy Hook Elementary (26 killed, 2 wounded) topped the FBI's list of highest casualties of the 160 incidents studied (FBI, 2013).

Types of attacks. Targeted mass attacks are planned attacks against a predetermined target, including an individual or group of individuals, a category of individuals, or an institution (Amman et al., 2017). “These are not spontaneous, emotion-driven, impulsive crimes emanating from a person’s immediate anger or fear. ... The perpetrators often have a grievance and they take time to consider, plan, and prepare their attack” (Amman et al., 2017, p. 4). Although the perpetrator may not harm the selected

target in the actual act, a preselection of the intended victim is made prior to act of violence. Despite the overall chance of a targeted attack being low, the impact of these violent acts is high (Amman et al., 2017). In addition to casualties and physical injuries, mass attacks or attempted mass attacks leads to emotional trauma such as posttraumatic stress disorder, anxiety, and depression and increases the risk of mental health problems (Turunen, Haravuori, Punama, Suomalainen, & Marttunen, 2014).

Between 1764 and 2013, there were 196 attempted or executed mass killings at schools and higher education institutions in the United States (Agnich, 2015). Weapons in mass attacks range from firearms, knives, and explosives (Agnich, 2015). For example, a student at Lone Star College in Texas injured 12 fellow students using a razor-type knife (Plushnick-Masti & Lozano, 2013). Of these 196 attacks studied, 174 used a firearm as the weapon of choice (Agnich, 2015), because of the ability to use these weapons to harm large numbers of people in a short time frame (Amman et al., 2017). Due to this frequency of this type of mass attack, most literature on active attacks in an educational setting has focused on shootings (Agnich, 2015).

One prevalent type of active attack, rampage shootings, has significantly increased (Rocque, 2012). A rampage shooting occurs when a current or former student(s) of the school shoot multiple, randomly chosen victims (Newman, Fox, Roth, Mehta, & Harding, 2004). From 1981 to 2010, the number of rampage school shootings has nearly doubled (Agnich, 2015; Baird, Roelike, & Zeifman, 2017). Rampage shootings rose to notoriety in 1999 when 12 students and one teacher died after a shooting spree at Columbine High School (Schildkraut & Muschert, 2014). These types of shootings have remained in the spotlight with attacks such as Virginia Technical

University, Northern Illinois University, Newtown Elementary and Marjorie Stone Douglas High School. Since 2009, 288 rampage shootings have occurred at schools and higher education institution, with 20 incidents occurring in the last two years (Whaley, 2019).

Active attacks in education. Mass violence at educational institutions is not a new phenomenon. Indeed, schools and universities have been targets of mass violence since their founding in the American colonies. For example, the Enoch Brown School Massacre occurred on July 26, 1764 (Middleton, 2007). In one of the most brutal incidents in Pontiac's War, schoolmaster Enoch Brown and nine children were murdered, four children were kidnapped, and 2 children—though scalped—survived their wounds. On May 18, 1927, school board member Andrew Kehoe detonated previously planted explosives in Bath Consolidated School. Afterwards, he exploded his vehicle, filled with shrapnel, outside of the school killing himself and wounding others. In total, 44 people died, of which 38 were students (Boissoneault, 2017). To date, the Bath Consolidated School Massacre remains the deadliest school attack in US history (Boissoneault, 2017). Since 1840 when records began being reliably tracked, not a single decade has passed without at least one school or university shooting; typically, 5 or more shootings are noted (Langman, 2015).

Although not a new phenomenon, active attacks at educational institutions have increased over the past six decades (FBI, 2013; Drysdale, Modzeleski, & Simons, 2010). In the 26 years of 1974-2000, 37 shootings occurred in an educational setting (Drysdale, Modzeleski, & Simons, 2010, p. 3). In half of the amount of time (between 2000-2013), the same number of attacks have occurred (FBI, 2013). Of these attacks, 12 were at a

higher education institution and 27 at a primary school (FBI, 2013, p. 15). A subsequent analysis of active shootings by the FBI revealed 18 more attacks occurred at an educational institution between 2013-2018, bringing the total active shootings at schools or higher education institution to 57 between 2000 and 2018 (FBI, 2019, pp. 9-12). In addition to being the second-largest location category (behind public commerce settings), shootings at educational institutions have higher casualty rates (FBI, 2013). The FBI's comprehensive list of shootings that occurred at a school or higher education institution and the number of casualties and wounded are described in Table 1. This table depicts the prevalence of shootings and violence at educational institutions over the past 20 years.

Table 1

List of School Shooting Data Gathered by the FBI

Schools	Date	Killed	Wounded
Santana High School	03/05/01	2	13
Granite Hills High School	03/22/01	0	5
Appalachian School of Law	01/16/02	3	3
Red Lion Junior High School	04/24/03	1	0
Case Western Reserve University	05/09/03	1	2
Kanawha County Board of Education	07/17/03	0	1
Rocori High School	09/24/03	2	0
Columbia High School	02/09/04	0	1
Red Lake High School and Residence	03/21/05	9	6
Campbell County Comprehensive High School	11/08/05	1	2
Pine Middle School	03/14/06	0	2

(continued)

Schools	Date	Killed	Wounded
Essex Elementary School and Two Residences	08/24/06	2	2
Orange High School	08/30/06	1	2
Weston High School	09/29/06	1	0
West Nickel Mines School	10/02/06	5	5
Memorial Middle School	10/09/06	0	0
Virginia Polytechnic Institute and State University	04/16/07	32	17
SuccessTech Academy	10/10/07	1	2
Louisiana Technical College	02/08/08	5	16
Northern Illinois University	02/14/08	5	16
Hampton University	04/26/09	1	2
Larose-Cut off Middle School	05/18/09	0	0
Inskip Elementary School	02/10/10	0	2
University of Alabama	02/12/10	3	3
Deer Creek Middle School	02/23/10	0	2
Ohio State University	03/09/10	1	1
Kelly Elementary School	10/08/10	0	2
Panama City School Board Meeting	12/14/10	0	0
Millard South High School	01/05/11	6	13
Chardon High School	02/27/12	3	3
University of Pittsburgh Medical Center	03/08/12	1	7
Oikos University	04/02/12	7	3
Perry Hall High School	08/27/12	0	1
Sandy Hook Elementary School	12/14/12	27	2
Taft Union Hall	01/10/13	0	2
New River Community College	04/12/13	0	2
Santa Monica College and Residence	06/07/13	5	4

(continued)

Schools	Date	Killed	Wounded
Sparks Middle School	10/21/13	1	2
Arapahoe High School	12/13/13	1	0
Berrendo Middle School	01/14/14	0	3
Seattle Pacific University	06/05/14	1	3
Reynolds High School	06/10/14	1	1
Marysville-Pichuck High School	10/24/14	4	3
Florida State University	11/20/13	0	3
Umpqua Community College	10/01/15	9	7
Madison Junior/Senior High School	02/29/16	-	4
Antigo High School	04/24/16	0	2
Townville Elementary School	09/28/16	2	3
West Liberty-Salem High School	01/20/17	0	2
Freeman High School	09/13/17	1	3
Rancho Tehama Elementary School	11/14/17	5	14
Aztec High School	12/07/17	2	0
Marshall County High School	01/23/18	2	21
Marjory Stoneman Douglas High School	02/14/18	17	17
Dixon High School	05/16/18	0	0
Santa Fe High School	05/18/18	10	12
Noblesville West Middle School	05/25/18	0	2

Note: Retrieved from FBI's *Active Shooter Incidents in the United States from 2000-2018* (FBI, 2019).

The first higher education shooting was a targeted attack. Targeted attacks occur when the victim(s) are targeted over a perceived injustice by the assailant (Lehman & Gamiz, 2016). In 1840, University of Virginia Professor John Davis was shot by a student outside his on-campus home after he tried to stop a protest against

carrying guns on campus (Rosenwald, 2018). Another targeted attack, Wesley Clow shot his professor and then killed himself after he received a bad grade in 1936 (Lehman & Gamiz, 2016). Additionally, in 1919, assistant professor Roger Sprague wounded two professors and shot the university's vice president after not receiving a full-time position (Schildkraut & Elsass, 2016). Almost a century later, a similar shooting occurred when Amy Bishop killed three colleagues and injured three others after she was denied tenure at University of Alabama-Huntsville (Wadman, 2011). Different from the 1919 killing, though, this spree killing received media coverage and required reputational rebuilding (Wadman, 2011).

In contrast to targeted attacks, rampage shootings target random victims and assailants seek to harm as many people as possible (Lehman & Gamiz, 2016; Newman et al., 2004). The 1966 University of Texas "Tower" shooting was a rampage shooting and one of the first shooting sprees to receive extensive media coverage (Schildkraut & Elsass, 2016). The gunman climbed the tower at the university and began randomly shooting people for 80 minutes until he was eventually killed by police. Fifteen people were killed and 32 wounded as a result of his attack (Schildkraut & Elsass, 2016). The media coverage of the massacre received national coverage, with reporters filming live from the scene (Schildkraut & Elsass, 2016). Media coverage of school shootings continue to develop until the unprecedented coverage of Columbine High School.

Another rampage shooting, the massacre at Columbine High School resulted in 13 people dead (Schildkraut & Elsass, 2016). The attack spanned 47 minutes, but the media coverage lasted for a month (Robinson, 2011). On the day of the attack, CNN aired six hours of uninterrupted coverage about the event (Schildkraut & Elsass, 2016).

Additionally, an analysis of media coverage of that year showed 10,000 newspaper articles from the nation's 50 largest newspapers dedicated to the shooting (Newman, 2006). Columbine spurred national debates about gun control, violence, and school safety (Schildkraut & Elsass, 2016). Following the shooting, schools began implementing dress codes, installing metal detectors, and requiring school identification badges (Schildkraut & Elsass, 2016).

Similar to the Columbine massacre, the 2007 shooting at Virginia Tech changed school safety. The deadliest school shooting in U.S. history left 32 students and faculty members dead and 17 others wounded. Following the massacre, the Jeanne Clery Act was amended to require institutions to develop emergency response plans, implement campus-wide notification systems, and establish protocols to immediately inform the community of specific types of emergencies (Connolly, 2013; Drysdale et al., 2010). Different than the other rampage shootings, the media frenzy that followed Virginia Tech included new technologies such as cell phone footage and social media (Mastrodicasa, 2008). Consequently, the intense media coverage led to further criticism of the institution for failing to act and communicate information about the attack in a timely manner (Mastrodicasa, 2008).

Different from the previously mentioned attacks, the active attack at the Ohio State Medical School did not involve a gun. In 2016, a student wounded 11 people after he drove his car on campus, hitting them, and then after exiting his car proceeded to stab students. Ohio State executive leaders and emergency managers responded to the attack by invoking a campus-wide lockdown and notifying students via mass

notification. The Islamic State (ISIS) terrorist group claimed responsibility for the attack.

Primary schools versus higher education. Attacks at primary schools are different than those at institutions of higher education (Drysdale et al., 2010). Primary schools typically are contained to one or several buildings, equipped with smaller classrooms, and students interact with teachers and staff on a regular basis. If a behavioral concern exists among these students, teachers and staff can communicate with the student's family according U.S. Federal privacy laws. Higher education institutions, however, typically are spread across larger campuses with more buildings, utilize larger, lecture-style classrooms, and faculty and staff rarely interact with the students on a regular basis outside of the classroom. Moreover, faculty and staff often approach safety and communication very differently given the variety of disciplinary backgrounds and autonomy present on most college and university campuses. In addition, if there is a behavioral concern, communications between faculty and staff with a higher education student's family is usually limited due to strict interpretations of the Family Educational Rights and Privacy Act (FERPA) of 1974 (Drysdale et al., 2010). However, 2008 amendments to FERPA following the Virginia Tech shooting allow educators to communicate with family and mental health professionals if behavioral concerns occur suggesting a student will harm himself/herself or others. Still, FERPA remains a challenge cited by many higher education practitioners in crisis communication (Fuller, 2017).

Another difference between higher education institutions and primary schools is the enactment of the Jeanne Clery Disclosure of Campus Security Policy and Campus

Crime Statistics Act (the Clery Act). Passed in 1990 and amended in 1992, 1998, 2000, and 2008, this act requires higher education institutions disclose information about specific crimes (i.e., homicides, sexual offenses, robbery, aggravated assault, burglary and theft, and arson) to the campus community. The last amendment in 2008 following the Virginia Tech massacre, required higher education institutions to develop an emergency response plan, establish a mass notification system, and immediately inform the campus community of an emergency as soon as it is confirmed unless the notification would restrict efforts by officials to contain the situation (Connolly, 2013; Drysdale et al., 2010). These mass notification systems are used to inform stakeholders of emergencies, provide updates about the incident, and communicate instructions (Connolly, 2013). In addition, the Clery Act amendment that followed the Virginia Tech shooting mandated that institutions test their mass notification systems annually (Connolly, 2013).

Communicating After Active Attacks

The main priority during a crisis is to protect stakeholders from physical threats. From a communication standpoint, this means informing the stakeholders of the threat and the precautions stakeholders need to take to protect themselves (Coombs, 2007b). This information can be shared with the stakeholders directly from emergency notification tools (e.g., sirens, text messages, emails, phone calls), social media, or from a third-party (e.g., media, witness) (Coombs, 2007b). For an educational institution, student safety is the highest priority and extensive security measures must be in place, including emergency and crisis communication plans (Barker & Yoder, 2012).

Due to the ethic of care associated to educational institutions, Mastrodicasa (2008) suggested school officials respond to the situation with compassion and sensitivity

in a swift manner. Barker and Yoder (2012) expressed compassion and instructions as important aspects to crisis response. Compassion referred to showing sympathy for the victims and instructions referred to informing the public on the actions they need to take to ensure their safety (Barker & Yoder, 2012). The Columbine massacre showed the need to balance both compassion and instructions (Barker & Yoder, 2012). As staff focused on assisting grieving children, media released nonstop graphic footage and details about the event (Barker & Yoder, 2012). Consequently, staff established a media perimeter when students returned to school to protect students (Barker & Yoder, 2012). After the Virginia Tech tragedy, executive leaders attempted to balance the compassionate needs of their students with that of media and public information. Critics claim executive leadership failed to do this as families were not notified of the deceased prior to media releasing the names (Barker & Yoder, 2012). Additionally, victims and families were bombarded with media requests and had little privacy after the incident (Barker & Yoder, 2012). In this instance, Virginia Tech leaders failed to remember that one of the most important stakeholders of education is parents and swiftly informing parents is a major component to overcoming a crisis (Barker & Yoder, 2012; Poland, 2007).

Lessons learned. Similar to the aforementioned analysis of Virginia Tech's failure to inform major stakeholders, a review of previous incidents provides leaders a chance to learn from mistakes leaders, communicators, and emergency managers previously made when responding to attacks at their schools. This section will detail the response of five major school shootings. Furthermore, each section analyzes the criticism from stakeholders regarding the communication and media response.

Thurston High School. On May 21, 1998, a student walked into Thurston High School in Oregon and fatally shot one of his classmates and wounded 20 others (Stein, 2006). School officials swiftly created a temporary Joint Information Center away from the scene for those seeking information. In addition, school, city, and hospital officials partnered to create a communication and information dissemination plan. As media inquiries poured in from all over the world, public information officials respond to requests and update media. To increase the effectiveness of communicating to media, regular press conferences were scheduled that included spokespersons from the school, police department, sheriff's office, and local hospitals (Stein, 2006). Interviews with officials from the Thurston High School attack revealed two major mistakes. First, the team neglected to monitor media coverage to ensure information being published was accurate (Stein, 2006). Second, officials regretted not using the school website to post information to the public that they could ensure was accurate (Stein, 2006).

Columbine High School. On April 20, 1999, two Columbine High School seniors killed 12 students and one teacher, wounded 24 students, and then killed themselves (Schildkraut & Muschert, 2014). Following the massacre, emergency and school officials created a Joint Information Center located at the city's public library (Portner, 1999). The different city, county, state, and federal agencies experienced difficulties communicating with each other due to using different radio frequencies and cell phone frequencies being jammed (Austin, 2003). Further complicating matters, news crews rushed to the library for information. Overwhelmed, the original staff of seven communication officials turned to the National School Public Relations Association for assistance, where communicators from numerous states flew into Colorado to help.

Then, staffed at 20, communication officials answered an estimated 200 calls a day from media (Portner, 1999).

After-action review of the Columbine shooting showed a need to “balance the interests of students, the media, and the institution” (Barker & Yoder, 2012, p. 88).

According to former Jefferson County Public School administrator Christian Anderson, the most important lesson learned from the tragedy was the importance of strong relationships between the communications team, school district, government agencies, community leaders, students, and the parents (Santa Clara County, 2013). To develop these relationships, a 24-hour hotline was established to provide information and dismiss rumors (Austin, 2003).

Virginia Tech University. Prior to the Virginia Tech massacre, the university created both a Crisis Communication Plan, which included guidelines for responding to a crisis and an Emergency Response Plan, which outlined emergency response efforts for the campus leadership and emergency personnel (Barker & Yoder, 2012). The university utilized the plans on April 16, 2007, when a student, Seung Hui Cho, went on a rampage shooting. Cho shot two students in a dorm room, then, two and one half hours later, went on a shooting spree killing 30 other students and injuring 17 (Barker & Yoder, 2012). Two hours after the first victims were shot, approximately 30 minutes before the spree, Virginia Tech officials emailed students and employees about the incident. Over the following one hour and 26 minutes, three other emails were sent as well as notifications via the campus outdoor loudspeakers. The Virginia Tech executive leadership was scrutinized after the attack for failing to notify students, employees, and families in a

timely manner (Barker & Yoder, 2012). If a notification was sent sooner, student lives could have been saved (Barker & Yoder, 2012; Galuszka, 2008).

To assist with media and communications, public information officers from multiple agencies partnered with the Virginia Tech staff (Barker & Yoder; Parker, 2008). An analysis of the Virginia Tech crisis response showed the executive and communication team attempted to be transparent with stakeholders, with a specific focus on the victims and their families, the university community, and media (Barker & Yoder, 2012; Parker, 2008; Virginia Tech, 2002). Despite this attempt, families of the victims expressed that the university did not handle communication and media properly. For example, media showed photos of victims prior to families officially being notified by university or emergency officials (Barker & Yoder, 2012; Fahmy & Roedl, 2008). In addition, students and families were not provided isolation and privacy and, therefore, were bombarded by media requests (Barker & Yoder, 2012).

After the shooting, the crisis management moved from response mode into recovery mode. This included a memorial service to address a heart-broken community featuring speakers by both the Governor of Virginia and President of the United States. The highlight of the ceremony was the closing remarks from a distinguished professor who aroused the “Hokie” school spirit in the university community as well as across the world (Barker & Yoder, 2012). Following the massacre, Virginia Tech had record-breaking enrollment and donations (Barker & Yoder, 2012).

University of Chicago. Months after the Virginia Tech massacre, an hour of violence surrounded the University of Chicago campus (Einhorn, 2007; Hoover & Lipka, 2007). At 12:30 a.m., a university employee was fired upon as he was walking on

campus. At 1:15 a.m., two female students were robbed by a man claiming he had a gun on a nearby street. Minutes later, a doctoral student was killed while walking to his apartment, located one half block from campus (Einhorn, 2007; Hoover & Lipka, 2007). Despite having a newly implemented emergency-notification system, university officials did not notify the campus community of the violence until 10:30 a.m. (Einhorn, 2007; Hoover & Lipka, 2007). The university faced criticism from students for waiting nine hours to inform them of the attacks and a construction project being the cause of an emergency phone not working (Einhorn, 2007). To alleviate fears and criticism, the university responded by increasing the number of police officers patrolling the area and opening an additional police station (Einhorn, 2007).

Sandy Hook Elementary School. On December 14, 2012, Adam Lanza killed 20 first grade students and six educators at Sandy Hook Elementary School in Newtown, Connecticut (Schlidkraut & Muschert, 2014). In the After-Action Review of the shooting, the superintendent, Janet Robinson, stressed the importance of communication during a tragedy (Bradley, 2018). Communication at the school immediately faltered when the principal was killed during the attack (Bradley, 2018). In their communication plans, the principal was the designated person to notify the district and Robinson of the assault. Due to this, Robinson advised other school districts to include both notification processes and backup communication process in their plans (Bradly, 2018).

Initial information about the shooting was full of errors as news organizations rushed to deliver the news and public officials provided inaccurate information (Berkowitz & Liu, 2016). For example, the shooter was wrongly identified at first due to an unnamed police source releasing a name from an incorrect identification card the

shooter was carrying (Berkowitz & Liu, 2016). In addition, Robinson noted the importance of correcting wrong information that was being disseminated (Bradly, 2018). To improve the accuracy of information being released, Robinson cleared information with police and developed relationships with media (Bradly, 2018).

Media Response During and After Active Attacks

The rise of the 24-hour news cycle in the early 1990s directly impacted the rapid reporting of crises (Mastrodicasa, 2008). Both in the midst and after a disaster, media provides extensive coverage of the crisis (Houston, Spialek, & First, 2018). Media's response to a crisis largely influences how a community reacts (Williams, Woods, & Staricek, 2017). For example, after five college students were murdered at the University of Florida in 1990, prolific media coverage caused widespread panic across the state (Mastrodicasa, 2008). For the two weeks police investigated the murders and sought the killer, media coverage showed dead bodies, rumors circulated the airwaves, and talk shows sensationalized the murders (Mastrodicasa, 2008). It was not until the university expressed concern and support for the students that campus was able to resume normal operations (Mastrodicasa, 2008).

Media sensationalizes mass attacks (Amman et al., 2017). The Columbine shooting was "one of the most highly media covered events of the entire decade" (Lankford & Madfis, 2018, p. 153). And more recently, the Virginia Tech and Sandy Hook shootings were featured in 90% of newspapers for three days after the incidences (Dahmen, 2018). Specifically, after a mass attack occurs, media presented detailed information about the incident, the killer, and the killer's manifesto, often attempting to elicit more drama, emotion, and entertainment (Meindl & Ivy, 2017). This extensive

coverage that focused on the killer, sensationalized the attack and created the legacy the killer hoped to achieve that will live on the Internet forever (Amman et al., 2017).

Stages of media coverage of mass killings. The extensive media coverage of mass attacks occurs in stages. Murray (2017) performed an ethnographic content analysis on media reports to determine the stages of media reporting on mass killings. In the ethnography, Murray (2017) examined five mass shootings, three of which occurred at an educational institution: Columbine High School, Virginia Tech, and Sandy Hook.

In the first stage, tragic shock, media framed the incident as a tragedy. The coverage focused on the crime scene of the shootings, with police and media sources as the primary sources of information as details from the incident emerged. Information in this stage was related to the number of victims, methodology of the killer, and whether or not the suspect has been apprehended. In this initial stage, details of the incident were constantly changing as media use varying sources (Murray, 2017).

During the second stage, witness reports, media interviewed surviving eyewitnesses from the scene. Although the reports were authentic and emotional, some of the information provided was contradictory as victims were in shock. Following the Columbine shooting, a witness gave two, contradicting detailed accounts describing the targeting of the victims by the gunmen. Despite the accounts being contradictory, the witness' story was shown repeatedly and boosted media ratings (Murray, 2017).

In the third stage, official sources released the assailant's name to media, but nothing more. Due to this, media worked to learn more about the killer by using profiles or unofficial sources. This led to misidentification of the assailant. For example, after the Sandy Hook shooting, media misidentified the shooter as his brother. In addition to

getting his name wrong, they shared the photograph of the shooter's brother that was retrieved from his Facebook page (Murray, 2017).

During the fourth stage, media interviewed people who have known the killer throughout their lives to gain more information about the killer. In these interviews, most people alluded to the assailant showing signs of committing such an attack. Additionally, these interviews led to profiling and damaging reputations of others. In the case of Columbine, media reported the killers were a member of the Trench Coat Mafia, a group of students who wore gothic attire. In reality, the students were outcasts at the school and not a member of the group (Murray, 2017).

In the fifth stage, media branding, media packaged their reports to differentiate themselves from other stations (Murray, 2017). These packages included logos, slogans, and theme songs (Murray, 2017). For example, NBC packaged Sandy Hook as *Tragedy at Sandy Hook Elementary* and ABC News dubbed it *Tragedy at the Elementary School* (Tucker, 2012).

During the sixth stage, official response, media reported on official responses from governmental agencies (Murray, 2017). It is common after these incidents for multi-governmental task forces to be formed to investigate the attack. The length of this stage varied as it is dependent on the length of the investigation. If the killer died at the scene of the crime, this process was faster as opposed to if the killer goes to trial. In the case of Sandy Hook, three reports were requested with the final report released three years after the attack occurred. In comparison, the official report following Virginia Tech was released six months after the massacre (Murray, 2017).

In the last stage, return to stage one, media highlighted discussions about gun control, mental health, and violence in the United States. As these conversations run its course, it disappears until it is mentioned with the next disaster (Murray, 2017). With the proliferation of these attacks, however, journalists begun to change their reporting technique and balance coverage with facts, not sensationalism (Murray, 2017).

A mass attack receives such extensive coverage in traditional media (i.e., newspapers, radio, television) and social media that these attacks are almost inescapable to the victims and the general public (Lankford & Madfis, 2018). Reporters who covered the Virginia Tech relied on new technology and nonofficial news sources during the first two days of coverage (Berkowitz & Liu, 2016; Wigley & Fontenot, 2009). For example, a student's cell phone footage taken during the Virginia Tech attack was shown on news channels across the country (Barker & Yoder, 2012). This overwhelming media coverage of active attacks at schools or universities frames the picture of school violence epidemic in the United States (Rocque, 2012).

Media framing. Similar to the different stages of media coverage of mass killings, media *frame* the event in different ways (Chyi & McCombs, 2004). Based on the different frames selected, media influence the public's perception of the event (Muschert & Carr, 2006). According to Ghanem (1997), media frame events in four aspects: (a) the topic, (b) the placement and the size or amount of the coverage in media, (c) the details of the information included, and (d) the tone of the event. In the foundational piece of media framing, Chyi and McCombs (2004) noted media frame events on five levels related to *space*, focusing on how an event effects: (a) the individuals, (b) the community, (c) the region, (d) the society as a whole, and (e) the globe. In addition, media presented

events on three levels related to *time*, framing events in: (a) the past, (b) the present, or (c) the future (Chyi & McCombs, 2004).

Using their ground-breaking theory, Chyi and McCombs (2004) analyzed 226 *New York Times* articles related to the Columbine shooting. Of these articles, 70% of them appeared in the first two weeks. The *Times* coverage of the tragedy hit its peak on the day following the shooting, with 15 articles related to the event in the paper that day. Of the articles examined, 52% portrayed the massacre through a societal frame. Instead of the coverage focusing on the incident itself, the coverage discussed gun control. As coverage of the shooting continued, the societal frame increased to 78% during the first 25 days while a focus on the individual frame decreased (Chyi & McCombs, 2004).

Similarly, Muschert and Carr (2006) examined the coverage of nine school shootings in the *New York Times* using media salience and frame changing. Of the 290 articles analyzed, societal frame dominated the coverage at 48% (Muschert & Carr, 2006). The authors (Muschert & Carr, 2006) noted that immediately following a school shooting, media focused on the individuals of the shooting, but over time majority of the coverage shifted to a societal impact frame. At the end of the coverage, the societal lens decreased while the community frame increased as students returned to school (Muschert & Carr, 2006).

Despite Chyi and McCombs (2004) finding that *The New York Times* framed the Columbine tragedy at a societal level with a focus on gun control, Birkland and Lawrence (2009) noted the public framed the Columbine tragedy differently. Instead, polls showed that the public blamed poor parenting as opposed to media's frame of lack of gun control (Birkland & Lawrence, 2009). In addition, little policy was implemented as a result of

the shooting, despite media, public, and government officials focusing on the issue of school violence (Birkland & Lawrence, 2009).

Given the increase in school shootings, Schildkraut and Muschert (2014) reexamined media framing by comparing the 2012 Sandy Hook shooting to the 1999 Columbine shooting. Using a similar method of comparing articles from *The New York Times*, Schildkraut & Muschert (2014) noted different results from previous researchers (Chyi & McCombs, 2004; Muschert & Carr, 2006). Although both media coverage of the shootings framed the events with a societal lens, initial coverage of the Columbine shooting focused on individuals, while the initial coverage of the Sandy Hook attack immediately focused on gun control (Schlidkraut & Muschert, 2014). This societal frame dominated the coverage for 10 days and then declined, with the individual and community frames rising to correspond with memorial services and students returning to class. The day after the Columbine attack gained the most coverage while the day after the Sandy Hook shooting showed an inverse trend as investigators did not release information quickly or hold frequent press conferences. In addition, journalists, in a hurry to quickly report the details, incorrectly identified the shooter's brother as the actual shooter. This inaccuracy caused journalists to fact check more prior to releasing information (Schlidkraut & Muschert, 2014). Another difference between the two shootings was media focused on the victims of Sandy Hook while they focused on the shooters of Columbine. This victim-focus turned the media lens from societal to individual and community (Schlidkraut & Muschert, 2014).

Local vs. national media. The geographical location of media determines the frame media used to tell a story (Hawdon, Agnich, & Ryan, 2014). After analyzing local

and national newspaper articles after Virginia Tech, Hawdon et al. (2014) discovered local newspapers focused more on the victims and community. In comparison, national media focused on the cause of the tragedy, including gun control, campus security, and mental health (Hawdon et al., 2014).

In the incident of Thurston High School, public relation officials working the crisis noted a difference between local media and national media (Stein, 2006). The national media tried to sensationalize the shooting, while the local media were more sensitive to the tragedy due to their connection to the community, school, and even the victims (Stein, 2006). Given the amount of media covering the tragedy, officials had to create media pools where select reporters would be allowed to film and photograph specific event coverage, with the understanding the reporters had to share their footage with their fellow reporters (Stein, 2006). This created animosity between the local and national media as the local reporters wanted to be a priority over the national media (Stein, 2006). In addition to learning from these communication patterns in media during school and universities shootings, outside agency crisis response may also provide useful information.

Active attacks at other agencies. On August 15, 2013, two bombs were detonated near the Boston Marathon finish line. The bombs killed three people, injured 264 others, and resulted in a four-day manhunt for the two assailants (Williams et al., 2017). An examination of the Boston mayor's twitter account showed he used his account to transmit messages about the crisis, the response of the crisis, resources for the victims and public, and to rebuild and create unity among the community (Williams et al., 2017).

Crisis Communication Strategies

The Federal Emergency Management Agency (FEMA) has four phases of emergency management (a) mitigation, or the reduction of hazards; (b) preparedness, planning and equipping people for a disaster; (c) response, actions taken to minimize the impact of a disaster; and (d) recovery, actions taken to rebuild after a disaster (n.d.). Similarly, Mitroff et al. (2006) described four components needed in a crisis management program: (a) a plan for a variety of crises, (b) the ability to perceive when a crisis is developing, (c) a crisis-management team, and (d) the inclusion of both internal and external stakeholders in the preparation and response. By establishing an emergency management plan prior to a crisis, potential downfalls were exposed and corrected to mitigate problems in a real-life scenario (Mitroff et al., 2006). Even though crises typically did not happen exactly as teams planned or trained for, the preparation for a crisis through adequate plans and training allowed teams to adapt and overcome the specific crisis (Mitroff et al., 2006).

These emergency and disaster plans of organizations should align with the plans of local, state, and national government agencies (FBI, 2018a). In March of 2011, the Presidential Policy Directive (PPD) 8: National Preparedness was signed, which provided an outline of national hazards preparedness. In PPD 8, emergency management is broken into five areas: (a) prevention, protection, mitigation, response, and recovery (FBI, 2018a). Prevention are actions taken to prevent an emergency situation from occurring. Protection are ongoing actions taken to secure organizations from threats. Mitigation are actions taken to diminish the chance of a threat occurring while also eliminating or reducing lives lost and property damaged if an incident occurs. Response are actions

taken during a situation to control an incident, reestablish a safe environment, and save the victims of the incident. Recovery are steps taken to resume an organization back to normal operations and people back to their normal lives (FBI, 2018a). Typically, prevention, protection, and mitigation are steps taken prior to an incident occurring. Response occurs during the incident and recovery occurs after the incident (FBI, 2018a).

These plans should reflect the parameters of the National Incident Management System (NIMS) developed by the Department of Homeland Security. The NIMS system is a standardized approach to emergency response. The system is a national strategy and set of procedures used by emergency responders of all government levels to respond to a disaster. The NIMS protocol allows all responders to manage a disaster, no matter the size or complexity, because everyone is operating under the same procedures regardless of their agency (Humes, 2014; NIMS, n.d.). In a higher education setting, following and establishing NIMS protocol is completed by an employee in emergency management (Farris & McCreight, 2014). Due to the increasing number of attacks and campus safety issues, emergency management positions are increasing on campus. This role typically oversees campus safety, compliance to government regulations, and emergency operations and planning (Farris & McCreight, 2014).

Emergency and disaster communication strategies and principles. In addition to an emergency and disaster plan, organizations need separate crisis communication plans (FBI, 2018a; Moore, 2018; Trump, 2015; Trump, 2012; Scanlon, Alldred, Farrell, & Prawzick, 1985). An educational institution's crisis communication plan should include policies and procedures for communicating during and after a crisis (Trump, 2015). These plans should include components related to communicating via traditional

media, broadcast media, social media, digital/online media, the school's website, and the school's mass notification system (Trump, 2015). A robust communication plan also includes information on key stakeholders and the best ways to communicate with those various groups (Moore, 2018; Trump, 2015). In addition, the crisis communication plan should be reviewed after every emergency, drill, and on an annual basis (McGuire, 2007; Pierce, 2016; Trump, 2012; Trump, 2015).

During a disaster, the public goes through a four-step process when they receive an emergency alert or warning message (Liu, Fraustino, & Jin, 2016; Mileti & Sorenson, 1990). First, the audience reviews the message for understanding. Second, they determine if the information is accurate. Third, they evaluate if the message is intended and relevant to them. Fourth, and last, they decide what actions need to be taken. In a crisis, the public seeks information about the situation and the necessary actions needed to be taken, and then share the information (Liu, Fraustino, & Jin, 2016; Mileti & Sorenson, 1990). There is a gap in the literature related to higher education decision-makers understanding and usage of this four-step process.

Hale et al. (2005) examined 15 crises and discovered that crisis communications could be grouped into four phases: (a) observation, (b) interpretation, (c) choice, and (d) dissemination. During the first step, observation, information about the crisis was gathered and organized. In the second step, interpretation, information was analyzed for accuracy and relevancy to the current situation of the crisis. During the third step, choice, strategies and solutions were analyzed to decide which action plan should be implemented to successfully mitigate the crisis. In the last step, dissemination, information was dispersed to stakeholders using the messages and platforms decided

from step three (Barker & Yoder, 2012; Hale et al., 2005). Two challenges were identified during the dissemination stage: (a) a lack of time and technology to effectively and efficiently communicate messages and (b) not communicating clear, accurate messages (Barker & Yoder, 2012; Hale et al., 2005). Researchers (Barker & Yoder, 2012; Seeger, Sellnow, & Ulmer, 2001) suggested that during these stages, crisis managers must constantly evaluate the current situation and the crisis response plan and adjust the plan as the situation further develops.

FEMA (2011) noted nine principles of a successful crisis communication strategy. First, consider the information needs of the stakeholders. Second, communicate effectively. Third, integrate communications into the entire crisis plan. Fourth, ensure transparency in communications. Fifth, confirm all communication is accurate. Sixth, communicate information in a timely manner. Seventh, make communication staff available and accessible to those needing information. Eighth, communicate emotions to the audience. Ninth, create a partnership with media (FEMA, 2011).

Other best practices of crisis communication include “timely, thorough, honest, and consistent communication with all key publics as well as appropriate levels of compassion and concern” (Barker & Yoder, 2012, p. 87). To be able to develop messages that meet these best practices, communicators should focus on obtaining information during a developing crisis. With accurate information, crisis communicators can then send timely, thorough, accurate, and consistent messages to stakeholders on the appropriate platform (Barker & Yoder, 2012).

Similarly, the Centers for Disease Control’s (CDC) six principles for crisis communications are (a) be first, (b) be right, (c) be credible, (d) express empathy, (e)

promote action, and (f) show respect (Centers for Disease Control, 2018; Trump, 2012). A crisis, specifically an active attack, is an urgent situation and requires the information to be disseminated quickly. It is critical to be the first source of information, the CDC's first principle, as the first source tends to become the preferred source for the general public. Although it is important to disseminate information fast and become the preferred source, all information must be accurate. Sharing accurate information, the CDC's (2018) second principle, establishes credibility with the users. Conversely, sharing inaccurate information and dishonesty can diminish any credibility previously gained. Therefore, the CDC's (2018) third principle, is honesty. Being honest is important to building trust with the public. To continue building rapport with the public, communicators should show empathy, the CDC's (2018) fourth principle. Empathy can be shown by addressing the feelings and challenges victims may be facing. To assist victims in some of the emotions they may be feeling, practitioners should promote action, the CDC's (2018) fifth principle. Promoting action can ease anxiety, give a sense of control, and help victims in the process of resuming normalcy. To continue building rapport with the public, leaders should make sure all communication is respectful, the last CDC (2018) principle.

Common among most crisis communication pillars are speed and accuracy (Barker & Yoder, 2012; Brunner & Lewis, 2006, Lawson, 2007; Lipka, 2007; Mastrodicasa, 2008; Trump, 2012). Given that active shootings at educational institutions last, on average, five minutes (FBI, 2013), a crisis response plan should include a strategy for disseminating information as quickly and efficiently as possible (Lawson, 2007; Lipka, 2007; Mastrodicasa, 2008). As shown in the Virginia Tech

massacre, the timeliness of releasing information to stakeholders was crucial to the public determining how the institution responded to the crisis (Mastrodicasa, 2008; Rollo & Zdziarski, 2007). Not only did the decision-makers wait two and a half hours to notify students of the previous attacks, but the communicators sent the message via email after students were already in class. Additionally, the university decision-makers failed to use other systems previously in place such as outdoor speakers, radio, and television, which could have quickly disseminated the information (Barker & Yoder, 2012). Due to the university's slow response strategy, the students were unable to appropriately see and respond to the message (Barker & Yoder, 2012).

The faster the information is disseminated, the more successful it is, but the information must be accurate and clear (Mastrodicasa, 2008). Information that is unclear causes confusion among the audience. Patten, Ruddell, and Thomas (2019) analyzed a case study of a medium-sized public university, where campus officials were notified by police that an armed man was reportedly heading toward campus. Campus officials quickly sent an emergency notification to the campus community that police were seeking an armed assailant near campus. Considered a precautionary notification, the message did not contain a description of the wanted man or instructions on how the university would proceed with business operations. An hour after the first notification was sent, officials sent a second emergency notification explaining the incident was resolved. During the hour between notifications, students, employees, parents, and the community were confused about the situation and unsure what actions, if any, they were supposed to take (Patten et al., 2019). Faculty members were unsure whether to dismiss class, lock down buildings, or even report to campus if they were off-campus when they

received the notice. Similarly, students reported feeling unsafe in class, feared facing disciplinary action for leaving or not reporting to class, and were unsure whether classes were still scheduled. Parents bombarded university phone lines for more information. The institution learned important lessons from their miscommunication to stakeholders: (a) notifications should provide as much information as possible and include necessary actions for the recipients to take, (b) faculty and staff need to be trained on the appropriate actions to take if they receive emergency messages, and (c) plans should be in place for how to correspond with parents (Patten et al., 2019). Although the communicators responded with one of the pillars, speed, they did not meet the requirements of the second pillar of accuracy. Had they accurately conveyed information about the suspect and the actions needed to be taken, they could have avoided the fear and confusion among their communities (Patten et al., 2019). Speed and accuracy are essential to successfully stealing thunder as described in the next section.

Crisis timing and thunder stealing. In addition to safety concerns, a timely response to a crisis is important because it reduces media's ability to sensationalize the crisis or create their own narrative and allows the public to hear accurate information directly from the organization (Stein, 2006). Because of its ability to reach the mass public and its ability to use its extensive capability to influence the public's opinion of the organization, media should be treated as a "primary public" (Barker & Yoder, 2012). A crisis timing strategy allows an organization to be proactive in self-revealing information about a crisis. The goal of this strategy is to *steal the thunder* from competitors or news agencies (Claeys & Cauberghe, 2012). This strategy allows crisis communication managers to warn stakeholders about the crisis and to shape the crisis to

media outlets with their own narrative. Researchers (Arpan & Pompper, 2003; Claeys & Cauberghe, 2012) showed that organizations who reveal their own crisis appeared more credible than organizations who did not reveal their own crisis. If the crisis communication managers failed to communicate the information to stakeholders in a timely manner, an information void was created and filled with information provided by other sources, which were often inaccurate (Claeys, Cauberghe, & Leysen, 2013; Coombs, 2015; Fowler, 2017; Stromback & Nord, 2006).

One way an organization can implement a crisis timing strategy is via social media. In a 2014 mall shooting in Columbine, Washington, the police department with jurisdiction of the mall used Twitter to break the news of the shooting. By doing so, the department established itself as credible and the official news source of the shooting (Folwer, 2017). Once they stole the thunder and broke the news, the department made a conscious effort to Tweet a minimum of once an hour with an update, even if there was nothing to report. Most of the Tweets sent by the department were informational in nature (Fowler, 2017). The department did this as a communication strategy to *fill the silence* and not allow an information void to happen where media and the public sought information elsewhere (Coombs, 2015; Stromback & Nord, 2006). The department even went so far to send a Tweet stating they were done tweeting for the night; with the time they would resume posting in the morning. Similar to the 2014 Columbine mall shooting, an analysis of two school shootings in 2014 revealed similar results (Mazer, Buchanan, Quinlan, & Titsworth, 2015). At both of these school shootings, the districts used social media to release information, establish their credibility, and reduce

misinformation. By using social media this way, the districts were able to become the primary source of information and steal the thunder from media outlets.

Reputational crisis communication strategies. Organizations implement crisis communication strategies to inform the public while protecting their reputation and reducing the damage of the crisis (Coombs, 2007a; Coombs & Holladay, 2002). There are numerous types of crisis communication strategies employed by organizations. The dominant crisis community theory, Situational Crisis Community Theory (SCCT), analyzes a crisis to predict an appropriate crisis response strategy (Coombs, 2007; Coombs & Holladay, 2002; Liu, Austin, & Jin, 2011). Crisis response strategies are selected based on the reputational threat of the crisis, the organization's previous crisis history, and the organization's responsibility of the current crisis (Claeys & Cauberghe, 2012; Coombs, 2007a). Based on those factors, organizations choose from four response strategies: (a) deny, (b) diminish, (c) rebuild, or (d) reinforce (Coombs, 2007a; Coombs & Holladay, 2002; Liu et al., 2011).

If the organization has a low level of responsibility for a disaster, it is recommended that crisis managers use a denial or a diminish response to distance the organization from the situation (Coombs, 2007a; Coombs & Holladay, 1996; Liu et al., 2011). The denial response has three strategies: (a) confront the accuser; (b) deny the existence of the crisis, and (c) blame the responsibility on someone else (Liu et al., 2011). The diminish response has two strategies: (a) excuse the crisis through an explanation and (b) justify the reason the crisis occurred (Liu et al., 2011).

If the organization has a high level of responsibility for a preventable crisis, it is recommended that crisis managers use a rebuild or a reinforce response to reduce the

reputational damage (Claeys & Cauberghe, 2012; Coombs, 2007a; Liu et al., 2011). The rebuild response has two strategies: (a) compensate the victims or (b) apologize for the crisis (Liu et al., 2011). The reinforce response has three strategies: (a) bolstering the organization through previous good deeds, (b) praising stakeholders, and (c) claiming the organization is the victim (Liu et al., 2011).

Both the NFL and the Baltimore Ravens used a SCCT strategy to recover from the Ray Rice controversy in 2014 (Richards, Wilson, Boyle & Mower, 2017). In this instance, running back Ray Rice was arrested for domestic violence against his fiancée. Originally, the NFL, the Ravens, and Ray Rice used a diminishing strategy to minimize the situation. After video evidence of the altercation was released, the NFL and the Ravens had to change their strategy to rebuilding as they could no longer deny the situation. In their rebuilding strategy, the organization suspended Rice, apologized, and changed its personal conduct policy (Richards et al., 2017). The organizations did not use either deny or reinforce strategies.

Dialogic Communication Strategy. The Dialogic Communication Strategy focuses on communicating to the public via “meaningful interactions” (Taylor & Kent, 2014, p. 388). In this theory, two-way communication is used to build a relationship (Du Plessis, 2018). This theory is based on the principle that establishing trust and relationships with audiences is essential to creating an environment where information is mutually shared and accepted (Smith, Smith, & Knighton, 2018; Taylor & Kent, 2014). This focus on the public perspective and experience is what separates dialogic communication from other strategies. In a crisis, the professional employing a Dialogic Communication Strategy would communicate from the public’s perspective and would

anticipate the public's concerns (Smith et al., 2018) using authentic, real-time interactions (Du Plessis, 2018). Du Plessis (2018) discovered that organizations that used dialogic communication during a crisis, helped build relationships with stakeholders and assisted the organization in rebuilding after a crisis.

Southwest Airlines was forced to take a Dialogic Communication Strategy after actor Kevin Smith tweeted he was asked to leave a flight for being overweight (Chewning, 2015). The airlines policy stated the customer must be able to sit in the seat with both armrests down (Pang, Hassan, & Chong, 2014). Per their policy that Smith agreed to when he purchased the ticket, the airlines had the authority to remove Smith from the flight. The story gained steam due to Smith's 1.6 million Twitter followers and eventually was picked up by major news outlets. This forced Southwest to understand the public's perspective and issue an apology to attempt to make the story disappear. In their apology, Southwest took a lighthearted jab at the actor referencing his role in Silent Bob and offered him a voucher for future flights. The news story did disappear for the time being, but it resurfaces anytime a similar airline policy makes the news (Pang, Hassan, & Chong, 2014). Social media has given stakeholders a voice and now organizations must authentically engage the public in real-time interactions (Chewning, 2015).

Social Mediated Crisis Communication Strategy. Similar to the dialogic communication strategy, Kent and Taylor (2016) have expressed that social media should be used by organizations to build relationships with and prioritize the needs of the public. Due to the changing media landscape from the advent of the Internet, researchers developed the Social-Mediated Crisis Communication model (SMCC) (Liu et al., 2011).

Social media are unique in that it allows for a conversation between the creators of the content and the followers of the content (Wright & Hinson, 2009). Rather than focusing on the message of the content, this model focuses on the distribution of the content (Smith et al., 2018), by examining how the source and the medium of the crisis information affects the response strategy (Liu et al., 2011; Liu et al., 2016).

The SMCC model predicts the direct and indirect effect of social media in how crisis communication messages are distributed via social media, traditional media, and word-of-mouth (Liu et al., 2016). According to the model, information during a crisis is disseminated on social media and consumed in three ways: (a) by social media creators, this can be either the organization or an individual, who disseminates information about the crisis; (b) by social media followers, who consume information disseminated by the creators; and (c) by social media inactives, who consume information off-line from social media followers or creators (Austin, Liu, & Jin 2012; Liu et al., 2011). In this model, content is distributed either from the organization or from a third-party.

Image Repair Theory. Image repair theory is based on implementing a strategy to repair an organization's reputation, or image, following a crisis (Benoit, 1997; Williams et al., 2017). This theory includes five strategies to repair an organization's image after a crisis (a) denying the crisis, (b) avoiding responsibility, (c) decreasing the severity of the crisis, (d) taking correcting action, and (e) mortification (Arendt, LaFleche, & Limperopulos, 2017; Benoit, 1995). In the denial strategy, an organization can either simply deny involvement in the crisis or shift responsibility to another party. In the evasion of responsibility strategy, there are four separate strategies an organization can choose (a) provocation, (b) defeasibility, (c) accident, and (d) good intentions. To reduce

the severity of the crisis, an organization might (a) bolster their image, (b) minimize the crisis, (c) differentiate the crisis from more severe situations, (d) show the crisis in a more favorable light, (e) attack the accuser of the crisis, and (f) compensate the victims. In the corrective action strategy, an organization tries to fix the problem from the crisis. In the final strategy, mortification, the organization or those individuals involved in the crisis apologize for the situation (Arendt et al., 2017; Benoit, 1995).

Image repair theory has been used in large-scale political, environmental and natural disasters (Arendt et al., 2017). For example, then-President Bill Clinton used image repair strategies following his scandal with Monica Lewinsky (Arendt et al., 2017; Kramer & Olson, 2002) and former President George Bush used similar strategies after the government's response to Hurricane Katrina (Arendt et al., 2017; Benoit & Henson, 2009). After analyzing 110 peer-reviewed articles from over 30 years, Arendt et al. (2017) discovered that corrective action was the most successful image repair strategy, successfully repairing an organization's reputation 57% of the time it was implemented. Denial, which was the most commonly used strategy, was also the least successful strategy, failing 62% of the time the strategy was used (Arendt et al., 2017). The researchers (Arendt et al., 2017) also discovered that organizations that remained silent following a crisis suffered from long-term reputational damage.

Restorative Rhetoric. Based on discourse of renewal, restorative rhetoric crisis communications should be used when a crisis affects a widespread public audience (Seeger & Griffin-Padgett, 2010; Williams et al., 2017). When using this theory, crisis management leaders should communicate in a way that explains the event while helping the community rebuild. Leaders must balance communicating instructions for safety with

a humanistic element that fosters a sense of recovery (Griffin-Padgett & Allison, 2010; Williams et al., 2017). There are four goals to rhetoric communication to (a) restore faith in the community; (b) help victims heal; (c) establish a sense of security and resolution of the crisis; and (d) plan for the future (Williams et al., 2017). “The twenty-first century has brought new and challenging issues that cannot be properly addressed by traditional frameworks for crisis response” (Griffin-Padgett & Allison, 2010, p. 381). Two major examples of restorative rhetoric are the responses to the September 11 terrorist attacks and Hurricane Katrina.

New York Mayor Rudolph Giuliani used restorative rhetoric to reassure and calm both New Yorkers and the American people (Griffin-Padgett & Allison, 2010). He emphasized to his stakeholders that there were enough resources that were all allocated to the attack, he expressed sympathy and emotion, but he never lost control in front of the cameras, and he blamed the terrorists who caused the attacks. After the initial days of the attack, Giuliani’s rhetoric changed toward that of rebuilding and healing. In his later addresses, he spoke of miracles and hope, praised the heroes of the city, and urged citizens to unite (Griffin-Padgett & Allison, 2010). Due to his leadership and response to the deadly attacks, *Time Magazine* named him *Man of the Year* (Griffin-Padgett & Allison, 2010).

Facing a different tragedy, New Orleans Mayor Ray Nagin’s rhetoric related to Hurricane Katrina was used to criticize the government’s response efforts (Griffin-Padgett & Allison, 2010). Nagin used his voice to express his and his stakeholders’ frustration and concern regarding lack of resources and evacuation plans. His rhetoric helped frame the Hurricane Katrina response as a disaster and even prompted an apology

by then-President Bush (Griffin-Padgett & Allison, 2010). Additionally, Nagin drove around the city, helping families, and speaking of hope and resilience. Despite state and government officials being in charge, he emerged as the leader because of his rhetoric and transparency with his stakeholders (Griffin-Padgett & Allison, 2010). In both instances, Giuliani and Nagin elicited restorative rhetoric to help rebuild their cities.

Disaster Response Communication Structure

A pre-established communication structure and plan is critical in effectively managing a crisis. With multiple notification systems and strategies to implement, crises must be managed by a team. By utilizing a team, multiple processes and strategies can be implemented at once. Previous researchers indicated crisis response teams take on a variety for forms and are guided by various theories and perspectives.

Crisis response team. Effective crises are managed by a team (FBI, 2018a). Some researchers (Elliot & Charelbois, 2007; Farmer & Tvedt, 2005; Hwang & Cameron, 2008; Mitroff et al., 2006) have argued that leadership is more important to weathering a crisis than a crisis plan (Barker & Yoder, 2012). The team should consist of representatives from across the organization, in addition to first responders (FBI, 2018a). Based on their survey of crisis management teams and response strategies, researchers (Mastrodicasa, 2008; Mitroff et al., 2006) discovered that most university crisis response teams consisted of representatives from student affairs, facilities, public relations, finance, police, security, academic affairs, legal, the president's office, risk management, operations, and athletics. Other researchers (Barker & Yoder, 2012; Leeper & Leeper, 2006) discovered that public relations departments and staff are not involved in the crisis management decision-making process. Excluding public relations departments is

detrimental because media turn to public relations staff for answers during a crisis (Stein, 2006). By minimizing the role of public relations staff in a disaster, the effectiveness of crisis communication strategies is reduced as communication staff are left being reactive versus proactive (Seeger, 2006).

The best crisis teams have trained together prior to a catastrophe (Mitroff et al., 2006). Training and practice exercises ensure everyone on the team is aware of their responsibilities before, during, and after a crisis (FBI, 2018a). By completing practice activities, the team can identify and improve weaknesses in the crisis plan (FBI, 2018a). As team members are typically from different departments, practicing allows them to become familiar with working together and understanding each other's diverse perspectives, authority, and networks. To next sections further explains the role and background needed in a crisis team.

Executive/President. Leadership is a critical component to managing a crisis (Mileti, 1980; Williams et al., 2017). Fanelli (1997) described the president as essential to resolving a campus crisis. During a crisis, leaders should assist in managing the crisis and the recovery efforts, including being visible, accessible, and transparent to media and stakeholders (Ulmer et al., 2011; Veil & Ojeda, 2010; Williams et al., 2017).

A leader should appear calm and in control of a situation, despite how awful the situation may be (McGuire, 2007). During a crisis, stakeholders need to hear and see their leader on campus (McGuire, 2007). As president of Trinity College, McGuire (2007) suggested leaders visit student areas such as dining and residence halls to listen to the student's stories and provide personal communication. When speaking to media,

stakeholders, or the public, leaders need to express compassion to the victims, make meaning of the situation, and help foster recovery efforts (Williams et al., 2017).

Public relations. Seeger, et al. (2001) examined the crisis response plans of 172 Michigan school districts and discovered 90% of the plans designated a crisis spokesperson. FEMA (2011) defined traits of a successful spokesperson. According to the governmental agency, crisis communicators should have strong (a) speaking abilities, (b) reputation among audiences, (c) knowledge of the subject, (d) image of authority, and (e) ability to connect with the audience (FEMA, 2011).

Only one person should be designated as the spokesperson for the institution when communicating with media and the public (Minkoff, 2015; Nash, 2010; Santa Clara County, 2013). When multiple people speak about an issue to media or the public, messages can become mixed, inconsistent, or conflicting (Minkoff, 2015). The selected person should have a previously developed relationship with local media contacts (Nash, 2010; Pierce, 2016) and be able to effectively communicate in media settings. To establish a relationship with media, experts recommended starting at the top with the publisher, editor, or station manager (Scanlon, Alldred, Farrell, & Prawzick, 1985).

When speaking with media about a crisis, it should be assumed that nothing said is off the record (Minkoff, 2015). In addition, media and the public perceive the words no comment as an organization hiding something or admitting guilt (Minkoff, 2015; Santa Clara County, 2013; Scanlon et al., 1985). Often in a crisis, officials are unable to comment on certain issues at particular times, if this is the case officials should explain why they are unable to speak about an issue at a particular moment instead of saying the words ‘no comment’ (Minkoff, 2015; Santa Clara County, 2013). This shows media and

the public that the organization is willing to speak to the topic when information is available, but that they are currently unavailable. If officials use words such as ‘no comment,’ then media and the public seek additional, unofficial sources to fill the gap of information they are needing.

Although only one person should be the spokesperson for the institution, it takes a team of public relations and communication officials to manage and communicate messages during a crisis (Jimerson, Brock, & Pletcher, 2005; Pierce, 2016; Scanlon et al., 1985). During a crisis, media flock to the scene and bombard officials with phone calls for information (Houston, Spialek, & First, 2018). Virginia Tech brought communication officials from across the state to assist with the influx of media following the massacre (Barker & Yoder; Parker, 2008). Similarly, after the Umpqua Community College shooting, 37 officials from Lane Community College assisted in the communication efforts (Pierce, 2016). A network of communication experts is critical to crisis communication efforts. Similarly, relationships with external agencies also support crisis response in time of need.

External agencies. Crisis response teams should build relationships with their counterparts at external agencies (e.g., police and fire) (Trump, 2015). Working with external government agencies in the community allows public information officers in those areas to provide information about how the emergency affects the entire community (Moore, 2018). Together, formal plans should be drafted between the educational institution and these first responders on how to create and operate a Joint Information Center (JIC) during a disaster (Trump, 2015). These centers are a hub for agencies to be able to collaborate on consistent and coordinated information for media and the public

(Trump, 2015). The JIC is a common location for media briefings, where only officials and media representatives can attend (Scanlon et al., 1985). This allows for information to be controlled by officials as all reporters are hearing the same information.

Depending on the size of the JIC and media response, a media pool may need to be created for press conferences (Scanlon et al., 1985). In this scenario, media select a few representatives to film and report on the scene in return for access to the footage and information (Scanlon et al., 1985; Stein, 2006). If possible, officials should select media from a wire service for the pool as most news outlets use these services (Scanlon et al., 1985.)

A JIC must be established fast during a crisis and media must be notified of the location (Scanlon et al., 1985). Essentials such as power and phone lines must be running for the JIC to operate. In addition, staff are needed to collect information and pass concerns and questions from media to officials (Scanlon et al., 1985). Plans should be made prior to a crisis to determine the location and equipment needed to operate the center (Jimerson et al., 2005). Previous plans and protocols will alleviate the stress of trying to establish a JIC and allow officials to focus on communication and media.

Technology

The advent of technology has increased the ways institutions are able to communicate to their stakeholders throughout a crisis. This ease of communication is imperative as rapid notifications of an active attack can save or diminish the amount of lives lost (FBI, 2018a). In an active attack, officials have minutes to send the first message to stakeholders (Foster, 2007a; Santovec, 2012), as most are concluded within five minutes (FBI, 2013). Following the Virginia Tech tragedy, campuses across the

country evaluated their emergency notification systems (Mastrodicasa, 2008). Many used this time to upgrade their systems and implement text messaging notifications (Mastrodicasa, 2008). An upgrade and increase in communication platforms, such as text messaging system, increases the likelihood of the message reaching the student.

The best technology to utilize during an emergency situation is as many as possible (“Make the most”, 2013). The more technology mediums used to communicate to stakeholders during a crisis, the more likely the message will reach the intended audience (Lightfoot, 2013; Schaffhauser, 2007; Staman et al., 2009). During a crisis, it could be time consuming to send messages via multiple communication platforms. A multi-modal system is an emergency notification system that send messages through various communication mediums with one click (Lightfoot, 2013). Most campuses use four to six different methods of sending emergency notifications to their stakeholders (e.g., text, voice, email, and social media) (Lighfoot, 2013). A multi-modal system integrates all of the main communication methods into one system to improve the efficiency of sending an emergency notification (Lightfoot, 2013).

Stephens, Barrett, and Mahometa (2013) surveyed more than 1,000 students, faculty, and staff of a large university campus after they received notifications of a campus shooting. The researchers discovered that people who received three messages through at least one synchronous medium, such as a phone call or face-to-face conversation, perceived the emergency as most important. Notifications sent via asynchronous channels, such as text messages and emails, were perceived as less important. To maximize urgency, the researchers recommended emergency managers send asynchronous messages first followed by a second synchronous notification. Given

the nature of the emergency, participants reported not feeling overwhelmed or overloaded by the multiple messages received (Stephens et al., 2013). These findings are important for crisis communicators to consider as multiple messages are needed for the gravity of crisis situation to sink in for many stakeholders.

In addition to trying to reach as many stakeholders as possible, having various communication tools in place is important because technology can fail (Schaffhauser, 2007). During Hurricane Katrina, for example, Tulane University's email system was inoperable, leaving officials unable to communicate with their stakeholders via email. Officials tried to recreate their email system, but were unsuccessful. Instead, the university officials examined other means of communication and turned to cell phones. Originally, officials tried to send voice calls, but phone service bandwidth was not strong enough. Instead, officials resorted to text messaging to connect with their stakeholders (Schaffhauser, 2007). Once officials realized text messaging would work, the President framed his whole communication strategy around sending text messages (Schaffhauser, 2007). Tulane's experiences showcase the need for redundancy and alternatives in emergency notification systems. The below sections further explain common emergency notification systems used by higher education institutions. All of these methods should be explored and considered when sending emergency notifications to ensure the message is reaching the most number of people as possible.

Email. Email is one of the most frequently used communication methods on a campus. Using this channel to communicate during a crisis, however, assumes the recipients are checking their email during that time (Mastrodicasa, 2008). One criticism of the Virginia Tech executive leadership following the massacre on campus was the use

of email as a primary means of notification during a time when students were between classes and not checking their emails (Barker & Yoder, 2012). Due to this, institutions, including Virginia Tech, upgraded their systems to include text messages (Barker & Yoder, 2012).

Text and voice messages. Following the Virginia Tech tragedy, institutions were required to implement emergency mass notification systems (Mastrodicasa, 2008). As emailing about an emergency can be problematic as it requires the user to be constantly checking for a message, universities turned to text and voice message systems, which notify the user of a new message. These systems either send a text message to cell phones and/or an automated voice call with the message to cell phones, answering machines, and landlines (Archee, 2006).

Between sending a voice message or a text message, text message is the more reliable choice. Because 96% of Americans, including 99% of 18- to 29-year-olds, own a cellphone, these messages are going straight to the devices in stakeholders' hands (Pew Research Center, 2019). During an emergency, there is an increase in traffic on phone networks as users try to make phone calls (Connolly, 2013). This influx in traffic can make it difficult to send mass messages over the same system. In this circumstance, sending text messages becomes more reliable as it consumes less bandwidth than voice messages (Connolly, 2013). In addition, some university officials have noted people who received a voice message hung up on the alert since it was a computer-generated voice and they assumed it was an advertisement (Foster, 2007b).

There are two ways to capture contact information from key stakeholders: (a) opt-in or (b) opt-out. The opt-in method requires stakeholders to input their information into

the mass notification system and elect to receive the messages (Connolly, 2013). As this option requires the user to complete a task, it may result in them not completing the task and, ultimately, getting the emergency message. The opt-out method automatically inputs the stakeholders contact information into the system and requires stakeholders to opt-out if they do not want to receive the message (Connolly, 2013). To increase the success of the emergency message, experts recommended automatically enrolling students in the system and making them opt-out of the notification if they do not want to receive it as the information being relayed via these mass systems can be the difference between life or death (Lightfoot, 2013; “Make the most”, 2013). Researchers noted that students will voluntarily provide their phone numbers to be used for emergency notification (Foster, 2007b; Frank, 2007; Mastrodicasa, 2008).

These messages, however, “are only as good as the people who manage them” (Connolly, 2013, p. 41). Information disseminated must be accurate and clear (Mastrodicasa, 2008). Experts have debated where these mass notification systems should be housed (Connolly, 2013; Galuszka, 2008) such as by campus emergency officials, information technology divisions, or communication departments. The system must be housed with people who can create, edit, and send the message as quickly as possible (Connolly, 2013). The personnel allowed to send notifications should be defined prior to an emergency to improve efficiency during an actual crisis (Connolly, 2013; Galuszka, 2008; “Make the most”, 2013). In addition, experts noted the fewer people involved in the communication decision making and sending process, the better (Schaffhauser, 2007). The more people involved in crafting a message, the longer it

takes. Instead, a small, fast, and trusted team is more efficient for sending out quick, emergency notifications (Schaffhauser, 2007).

Incorporating institutional branding and headings can also increase the effectiveness of crisis messages (“Make the most”, 2013; Staman et al., 2009). Using consistent wording and images conditions stakeholders to recognize the communication is being sent from the official institution during an emergency (Staman et al., 2009). Due to students transferring between institutions, branding also communicates to students that institution is sending a message (“Make the most”, 2013).

Websites. School websites are vital in communicating in a crisis. Considered the official platform of the school, the site will be frequented by all stakeholders including parents, media, and the public (Trump, 2015). Prior to a disaster, a school’s website should have a dedicated emergency and safety page to educate stakeholders on the types of potential disasters and how to respond in an emergency (Trump, 2015). More importantly, institutions should have a dedicated space on the homepage or an alternative home page to activate in the event of a major emergency (Trump, 2012). This template should be created in advance to allow for quick utilization during a crisis.

A school website can become the official source of information during a disaster (Mastrodicasa, 2008). Following Hurricane Katrina, Tulane University created an emergency website to provide information to their stakeholders (Mastrodicasa, 2008). In addition, Discovery Middle School in Madison, Alabama utilized both the school’s website and the city’s website to keep parents and the community informed (Nash, 2010). These pages can be updated in real-time to provide up-to-date information for stakeholders. Unlike other platforms, such as social media, websites are not constricted to

character limits and should be used to provide thorough information about the crisis to stakeholders.

Social media. The public used to turn to traditional media for information, but the advent of social media has users seeking information through digital avenues (Williams et al., 2017). Social media are social networking, messaging, and other web-based or mobile sites used for social interaction (Stephens, 2011). Organizations use social media during a crisis because they can communicate instantly with their communities, rather than being limited to traditional outlets (Williams et al., 2017). The public will turn to any technology that will allow them to communicate their needs during a crisis (Procopio & Procopio, 2007). Specifically, social media usage increased (Pew Internet & American Life, 2006) as the public used the platforms to receive up-to-date and unique information about the crisis (Bucher, 2002; Procopio & Procopio, 2007). In the instance of the Boston Marathon Bombing, tweets from government officials were disseminated quickly and frequently reshared by users, amplifying the reach of the tweets (Williams et al., 2017).

Universities, specifically, need to use social media for communication because it is the preference of their young stakeholders (Pempek, Yermolayeva, & Calbert, 2009; Snoeijers, Poels, & Nicolay, 2014). Researchers from the Pew Research Center (Perrin & Anderson, 2019) reported 88% of 18-to-29-year-olds use some form of social media. A study of 162 college students showed they used both social and traditional media on a regular basis for entertainment, relationship maintenance, networking, and education (Austin, et al., 2012). During a crisis, though, their media consumption changed. Students turned to social media during a crisis for fast, insider information (Austin et al.,

2012; Jones et al., 2017). Specifically, students used social media over tradition media because they noted they believed the information on social media would be faster (Austin et al., 2012). Therefore, educational institutions should utilize social media to communicate to their stakeholders about a variety of topics including closures, status information about the incident, safety information, and post-reunification information (Stephens, 2011). In addition, social media usage during a crisis can add redundancy to other communications, reduce the necessity to disseminate information through the press, and disseminate communication to the public, including the press (Stephens, 2011).

With the prevalence of social media, “rumors and misinformation that used to spread in days now spread in minutes” (Trump, 2015, p. 77). If an official source does not release information fast enough, students will turn to other channels and may receive conflicting information or rumors (Jones et al., 2017). Researchers discovered that during a 90-minute gap of communication from officials during an active-shooter, lockdown simulation, 38 rumors were created, many going viral (Jones et al., 2017). On social media, this is specifically problematic as it is hard to verify information being shared by users and once a post goes viral, it will continue to be shared despite inaccuracies (Jones et al., 2017). To reduce inaccurate information from circulating on social media, officials should release information as frequently as possible (Jones et al., 2017). Specifically, during an attack at a school, multiple alerts have increased the urgency among those who receive them (Jones et al., 2017). Even if new information is not available, frequent updates reduces rumors and anxiety related to the attacks (Jones et al., 2017). By monitoring social media, officials can find and dispel rumors from unofficial sources (Arnold, 2009; Connolly, 2013; Jones et al., 2017).

Multiple social media platforms exist, and the demographics of each platform vary. Instagram and Snapchat are most used by 18- to 29-year-olds (Perrin & Anderson, 2019). Twitter, which is only used by 22% of adults, is mostly used by 18- to 29-year-olds (Perrin & Anderson, 2019). Although Facebook is used by a range of age groups, it is used typically by those 50-years-old and older (Perrin & Anderson, 2019). Given the differences of social media users, it is important to understand the demographics of each platform and how each audience uses the platform. Understanding these demographics allows crisis communicators to cater statements and responses to specific audiences as needed. For example, based on the aforementioned demographics, messages geared toward parents would be more appropriate on Facebook as opposed to Twitter and messages geared toward students would be more successful on Twitter, Instagram, or Snapchat. Analyzing the usage and demographics of social media accounts can provide integral information to incorporate into a crisis communication plan.

Snoeijers, et al. (2014) analyzed students' usage of Facebook and Twitter during a crisis. The researchers discovered students followed and interacted more with information about the incident on Twitter (Snoeijers et al., 2014). In education, a dean of a college is equivalent to a face of a company such as a CEO. During a crisis, the CEO would speak out to stakeholders (Snoeijers et al., 2014). Similarly, students responded and interacted more with messages shared from the dean of the college versus the university's official social media account (Snoeijers et al., 2014). The researchers hypothesized this was because people would rather interact with a human face than an anonymous account. Additionally, Snoeijers et al. (2014) theorized that the dean's

messaging during a crisis validated and elevated the severity of the incident. Further underlining the importance of a leader during a crisis.

During a crisis, students also will use social media to check in with their friends and family regarding a crisis (Austin et al., 2012). After the Virginia Tech massacre, more than 500 Facebook groups were created associated to the situation (Mastrodicasa, 2008). Specifically, within one day of the incident, 5,400 students and alumni joined a Facebook group called VT Unite (Mastrodicasa, 2008).

Prior to using social media as a crisis communication tool, policies and procedures should be established. When creating these guidelines, officials should establish who is sending the message and who is monitoring the comments for feedback as well as redundancy among personnel (Stephens, 2011). It is critical to monitor social media comments and answer questions quickly to decrease the chance the user will seek the answers from unofficial sources (Conolly, 2013; Stephens, 2011). When using social media during a crisis, officials recommended establishing hashtags as a way for the public to track information (Stephens, 2011). In addition, include website links, when applicable, to direct users back to websites for more information (Stephens, 2011).

Media

Media are predictable (Rosenthal & Pijnenburg, 2012; Scanlon et al., 1985). Previous attacks have shown that following an attack at a school, local, national, and international media will bombard the scene (Lankford & Madfis, 2018). Because they are predictable, officials should plan to use media as a partner during the crisis help disseminate accurate information and reduce rumors (Jones et al., 2017; Scanlon et al., 1985). Additionally, it is important to partner with media to disseminate messaging as

students deem media credible and seek out information during a tragedy (Austin et al., 2012).

Journalism has transformed with the digital age. Journalists now produce coverage for three screens: television, the internet, and mobile devices (Trump, 2012). Often, these journalists are working under fast deadlines with limited resources. Considered multimedia journalists, they are expected to conduct interviews, film video, and write stories for multiple platforms (Trump, 2012). Despite this commonality among reporters, media have different needs (Scanlon et al., 1985). Local media typically want specific information related to residents in the community. Regional media typically include local information but take a more statewide approach. National media focus mainly on the bigger picture (Scanlon et al., 1985). Although government officials may have some firsthand information about the incident, they also use media to gain information (Scanlon et al., 1985). Officials should consider government relations when responding to media requests.

Audiences interact with different media at different times and in different ways (Scanlon et al., 1985). Ratings and survey companies provide media with information regarding the demographics (i.e., age, gender, education level, and income) of people consuming their content and the times and day the content is consumed. This information is used by media stations to create their target market and audience (Scanlon et al., 1985). In addition, media markets may cover areas where multiple languages are spoken (Scanlon et al., 1985). Information about the station's target market and audience should be considered when disseminating information to ensure the correct message reaches the correct audience (Scanlon et al., 1985).

Media can be seen as difficult as they demand answers to questions. If official sources do not provide information, media turn to other sources to close the gap and find information to report the story (Scanlon et al., 1985). Often, media monitor government and first responder radio frequencies and have sources who will speak off-the-record. Communication officials, however, should never feel pressured to answer media questions. If answers are unable to be shared with media and the public, an explanation about why the question cannot be answered is preferred (Minkoff, 2015). This inability to answer questions is often common in the beginning of an emergency, when there is confusion and specific information cannot be released (Scanlon et al., 1985). Instead of guessing or providing information too soon, communication officials should inform media they are unable to release the information at that time but will disseminate the information when it is available.

Regular news briefings and conference calls with media will help create a partnership between media and the organization (Nash, 2010). To establish rapport with media, Discovery Middle School officials held daily media briefings and conference calls with news directors and editors to answer questions after a school shooting on their campus killed one student (Nash, 2010). In addition to gaining mutual respect among media and school officials, it provided media with a schedule of when they would have further updates (Nash, 2010; Stein, 2006).

Processes. Mitroff et al. (2006) recommended that crisis management teams begin by evaluating the crises that have occurred on campus as well as situations that could have turned into a crisis but did not fully evolve into a catastrophe. Additionally, teams should examine situations that have occurred on other campuses and evaluate how

the same situation could occur their campus (Mitroff et al., 2006). This information should be used to create a written, communication system and plan for each crisis (Jimerson et al., 2005; Santa Clara County, 2013). This plan should describe the roles of each team member, including a designated spokesperson for the institution (Jimerson et al., 2005; Santa Clara County, 2013). The plan should identify key stakeholders to avoid forgetting to communicate to someone during the emergency (Santa Clara County, 2013). In addition, the plan should describe the different communication methods as well as templates for emergency notifications and press releases to decrease the amount of time it takes to create and send information (Jimerson et al., 2005; Santa Clara County, 2013). The plan should also include a list of resources and people to contact during an emergency for help (Santa Clara County, 2013).

After a crisis occurs, Jimerson et al. (2005) advised organizational leaders to assess the situation and organize the response based on the previously establish plan (Jimerson et al., 2005). This should include establishing communication between all members of the crisis response team therefore newly developed information can be passed between members as they are performing their respective duties (Jimerson et al., 2005). During this time, every appropriate means of communication should be utilized to inform students, employees, and the public of the emergency and actions needed to be taken (Nash, 2010; Santa Clara County, 2013).

The leader of the communications team should immediately start developing a crisis response portfolio that includes information on the situation, summary of the action plan, and potential problems that may be encountered (Jimerson et al., 2005). The media coordinator should begin organizing a press conference to communicate information to

the public (Jimerson et al., 2005). A rhythm of hosting media briefings should be developed to provide constant information to the public. At first, it will be necessary to hold multiple media briefings within the first few hours, then the briefings can spread to once a day for as long as needed (Nash, 2010). Media briefings should include the same speakers to establish consistency and a single narrative of the situation (Nash, 2010; Santa Clara County, 2013).

Previously established websites and/or hotlines should be activated to provide accurate information to the public 24 hours a day (Jimerson et al., 2005; Nash, 2010; Santa Clara County, 2013). This information will reduce rumors related to the crisis. In addition, media reports and social media should also be monitored for accuracy and rumors (Jimerson et al., 2005; Nash, 2010; Santa Clara County, 2013). If media report inaccurate information or use an improper tone, the media coordinator should request a correction to the information (Santa Clara County, 2013).

At the conclusion of a crisis, an after-action review, or evaluation of a crisis should be performed (Jimerson et al., 2005). The information learned during the crisis should be used to adjust the crisis plan in preparation for another disaster (Santa Clara County, 2013).

Conclusion

Although not a new phenomenon, active attacks at educational institutions have increased over the past six decades (FBI, 2013; Drysdale, et al., 2010). Specifically, 57 active shootings have occurred over the past two decades at educational institutions (FBI, 2019). Some of the deadliest attacks in the United States have occurred during this time

(i.e., Virginia Technical Institute and Sandy Hook) and a total of 171 people have been killed and 220 wounded since 2000 (FBI, 2019).

An institution's top priority is the safety of its stakeholders (Coombs, 2007b; Khaled & Mcheick, 2019). And due to the prevalence of these attacks at educational institutions, it is imperative officials are prepared and skilled in communicating during and after these active attacks as the information is critical to the safety of their students (Procopio & Procopio, 2007; Seegert, et al., 2001). Following communication pillars such as speed, accuracy, and compassion will help officials disseminate messages in an effective way (Barker & Yoder, 2012; Brunner & Lewis, 2006, Lawson, 2007; Lipka, 2007; Mastrodicasa, 2008; Trump, 2012). Additionally, implementing emergency communication strategies such as thunder stealing and reputational crisis communication strategies such as SCCT and restorative rhetoric allows organizations to inform the public while also reducing the damage of the crisis to the organization (Coombs, 2007a; Coombs & Holladay, 2002).

To implement a strategy, however, teams, structures, and tools are needed. A well-rounded team consisting of personnel from multiple departments with a variety of experience will elevate the crisis response (Mastrodicasa, 2008; Mitroff et al., 2006). Together, the team can produce plans and practice disseminating information through the various emergency communication channels. Ranging from text messages to outdoor sirens, the more mediums used to send a message the more likely it will reach the intended audience (Lightfoot, 2013; Schaffhauser, 2007; Staman et al., 2009).

In addition to emergency notification systems, media are another avenue for disseminating information about a crisis to the masses. With the advent of the 24-hour

news cycle (Mastrodicasa, 2008), mass attacks have become sensationalized by media (Amman et al., 2017). These attacks become some of the most highly covered events of the year or decade in the case of Columbine (Lankford & Madfis, 2018). Thus, it is important to understand the stages and framing of these attacks by media as well as the processes for the best way to handle media.

CHAPTER III

Methods

Given the importance of communicating to stakeholders during and after an attack at a higher education institution, the purpose of this qualitative dissertation was to evaluate the crisis communications strategies previously used by leaders during and after active attacks at higher education institutions. Through a phenomenological research design, data were gathered on best practices for properly communicating during and after an active attack. By applying the findings of this study, higher education leaders will have the necessary knowledge to prepare strategies and best practices for communicating during a crisis, reducing harm to stakeholders, and diminishing damage to their reputations.

Phenomenological studies are used to describe shared lived experiences among multiple people (Creswell, 2012). By interviewing participants in this research study, they had an opportunity to share their experiences on active attacks at their campus. Through an analysis of statements and quotes in this data, the essence of communicating throughout and after an active attack was developed (Creswell, 2012). This chapter further explained the methodology of this study, outlining the questions, design, procedure, setting, participants, data collection, and analysis that was used for this study.

Research Questions

The following research questions were addressed in this study: (a) What crisis communication strategies did higher education leaders experience during and after active attacks at higher education institutions? and (b) What were the best practices for communicating during and after active attacks at higher education institutions?

Research Design

The research questions of this study addressed strategies and best practices for communicating during and after active attacks. In order to develop these strategies and best practices, it was important to understand the common experiences among participants during these tragedies (Creswell, 2012). These common experiences were best examined through a phenomenological approach (Creswell, 2012).

Phenomenology is a research method used to study a phenomenon (Creswell, 2012). The goal of phenomenology is to reduce “individual experiences” to a “universal essence” by describing the commonalities among all participants’ experiences (Creswell, 2012, p. 58). Through study, the phenomenon of communications response by university leaders after active attacks experienced at their campus was examined. By interviewing university leaders with this common experience, the essence of the experience was captured by describing the “what” and the “how” of the shared, lived experience (Moustakas, 2010).

Lived experiences are subjective and objective (Creswell, 2012). A subjective experience is the individual’s personal experience (Smith, 2019). In this research study, the subjective experience was the participant’s experience with crisis communication during an attack. An objective experience was the commonality of the experience shared among multiple people (Smith, 2019). In this research study, the objective experience were the commonalities shared between the participants’ experiences with crisis communication during an attack. To gain a comprehensive understanding of crisis communications during these tragedies, both subjective and objective experiences described by the participants were analyzed.

Researcher positionality. Phenomenology focuses more on the participant's experiences of the phenomenon and less on the researchers (Creswell, 2012). In order for the researcher to gain a new perspective of the phenomenon, the researcher identified their own experiences through a process called *epoche*, or bracketing (Creswell, 2012). This process allowed for a transcendental examination of the phenomenon (Creswell, 2012).

Researcher positionality are assumptions or beliefs a researcher brings into their study (Creswell, 2012). These positions can influence the research and should be identified for biases (Smith, 2019). My positionality for this study was identified as axiological and social constructivism (Creswell, 2012). Axiological assumptions were biases brought into the research (Creswell, 2012). Similarly, social constructivists acknowledge the effect of their own personal experiences on the study by influencing their interpretation of participants' viewpoints (Creswell, 2012). Given my positionalities, it was my assumption that biases can influence research and therefore should be identified.

Researcher positionality can also be influenced by ontological and epistemological assumptions applied in the research process (Smith, 2019). Therefore, it was important to identify these assumptions. Ontological assumption is how social constructivists frame reality (Creswell, 2012). In this study, the ontological assumption was the possible framing of multiple realities between the researcher and the participants based on different crises. Epistemological assumption was the creation of reality between the researcher and participants (Creswell, 2012).

Given these assumptions and positionalities, it was important to identify my biases and previous experiences related to crisis communications and active attacks as my interpretations of this study may be impacted by my previous experiences (Creswell, 2012). By bracketing my experiences, I was able to separate the participants' experiences and perspectives outside of my own (Creswell, 2012). The following sections detailed my experiences with crisis communication and active attacks that could have influenced my perspective of crisis communication during these attacks.

The Columbine High School massacre happened when I was nine years old. Although I do not specifically remember the tragedy, I remember it always being a reference throughout my life in popular culture and news outlets. Unfortunately, as I have gotten older, these tragedies have not stopped. From Virginia Tech to Sandy Hook and Parkland to Santa Fe, these massacres seem to be plaguing our schools. It is terrifying knowing these attacks can happen anywhere, even in what should be a safe learning environment. Given the frequency of these attacks around the United States, it seemed as if our campus should prepare for when it happens, not if it happens. With this realization, I became involved in our university's emergency response team. During my tenure with the crisis communication team, I received more responsibilities and was in charge of crafting and sending emergency notifications on all mediums (e.g., text messages, voice calls, emails, sirens, desktop alerts, website updates, and social media), monitoring and responding to feedback, and assisting in media management. Luckily, our campus has never experienced an active attack, as of the date of this dissertation. Our campus, however, has experienced numerous reputational crises. During these instances,

I assisted in developing strategies, creating responses, and managing different media outlets.

What has shaped my perception even more of these types of attack is not the terrifying thought of an attack occurring at the campus where I work, but the gut-wrenching thought of it happening where my daughter goes to school. Only five-years-old and in pre-kindergarten, I remember the sadness I felt when I heard my daughter talk about her school's lockdown drill. She asked questions about why someone would come into their school to hurt them, how could their teachers protect them, what would happen if their teachers could not protect them. As an adult, I struggled to provide an answer that I could comprehend, let alone explain it to my daughter. Together, my knowledge and experiences of active attacks as a communicator and public relations manager, parent, and citizen in the United States have framed my perception on crisis communications during active attacks.

In addition to my axiological assumptions, my social constructivist view could influence my understanding (Creswell, 2012). Social constructivists believe individuals use their experiences to help create their understanding of the world (Creswell, 2012). By learning the viewpoints of others based on their experiences, knowledge and truth is gained (Creswell, 2020). Additionally, the researcher's own viewpoints could influence their interpretation of the participant's viewpoints. Overall, social constructivists seek truth in the "complexity of views" as opposed to "narrow meanings" in few categories (Creswell, 2012, p. 20).

Procedure

This procedure section provided detailed information about the process in which this research study was conducted for future studies to replicate it. Specifically, this section described the research location, the participants of the study, the data collection method, and the process used to analyze data. In addition, this section detailed the Institutional Review Board procedures and Data Analysis Plan used to ensure participant anonymity.

Setting. The research setting is the site, whether physical, social, or cultural, where the study is conducted (Bhattacharya, 2012). The setting for this research study was nonprofit, higher education institutions. Because the study examined active attacks at higher education institutions, and the number of these types of attacks are limited, the study was open to four-year and two-year institutions as well as public and private institutions. The geographical location was open to institutions within the United States. Due to the varying geographical locations of participants and the fact that I resided in Texas, interviews were conducted via online video chat services such as Zoom. Institutional type and location may have impacted the perspectives of participants. Researching these various types of institutions provided a comprehensive dataset to analyze and gain various perspectives.

The institutions studied ranged in population from 12,000 students to over 60,000 students. The institutions included community college and state universities. The demographics of students enrolled in these institutions varied including race, gender, age, socioeconomic status, and religious backgrounds. Additionally, the characteristics of this research study included two- or four-year public institutions, located within the United

States. Although this was a broad setting, it was necessary to understand the phenomenon being studied. Future research could narrow the setting for a more in-depth analysis on the communication strategies of a specific type of institution.

Participants. Due to the nature of the study, purposeful sampling was employed. Purposeful sampling is used when the participants are selected because they have experienced and understand the phenomenon (Creswell, 2012). This study used a specific type of purposeful sampling called criterion sampling. In criterion sampling, all participants must meet a predetermined criterion (Creswell, 2012). Criterion sampling is used in phenomenological studies as the participants must have experienced the phenomenon being studied (Creswell, 2012).

For this research study, all participants experienced an active attack at the institution during their employment. In addition, all participants worked on the communication team during and after the attack. To understand the strategies behind the communication sent, participants in this study had to be leaders in the (a) President's Office; (b) Marketing, Communications, or Public Relations Office; (c) Emergency Management Office; (d) Student Affairs Office; or (e) Academic Affairs Office. These criteria use participants who met the literature-defined structure of leaders who should be on a crisis response team (Mastrodicasa, 2008; Mitroff et al., 2006).

To validate the participant sample, multiple participant confirmations were conducted. A primary participant check was conducted via internet search through an examination of the active attack at the institution and the participants' role at that time. A secondary participant check was conducted by contacting the perspective participant via email to confirm they met the set criteria. Finally, a third participant criteria check

occurred with the verbal approval of informed consent, which included a review of the criteria for inclusion in the study. The information gathered from the participant checks is outlined in a matrix (Appendix A).

Participants ranged in demographics including race, age, gender, socioeconomic status, and religious backgrounds. In addition, the education and experience of participants varied. Participants were not included or excluded based on race, age, gender, socioeconomic status, religious backgrounds, education level, or experience level. Participants who met the criteria and were willing to participate in the study, were asked to give their verbal consent after reviewing the participation form detailing the purpose of the research study and how data collected was used (Appendix B) (Creswell, 2012). By using this sampling criteria, it was estimated four to eight participants, should be interviewed.

Debriefing. Given this research study examined active attacks, participants were asked questions about potentially emotional times in their lives. To reduce the amount of harm, participants were debriefed after the interview and encouraged to reach out to their local counseling centers if needed. I was debriefed after each interview as well to discuss the interviews and any difficulties.

Data collection. In phenomenological studies, data were collected from individuals who have experienced a specific phenomenon (Creswell, 2012). Although phenomenology allows for various forms of data to be collected (i.e., art, poems, documents, etc.), data typically consist of interviews with up to 10 people (Creswell, 2012). Semi-structured interviews allow “for the exploration of the perceptions and opinions of respondents regarding complex and sometimes sensitive issues and enable

probing for more information and clarification of answers” (Barriball & While, 1994).

To allow for follow up questions, semi-structured, individual interviews using an interview protocol form (Appendix C) were conducted. Interview questions were developed by narrowing the research questions (Creswell, 2012) to encourage the participants to discuss the attacks, their role, and the institution’s response to the attacks. Multiple interviews were not necessary as all the necessary information was gathered in the first interview.

Phenomenology describes “the meaning of the phenomenon for a small number of individuals who have experienced it” (Creswell, 2012, p. 131). For this study, participants who have experienced the phenomenon were interviewed. Interviews lasted for a maximum of 90 minutes per session to allow for enough time to not limit responses, but also not overwhelm the participants (Seidman, 2013). Audio from the interviews were recorded. To prepare for analysis of data, the interviews were transcribed for accuracy. The transcriptions were verbatim from the interview to preserve the speech, speech patterns, and punctuation of the participant (McLellan, McQueen, & Neidig, 2003). Additionally, interviews were transcribed in its entirety and speech markers were used (McLellan, McQueen, & Neidig, 2003). To ensure data are accurately recorded, participants had an opportunity to review the transcripts via a member check process and make changes if necessary.

To meet IRB standards, data collected were stored on a private computer only accessible by myself. The data were password protected. For security purposes, the password was changed every four weeks. To protect the anonymity of participants, the participants’ names were masked (Creswell, 2012). Descriptive and varied attribute

codes were used to identify participant's age, gender, and ethnicity (Saldana, 2016). To protect participant information, a matrix was used to organize data as a way to identify information about this study (Creswell, 2012). However, as these data could identify a participant, they were not reported.

Data analysis plan. Structural coding was used as the data analysis method of this research study. This type of coding allows for a comparison of the similarities, differences, and relationships of the data collected (Saldana, 2016). In this foundational process, a word or phrase representing data was used to code and categorize the data. Structural coding is used for examining semi-structured interviews of multiple participants to categorize the data into themes (Saldana, 2016). By using structural coding, the most impactful themes related to the phenomenon were identified (Smith, 2019).

Significant statements made by the participants about the phenomenon were identified by the researcher (Creswell, 2012). In this process, defined as horizontalization, all statements were treated as having equal worth (Creswell, 2012). These significant statements were categorized into larger themes based on the information in the statements (Creswell, 2012). Based on these statements and themes, a description of the phenomenon was developed (Creswell, 2012). These descriptions could be (a) textural descriptions, which described what the participants experienced, (b) structural descriptions, which described how the experienced happened including the setting and context of the phenomenon, or (c) essence descriptions, which combined textural and structural descriptions (Creswell, 2012). Data were analyzed in five stages: (a) the interview transcripts were read to understand the data, (b) significant statements

related to the phenomenon were identified, (c) larger themes were developed based on the meanings of the significant statements, (d) descriptions were used to explain the participants' experiences with the phenomenon, and (e) quotes from the participants were used to verify the final descriptions (Smith, 2019).

To analyze data into themes, first and second cycle coding was used (Saldana, 2016). With first-cycle coding, data were divided into seven subcategories: (a) grammatical methods, (b) elemental methods, (c) affective methods, (d) literary and language methods, (e) exploratory methods, and (f) procedural methods (Saldana, 2016). Second-cycle coding continues dividing the data based on (a) pattern coding, (b) focused coding, (c) axial coding, (d) theoretical coding, (e) elaborative coding, and (f) longitudinal coding (Saldana, 2016). In second-cycle coding, data from the first-cycle were recoded and applied to the theory of the study, Situational Crisis Communication Theory. By using this coding process, themes emerged. To increase the validity of the data, coding was conducted by two people: (a) a doctoral student and (b) myself. Participants on the research team received copies of the completed interview transcripts for coding as well as examples of first and second cycle coding.

From this coding, themes emerged and content analysis was used to analyze the findings described in the results and discussion chapters. Content analysis is a research method used to make standardized and replicable inferences about information (Krippendorff, 2004). In content analysis, after statements are coded, the frequency of the codes can be calculated and compared (Krippendorff, 2004). In this study, structural coding was used to divide statements into categories and themes. Content analysis was

then used to calculate the frequency of the categories to highlight the significance of each theme.

This proposal was approved through the university's Institutional Review Board (IRB). IRB protects human subjects by ensuring research studies are compliant with laws regarding human participants. Prior to being interviewed, all participants provided verbal consent that they agreed to voluntarily participate in the study and that they could withdraw from the study without penalty at any time. In addition, participants remained anonymous through attribute coding. No personal identifiable information was included in the transcripts. Interview responses, transcripts, coding materials, and audio recording was stored in an encrypted, password-protected online data system. In accordance with institutional policies, all stored data will be destroyed within one year after the study is completed.

Conclusion

This phenomenological research study examined crisis communication strategies used during and after active attacks at higher education institutions. Specifically, this study sought to answer the following research questions: (a) What crisis communication strategies did higher education leaders experience during and after active attacks at higher education institutions? and (b) What were the best practices for communicating during and after active attacks at higher education institutions? Interview responses of participants with direct experience communicating to stakeholders during and after active attacks were transcribed, coded using first and second cycle coding, and analyzed using content analysis. From this coding process, themes emerged and were analyzed to further explain the phenomenon of crisis communications and active attacks. Based on the

analysis, best practices and strategies for leaders to utilize during such an attack were presented.

CHAPTER IV

Results

The purpose of this research study was to examine communication strategies and best practices utilized during and after active attacks in higher education. I used a phenomenological qualitative research design to answer two research questions: (a) What crisis communication strategies did higher education leaders experience during and after active attacks at higher education institutions? and (b) What were the best practices for communicating during and after active attacks at higher education institutions? Through an analysis of four interviews, a shared, lived experience was discovered among the participants (Moustakas, 2010). In this chapter, the results of the study are explained through a detailed description of each of the eight themes.

Participants

For this research study, purposeful sampling was utilized to find the participants. To ensure participants had knowledge about crisis communications throughout an active attack, participants were required to meet three criteria: (a) experienced an active attack while employed at an institution, (b) participated in the communication process throughout the attack, and (c) was a leader in the President's Office; Marketing, Communications, or Public Relations Office; Emergency Management Office; Student Affairs Office; or Academic Affairs Office. Due to limitations such as the 2019 novel coronavirus pandemic and nature of the study, only four participants were interviewed. The study occurred at the height of COVID-19; therefore, the population needed to interview (e.g., emergency managers, communicators, and executive leaders) was increasingly busy maintaining their campus operations. Additionally, participants may

have been hesitant to volunteer for the study due to the tragedy of experiencing an active attack. Participants may have wanted to avoid reliving the experience and the potential trauma of the attacks.

Of the four participants interviewed, three participants worked in their institution's emergency management office and one participant worked in the communications office. Despite each participant meeting the criteria, the majority of the participants had roles in emergency management. The participants' roles being mostly in emergency management did not align with my original plan to represent areas more equally. Exhaustive efforts to contact a wide array of higher education personnel were employed. However, three of the four participants that volunteered for this study were all emergency management personnel. The majority of the participants' roles as emergency managers should be viewed as a limitation of this study. Due to this limitation, interpretations of data were made cautiously. However, for the purpose of this initial, exploratory study, such a population is sufficient to contribute to scholarship on the topic of emergency communication. Each participant and their respective institution were given a pseudonym to protect the participants and their identity. To provide further anonymity to the participants, identifying professional details were not disclosed.

The first participant, Daniel Smith, was the emergency manager for University of Ashton —Pecan Valley (UAPV), a research doctoral university with approximately 26,000 undergraduate and graduate students. UAPV is part of a larger state university system ten institutions across a state located in the Western United States. During his tenure as emergency manager, Smith assisted in the university's response to an active shooter on their campus. In this attack, the assailant attended a local community college

nearby and lived with three students who attended the UAPV. The assailant killed his roommates and then attempted to get into on-campus housing. When the assailant was unable to access the on-campus housing, he killed two students who were walking by and six students after he fired his weapon inside a local restaurant. The assailant began driving his vehicle into people until he crashed near the campus and exchanged fire with the police department. The assailant then killed himself. This was the first type of active attack on UAPV's campus.

The second participant, Kevin Johnson, was the communications manager for Sycamore Valley Community College — Hazelnut (SVCC-H), a community college with approximately 12,000 students. SVCC-H is part of a larger community college system that had six campuses across a state located in the Southern United States. Johnson worked for the college when one student shot another student during an argument on campus. During the shooting, one of the bullets ricocheted and struck a staff member. The assailant left the scene and was apprehended a few days later. This was the first type of attack on SVCC-H's campus.

The third participant, Larry Anderson, was the director of emergency management for University of Ashton — Walnut Valley (UAWV), a research doctoral university with approximately 45,000 undergraduate and graduate students. UAWV is part of a larger state university system that 10 ten institutions across a state located in the Western United States. Anderson worked for the university when a former student went to his former professor's office and shot both the professor and himself. Prior to this shooting, other attacks had occurred on UAWV's campus. It is unknown if Anderson worked on the campus during the prior attacks.

The fourth participant, Eric Powers, was the director of emergency management and fire prevention for Almond State University, a research doctoral university with approximately 60,000 undergraduate and graduate students. Almond State University has six campuses across a state in the Northeastern United States. Powers worked for the university when the assailant, a transfer student, drove his car into a crowd of people on campus. After crashing his car, he got out of his vehicle and began stabbing people with a machete. A university police officer then engaged the assailant and the assailant proceeded to run toward the officer with his weapon in the air. The police officer shot and killed the assailant. This was the first type of active attack on Almond State's campus.

Due to the aforementioned limitations and the use of purposeful sampling, the participant pool was limited. Despite reaching out to 17 participants and two listservs, only four participants agreed to participate in the study. Three of the participants were in emergency management positions at four-year institutions, while one participant was in a communications position at a community college. In addition to the small number of participants, it is noteworthy that all participants were male. This demographic, however, is unsurprising given 80% of emergency managers are male (Weaver et al., 2014). All of these factors could have affected the shared, lived experience.

Review of Methods

This phenomenological research study used semi-structured interviews to collect data on crisis communication strategies used throughout active attacks in higher education institutions. A 30 to 90 minute interview was conducted with each of the four participants, discussing the attack at the institution, the participant's role in the

communication process, and the institution's response to the attack. Each interview was transcribed verbatim and shared with the participant for member checking. The participants did not make any changes to the transcripts during the member checking process.

A coding team was assembled to analyze the data from the interviews. The team consisted of a doctoral student and myself. Both members of the team completed their doctoral coursework and were familiar with the coding process. To analyze the interview data, the research team used structural coding to find the similarities, differences, and relationships between the data collected (Saldana, 2016). These codes were then analyzed using content analysis to determine the frequency and significance of the statements (Krippendorff, 2004).

The research team read each transcript and identified 324 significant statements made during the four interviews. All significant statements were coded and examined for patterns. Specifically, the research team looked for reoccurring words used throughout the significant statements. In total, 72 structural codes were developed using specific language that was frequently mentioned by participants. These narrowed, structural codes were then recoded into broader reappearing themes. Upon completion of the structural coding and content analysis, the coding team discovered eight themes: (a) notifications, (b) response, (c) role, (d) lessons learned, (e) preparedness, (f) rumors, (g) media, and (h) reputation. Each of these themes were frequently mentioned by the four participants when responding to the interview questions and discussing the attacks that occurred and their communication responses. A breakdown of the categorization and frequency of the structural codes and themes can be viewed in Appendix D.

Results

Throughout the interviews, participants discussed their unique experiences about communicating throughout the attack that occurred at their institution. Together, their stories told a shared, lived experience that cultivated into eight themes. Each participant discussed their preparation, notification to the community, communication response, rumor control, external media response, and reputation impact as it related to the attacks on their campus. Additionally, the participants detailed the role played by both internal and external departments throughout the attacks. The entire interview gave participants a chance to reflect on the attack and discuss the lessons learned about the crisis communication strategies utilized in the response. These structural codes and eight themes are presented in the following sections.

Notifications

Emergency notifications appeared in the interviews 80 times and was the most prominent theme. Each participant was responsible for sending mass emergency notifications for their institution during the attack that occurred on their campus. They described sending notifications as their first step after learning about the attacks. Director of emergency management for UAWV, Larry Anderson, explained his initial reaction to the attack was to send an emergency notification to the entire campus population, a database of approximately 100,000 people. Despite being unsure on the specifics of the attack, Anderson immediately sent out an initial notification and then sent a second follow up notification once he had more information. He explained,

Our thing on emergency notification, is we always err on the side of giving just what we knew, so we almost never would send out a notification on what we

thought. So, the first notification, we sent out was just what we knew, that ‘there was police activity in the vicinity of the building where the shots were fired.

Please avoid the area.’ Shortly thereafter, I want to say like three minutes later, I get a call back from the captain, who's on the scene, says, ‘I'm on the scene we smell gun fire, shots have obviously been fired.’ And so, then we send a second notification, again, about three minutes after the first saying ‘shots fired.’

By sending an initial notification quickly, followed by more detailed notifications, Anderson was able to notify the campus community of an emergency in a specific location without having to wait for all of the details about the incident. In the above scenario, if Anderson waited until the captain confirmed the gunshots, the message would have been delayed three minutes. Instead, Anderson was able to warn the community to avoid an area and provide a follow up notification confirming the type of threat and location.

To increase the ability to send notifications quickly, Anderson used templates for the messages. Previous emergency management directors for UAWC established more than 30 different templates in their emergency management system. Using templates allowed him to add the location of the attack into the template quickly. Anderson said his team received compliments about the quickness of sending the initial messages and that it was the fastest emergency notification sent to a campus community during a shooting.

Other participants described their timeliness of sending emergency notifications. Eric Powers, director of emergency management and fire prevention for Almond State University, sent 10 text messages to their entire emergency database in the first two hours

following the start of the attack. This totaled to more than 1.2 million text messages sent.

Powers described the timeline of emergency notifications sent by his office,

So at 9:54, I think, is when the when, when (*sic*) we got the shots fired. 9:56 is when we got shots fired, one down. Less than a minute later, we had, we had already sent out that initial, I think it was like 45 seconds later, we had sent out that initial alert that was going. About a minute and a half later, a detailed message was sent out and about four minutes later, a third message was sent out with additional information. All together within the first, I think it was two hours, we sent out a total of 10 text messages.

Sending timely notifications during an incident is expected from students. Anderson explained the students on their campus expected them to send emergency notifications quickly about any type of incident that could impact them on or off campus.

Powers and Anderson said they were proud of their ability to send the initial messages to their community within minutes of learning about the attacks, but both expressed frustration with themselves for gaps in the notifications later in the attack.

Powers said,

At 10:35, our fifth one went out and then we had a bit of a break, where we dropped the ball, quite frankly. We should have sent, we have a rule that we send something every 20 minutes or less. ... We dropped the ball. We have people hiding. It's 10:35, they're still in their classroom. We didn't send another one out until 11:30, 55 minutes later.

Anderson echoed Powers sentiments and said the gap of communication during their attack caused confusion among their stakeholders.

And so, we did not send out a follow up message after that second emergency notification for about an hour and a half. So, everybody was kind of left in the dark. They didn't know what's going on. And really the reason we finally sent something out, was I started to get reports that people were leaving their buildings. So that happened, I don't know, maybe 20 minutes into the incident. We didn't send out anything else for an hour and a half, because we just, I just didn't, I was busy doing other things. Anyway, then we sent, about an hour and 30 minutes, we sent a note saying lock down and about an hour 45 minutes, we sent another message like, "Stay locked down, we don't know anything new, but stay locked down."

During an emergency, timely communication is key to reduce confusion among victims, stakeholders, and the community. Failing to send timely communications could be dangerous and lead to people misunderstanding instructions, leaving a building in lockdown, or entering an unsafe area. Understanding the importance of sending frequent communication to constituents during an active attack, both Anderson and Powers implemented rules to send a notification every 15 to 20 minutes during an emergency.

In addition to lack of communication, confusion among constituents during an emergency comes from rumors. Daniel Smith, the emergency manager from UAPV, said these rumors often stem from social media. Smith elaborated,

For every time that they didn't send out something from the UAPV something on social media pop down. And so, they learned that even if the message is the same, send out some type of follow up message. Maybe every 5,10, 15 minutes like

‘hey, we're still working on this.’ So even if you don't have anything to say, send out some type of alert that says, you know, we're still working on it.

To prevent confusion among stakeholders during a lockdown, Daniel Smith had similar recommendations to Powers and Andrews, send a notification every 10-15 minutes until the incident is resolved.

Despite the need to communicate frequently to the audiences during an active attack, participants noted that it is important to make sure all of the information given is accurate. Anderson said to err on the side of caution. His team only gives information based on what they know, not what they think they know.

When sending the emergency notification, all participants used a variety of different modalities to communicate their message, including text messages, email, desktop alerts, and outdoor sirens. Some emergency systems, such as at UAWC, were integrated where one software was used to send messaging through various means. Anderson described the system,

The other thing is that our messaging system was totally integrated. So we didn't have to go to multiple places to send them. So we sent text messages, we sent emails, we have a giant voice system But those were all integrated in one place. ... Go in, put the location in, push send. It goes to the right [designated] people [in the database]. It goes to all right devices that was a big deal.

An integrated system reduces the time it takes to send emergency messages through multiple modalities. Anderson said communicators and emergency managers should not rely on one type of platform, as students may be unable to access the platform at the time the message is sent. For example, professors may restrict cell phone and social media

usage during class. Due to this practice, he emphasized the importance of sending through multiple platforms. By increasing the modalities used and decreasing the time to send a message, constituents are able to receive the message faster in whatever form they can access.

Daniel Smith and Eric Powers used a similar integrated system to send their emergency alert messages. The system used by these two emergency managers, however, was connected to a button behind the dispatch center. When the button was activated, a generic message was sent via text message, social media and website as well as all classroom computers and digital signage on campus. At the same time, the system called the emergency management team and connected them with the dispatch center to gain more information about the ongoing incident so a follow up, detailed message could be sent. This allowed Smith and Powers to send their initial messages quickly.

Response

In addition to sending initial notifications to their campus communities, participants described their response efforts in detail. Three of the four participants described establishing an Emergency Operations Center (EOC), with two of the EOCs having a virtual component to allow for collaboration between multiple departments on campus without being in the same location. Powers said the virtual EOC allowed necessary executive and emergency management members to join the command center when it was not safe or feasible to do so in person. He elaborated,

We would like to have them in the same building as us, but it's just not feasible, you know, for one of us to travel, you know, have three quarters of a mile or a mile to get to each other in emergency. So, they do their thing, we do our thing,

we set up this conference bridge with both on each end. We mute it, but if one of us has a question or specifically if they have questions for us or we have information for them will unmute it and share that with the other side.

Through this open communication, Powers said executive leaders such as the president's cabinet can confirm rumors they heard, ask questions, and receive important information about the incident allowing the leaders to take action and maintain operations of the institution. Smith added the virtual command center at UAPV allowed staff members in other areas, such as student affairs or communications, to work remotely. In addition to working with internal departments, Anderson established an EOC to improve communication between the university and the city as an attack can impact both the city and county where the institution is located. According to Anderson, "... some things didn't get spread down so we established a unified command post with our incident command post next to Pecan Valley's command post."

To improve communication outside of institution's departments, two participants established a call center to communicate with students and their families. At SVCC-H, Kevin Johnson opened a call center that had an automated message play when stakeholders called to get more information about campus operations during the incident. As they learned new information, the call center's message would be updated. At UAPV, Smith opened a call center as part of their EOC for students and parents to call and express their concerns to an actual person at the institution. According to Smith, employees in their student affairs department staffed their call center because "they're the ones every day that are talking to parents, and staff, and students. So, they're kind of they're already used to that conversation." Staff members working the call center were

provided a fact sheet with key points that was created by their public affairs team. If a caller had a question that was not answered on the staff member's fact sheets, they would write the question on a whiteboard. This process allowed the emergency managers and public affairs team to work together to create an answer for the fact sheets if similar questions were posed in the future.

The call center provided a location for families, students, and alumni to express their concerns and grief over the incidents. The participants discovered that all stakeholders needed to be reached, but parents utilized the call center the most. According to Smith, parents, worried about the safety of their students, would reach out to the call center for more information about the incident. Additionally, parents would call because they wanted to talk and feel heard. Smith elaborated,

There were times that I was brought into the call center, too. If it just made some parents feel better, to hear the message directly from the emergency manager, even though the same information is being provided by the call center.

According to Smith, parents with students at different institutions across the system contacted the call center for three days to check on their students that the parents were unable to reach. Due to this abundance of calls, Smith altered the communications to include a statement encouraging students to reach out to their families to confirm they were safe.

Kevin Johnson was surprised about the amount of communication in the following days and weeks after the attack to students. Johnson said they held listening-session events for students to express their concerns and receive answers to any of their questions.

I think for me the biggest kind of takeaway, surprise anyway, was how much communication we did after the event in the days and weeks that followed, just because there was such an emphasis on sort of reassuring the students that that the campus was safe.

Smith said their students took control and hosted their own events, including a memorial service to honor the victims. He described the event and the student coordination,

They actually did a candlelight event that Saturday night. That was, that was very well received, very well as the students started to grieve within, within the event.

Because of the overwhelming positive response to the candlelight vigil, Smith considered a memorial service for students an important part of healing the community. A takeaway from the attack for Smith was coordinating and communicating a student vigil as soon as possible after an attack to promote healing.

In addition to students and their families, Smith said one important group was alumni. According to Smith, “And we found that night when, when the killing happened whether you had graduated one year, five years, or 30 years, we found out from our alumni that they felt like they were back on campus.” Originally, Smith did not consider alumni as an important audience in their initial response. After learning how the tragedy impacted members of the alumni community, the Emergency Management team began building the partnership with the Alumni Association and Smith said they will incorporate them into future emergency communication.

Role

Participants described the roles of different areas and team members who assisted in the emergency response. Four main roles were mentioned: (a) executive leadership, (b)

emergency managers, (c) public affairs, and (d) law enforcement agencies. Participants said each role, and the partnership between the team members of the roles, played a unique part to the emergency response.

At UAPV, the goal of executive leadership during an emergency was to maintain university operations. As the emergency manager, Smith communicated any relevant information about the incident to the executive leaders. According to Smith, this communication allowed the decision-makers to take the necessary action to maintain operations of the institution. Smith elaborated that although the executive leaders made decisions regarding the operations, they did not make public safety decisions. Additionally, Smith described the role of executive leaders as supporting the decisions of emergency managers when sending emergency notifications. He described a conversation between a Senior Vice President and his emergency team:

We had our Senior Vice President, number three at the university, come in and talk to the dispatchers and tell them, “I want you to hit that [emergency notification] button if you think it needs to be hit. If you're wrong, you're not going to be in trouble. You have my word on that. You will not be in trouble. We will not chastise you, we will not yell at you. We will not be upset. If you honestly think it should have been hit, hit it. It's easier for us to take it back and say, ‘whoops, sorry,’ than it is for us to say, ‘we probably should have notified, you have this guy going around shooting everyone, but we didn't, sorry about that.’ So, it's easier for us to apologize for sending it than apologize for not sending it.” And that was an important piece to have, that that leader university leader came in and talk to them.

This example highlights the importance of executive leaders fulfilling their role of maintaining campus operations by supporting the emergency management team. Specifically, this example showcased the importance of executive leaders partnering with communicators and allowing them to make decisions without consultation.

While executive leaders are running the main operations of campus, the emergency management team is overseeing the actual emergency including sending emergency notifications, establishing the EOC, and responding to the scene. As the director of emergency management, Anderson described his job as being responsible for all hazards, emergency planning, response, recovery, and mitigation. Another emergency management director, Smith, explained his role during an emergency as the “center of the wheel,” coordinating the different elements and partnerships between all of the different departments and agencies a part of the emergency management team.

Part of the emergency management team mentioned by three of the four participants was staff from the office of public affairs and communications. During the attack at his institution, Kevin Johnson said his team sent emergency notifications, managed media, and worked with executive leadership. In his role as Communications Manager, Johnson worked as a media liaison between media outlets and the institution’s executive leadership. Despite the fact that Emergency Managers Smith and Powers created the initial emergency notifications during the attack, the communications and public affairs office controlled the messaging after the attack was completed.

So they can craft the message, you know, spin it, do whatever they want with it. I don't care. The emergency is over. At that point, it's kind of out of my hands and I pass that off to them.

Depending on the institution, crisis communications can be handled by one department or by multiple departments in different stages throughout an active attack. Regardless of who is sending the notifications, though, partnership between areas is critical to ensure consistent, frequent, and accurate messaging both during and after the attack.

In some instances, law enforcement agencies took over as the leading agency in regard to communicating, finding the suspect, and completing the investigation. Johnson said law enforcement “took over the scene, started doing the investigation, and cordoned off the campus.” Half of the participants said the law enforcement agencies controlled the messaging and held press conferences during the attack and related to the investigation. Johnson described how the law enforcement agencies took over the communication during the day of their attack,

It was really just sort of deferring to the law enforcement agencies as far as how to communicate. You know, we can take the lead with communicate with the students on the front end. But after that, the communication with the media was, was led by what the, what the law enforcement groups wanted to do, at least for that day.

Johnson had to coordinate with the law enforcement agencies to ensure the institution’s messaging to the students was consistent with the law enforcement messaging with media. Through this partnership, they were able to communicate effectively and effectively to all audiences about the attack.

Smith highlighted the importance of partnering with law enforcements to reduce confusion. In the attack at UAPV, the law enforcement agencies took over the communications, as it was their jurisdiction. Because there was not a partnership in place

with law enforcement agencies, there was confusion among leadership about the communications process. Subsequently, neither the law enforcement agencies nor the institution directly communicated to the campus community (i.e., students, faculty, staff) about the attack. In this incident, the attack occurred over a three-day weekend.

According to Smith, students, faculty, and staff came back to campus with no notice of the incident. Smith elaborated, “They came back and we didn't have that email [from UAPV]. So maybe people weren't getting any kind of information from us and they were just getting that information from the sheriff.” Because community members were not receiving information, they blamed the institution, despite the messaging being controlled by external law enforcement agencies. Smith stressed that having partnerships in place with the external agencies would have improved their communications flow.

In addition to communication issues, a common problem among participants was the number of law enforcement agencies that responded after the attack occurred. Anderson said after their attack, there were “more responding agencies then you can shake a stick at.” Powers elaborated,

And frankly like we had so many cops show up, whether we called them or not, whether we asked for assistance or not. When they heard it on the media, they responded. The ATF, for example, is based out of [CITY], which is 108 miles away. They were here in about one hour.

Although the support was appreciated, the different agencies did not check in with the emergency managers, creating confusion. Anderson described the misunderstanding,

The rest of Walnut Valley police did not check in. The FBI checked in and that was it. Nobody else checked in with us. And so we've got all these law

enforcement agencies showing up and not talking to one another. And that was a huge issue.

Due to the number of roles involved in responding to an emergency, Smith said it was important to build partnerships with the internal departments and external agencies. He explained the key to their success was building partnerships and relationship in preparation for emergency scenarios, including active attacks.

And one of the favorite slogans of emergency management is, don't let three o'clock in the morning be the time that you're going to exchange business cards, but it actually kind of goes deeper than that. It is having those relationships so you can rely on each other so that you can, you can really talk to each other and, and, and build those partnerships. As the events unfolding, is not a good time to talk to each other.

This statement applied to internal relationships as well. In Johnson's case, both he and his supervisor were away from campus when the attack occurred. After finding out about the shooting on campus, Johnson had to race back to the office from lunch to send the first emergency notification to students as no one else on campus had the ability to send the text messages. Partnerships and redundancy with their institution's system office, however, helped to send emergency messaging to their students. Due to a previously established procedure, SVCC-H's system office was able to post emergency notifications to the institutions social media, website, and computer monitors across campus. After discovering this delay in the After-Action Review of the attack, Johnson's team trained other employees throughout different departments on campus on how to send emergency text messages.

Lessons Learned

To determine the best practices of communicating during and after an active attack (research question b), it is important to evaluate the lessons learned by those who responded to attacks that occurred on their campus. This theme, *Lessons Learned*, was one of the most reoccurring themes mentioned by participants. Although each participant cited numerous lessons learned, the biggest were related to communication or the ability to communicate. According to Smith, their biggest lesson learned from the attack and response on their campus was that communication is the most important thing in an emergency.

After the attack at UAPV where multiple students were killed, the local law enforcement agency took over the emergency communication. Due to this shift in leadership, communication was not sent directly to the entire campus community. Instead, an email was sent to the department heads to forward to their teams, but because it was a three-day weekend, the department heads seldom forwarded the emails to their departments. To improve emergency communication on campus after the attack occurred, Smith said the emergency management team updated their Clery Act policies to require an email be sent to the entire campus community if an attack occurs.

Anderson also learned lessons regarding sending emergency communications during the attack on their campus, but their revelation was geared toward visitors. Prior to the attack on UAWV, the emergency management system was capable of reaching all students and employees, but not the 5,000-10,000 visitors on campus a day. Additionally, the campus did not have any outdoor sirens or outdoor signage. Therefore, during the attack on their campus, the team was unable to communicate critical

emergency information to their visitors on campus. To fix this communication gap, the institution installed an integrated loudspeaker system across campus and established a system to enroll visitors into the notification system to receive emergency text messages during their time on campus.

Another lesson learned cited by participants was the frequency of sending emergency notifications. Three of the four participants noted their response to the attack on their campus taught them the importance of sending an emergency notification to stakeholders every 15-20 minutes while the attack is happening. Anderson said prior to the attack on their campus there was no policy related to the frequency of sending an emergency notification, but after the event, he established a rule to send a message every 15 minutes during an on-going situation. Powers had already established a rule to send an emergency message every 20 minutes at Almond State University, but there was a 55-minute gap in the communication during the attack on their campus. Powers contributed this delay in communication to the amount of work being completed by his area due to the attack. To fix their communication problem, Powers purchased a timer that he kept in the EOC. Each time his office sent an emergency notification, they set a timer for 15 minutes. When the timer goes off, it reminded them to send a follow up emergency notification. This solution ensured their stakeholders received frequent and timely notifications during an active attack.

In contrast to the other three participants, Johnson's biggest lesson learned was not communication itself, but being forced to evacuate and not having access to equipment needed to be able to send the emergency notifications. Because his office was located near the site of the attack, campus security evacuated his building within 20

minutes of the attack. All he was able to grab was his laptop. Johnson described the situation saying,

Within a few minutes, we were being told you have to leave your offices. That really kind of highlighted the fact that, because you don't know how it's going to go down, you can't depend on the resources of your office. You really need someone that's not going to be affected by whatever the, the actual situation is in the moment to have the ability to do some of that communication.

Because of the forced evacuation, one of Johnson's best strategies for crisis communications was to have equipment readily available and reliable backups who were able to send emergency communications across the institution. Forced to leave within 20 minutes, Johnson only had time to grab his laptop. Unequipped with all of the resources needed, Johnson had to rely on others across campus to help initiate the emergency messages. According to Johnson, this preparation was critical to communicating during a crisis and offered an important lesson learned from the incident.

Preparedness

Preparation normalizes emergency response, therefore, when the tragedy is happening, the response is second nature. According to Smith, preparation is important because, "You're really dealing with a lot of grief as you're trying to do the emergency, so the more you can make the emergency normal and the better off you are." Powers and Johnson echoed his sentiment of the importance of preparation. All three participants highlighted different aspects of preparation including establishing external relationships, hosting extensive training sessions, and installing integrated communication systems.

For Johnson, preparation meant building relationships with external law enforcement agencies and establishing internal communication redundancies. At SVCC-H, the law enforcement agencies took control of the communication after the initial emergency notifications. Because of the law enforcement led all communications, it was important for his team to “bring in the law enforcement to the front of the process” and “have that planned out in advance.” Throughout the attack, Johnson coordinated with the law enforcement agencies to ensure the institution’s messaging to the students was consistent with the law enforcement agencies messaging to the community through media. This partnership involved hosting joint press conferences and deferring to law enforcement agencies about messaging. By building a relationship with the external agencies throughout the response, the organizations were able to effectively communicate to all audiences about the attack. Now, Johnson said he understands the importance of continuing the relationships with law enforcement agencies and ensuring they are involved in the communication preparation process.

In addition to external agencies, the attack highlighted the importance of internal redundancies. Away from campus when the attack occurred and then forced to evacuate upon returning to campus, Johnson relied on other internal departments and the system office to assist with sending emergency notifications. With a limited number of people to call upon in their time of need during the attack, Johnson’s team made it a priority to train other personnel across campus in the process of crafting and sending campus-wide messages in case of an emergency. To make it easier on newly trained personnel, Johnson created wallet sized instruction cards with the steps to send a notification. By doing this, they were able to increase the number of people with access to the system and

ensure personnel who did not frequently use the system would be capable and unafraid to send a message in a true emergency.

Powers emphasized the importance of installing integrated notification systems prior to attacks. One year prior to the attack at Almond State, a hostage situation had occurred. Due to this previous attack, the university installed an integrated notification system that would automatically send a mass text message to the campus community in seconds once activated by the 9-1-1 dispatch center. Additionally, the university's camera system allowed the emergency management team to identify when the attacker arrived on campus and determine that he acted alone in his attacks.

Three days prior to the attack at UAPV, Smith hosted a training with a sorority about safety and self-defense. Because of this training, the sorority members did not open their door when the assailant tried to attack their sorority house. Additionally, the emergency management team had previously established an ongoing training and exercise program to prepare for attacks. His aggressive training program included educating leadership about the process of responding and communicating during an attack on campus. Smith described the importance of training staff and leadership across campus,

Making sure everyone, including leadership understands that you know the primary [communication]. Yes, we are doing Clery reporting, Yes, we want to get the message out to people so they know shelter-in-place. ... And again, that's hopefully you can do that that training ahead of time, that kind of tells people about, about that, that, you know, this isn't going to be Hollywood where they

find the bad person right off the bat. Even if they, they do find the bad person, they might be doing that secondary rumor control.

In addition to educating the appropriate personnel on emergency response and communication, Smith said the trainings brought everyone together. Prior to the attack, Smith instituted a training program. Once the attack occurred, the team was able to lean on each other emotionally as they processed the grief. According to Smith, “a lot of that really brought our team together, even though we are training and doing and doing exercises. But really, that the emotional support of the team.”

Rumors

During an emergency on campus, participants explained that rumors could cause confusion in students, faculty, staff, emergency responders, parents, and community members. Three of the four participants cited rumors and false reports in their interviews. According to Powers, there were rumors circulating after the attack at their campus that there was multiple gunman and multiple fatalities. Similarly, in the attack at UAWV, Anderson noted that 9-1-1 dispatch received 290 calls in the first two hours following the attack reporting gunshots. At UAPV, Smith heard rumors about the type of vehicle the suspect was driving and the suspect’s location. According to Smith, this was not uncommon because “any event has a false secondary event.”

Many of these rumors, Smith found, circulated on social media. Because rumors are mostly found on social media, Smith recommended monitoring social media for rumors. In addition, Smith recommended using social as a modality to send messaging and emergency notifications to help dispel rumors.

For every time that we didn't send out something from UAPV, something on social media popped down. And so we learned that even if the message is the same, send up, send out some type of follow up message, maybe every 5,10, 15 minutes like, 'hey, we're still working on this.'

Similar to Smith, Powers and Andrews recommend sending a notification every 10-15 minutes until the active attack is resolved to dispel rumors, provide transparency, and ensure stakeholders know the steps they need to take to ensure their safety. By controlling rumors and using social media to speak directly to constituents, communicators increase the credibility of the institution's social media accounts and establish the accounts as the official source of information for the attacks. This gives stakeholders a direct source to access the latest information, further reducing rumors and increasing accurate information to the public.

Media

The theme *media* was used when participants referenced media response to the attack on their campus. All four participants said media responded and covered the attacks. Each participant, however, had a different experience with media.

Both national and local media responded to the attack at Almond State University. Specifically, media appeared on campus within 20 minutes from the attack occurring. Powers described the media presence as large, but with the abundance of police officers, they were able to keep the press under control. According to Powers,

So, you know, everybody came, we had national media here satellite trucks galore all over the place, but they were all pretty respectful. I mean, they understood They understood what we were trying to do, you know, during the incident as

well as after the fact. You know, we really didn't have too many issues with the media, trying to get into places that they shouldn't be. And frankly, I'm not sure that we had any that I can recall know trying to enter someplace that they shouldn't.

Powers elaborated that national media only covered the event for a couple of days. He attributed this to no students dying from the attack other than the assailant. According to Powers, if there were student deaths, media presence would have increased and, specifically, the national media would have covered the story longer.

Similarly, Anderson said that although the attack at UAWV garnered a lot of media attention, the reporters and crews were all cooperative and respectful. Due to previously established protocols, the university's fire department was able to control media traffic and establish a safe holding area for media. Despite the attack, UAWV received positive attention for their timeliness in responding to the attack. According to Anderson, the only negative press they received was from not having locks on the doors. Because there were no locks, students used alternative means to lock or block the doors to protect themselves. Anderson noted the only negative publicity the institution received related to the attacks was images of students who used innovative ways to lock the doors. This negative publicity disappeared, though, and, overall, the institution was praised for the personnel's quick response.

Contrary to Anderson and Powers, Smith said the reporters who responded to the attack at UAPV ranged from manipulative and threatening to nice.

You know, some would write you an email pretending they already kind of knew everything, like "hey, I just wanted to follow up on this and make sure." Some

were threatening, like, “how dare you not give us this information.” And then some were just, you know, super fly. So there were different types of media trying to get information.

Additionally, prior to the attack at UAPV, the assailant posted a manifesto online that media outlets discovered. Smith said media focused on the attacker first, then the victims, and then the institution.

And he had done, he had put out some, some information that was coming out. So everybody kind of knew who the killer was so the media was feeding off of that. And then by the next day, the media started focusing on the six victims.

Unlike the other participants who worked in emergency management, Johnson, who worked in communications, focused more on the press briefing held at his institution. Although the media conference was hosted by the law enforcement agencies, he still spoke to media on behalf of the institution. At the press conference, the law enforcement agencies spoke about the attack and the investigation, while Johnson said his focus was on the students and their families. Despite each institution receiving overwhelming media response, most noted media were respectable, under control, and that media response to the attack did not have a lasting impact on their institution’s reputation.

Reputation

When asked about the impact of the attacks on their institution’s reputation, all four participants said they do not think the attacks had a negative or lasting impact on their reputation. Three of the participants attributed the lack of a negative reputation to their response to the attack. The fourth participant did not attribute the lack of reputational impact to any factor. Powers elaborated, “I don't think there's any winning.

But you know, I think we look pretty good. After this, I think it was a positive feeling from our students, our faculty, staff, parents and supporters.” Anderson echoed this sentiment, “Yes, I think one thing we did not, we didn't catch any flack at all. Everybody was satisfied with how quickly they got notified. So I think that helped us a lot.”

Similarly, Johnson attributed the lack of reputational impact to the institution’s quick response as well as the history of safety at the institution. SVCC-H was established in the 1970s and this was the first shooting that had occurred on campus. Regarding their response, Johnson said,

We spent a lot of efforts, making sure the campus was in good shape, and that the police were, were visible and you know friendly and interacted. ... So, I think people felt comfortable when they came to campus. So, that sort of offset any Worries about it being sort of a, you know, institutional problem or something that could have been prevented. And so it didn't really cause any long-term reputational problems.

Johnson also added that because active attacks have increased across the country, people are more understanding and place less blame on the institutions. Johnson said,

So, it's like all of a sudden, the attention, turned to this one, too. But there was, there was other events like that happening in other parts of the country, too. And people just kind of moved on. So, I think a lot of people have just kind of accepted that this is a risk of these places where a lot of people are congregating, whether it's a school or movies or whatever is.

Overall, despite the violent attacks and an overwhelming media response, all participants noted their institution's reputation was unharmed due to the quick response to the attacks, the institution's history of safety, and the frequencies of attacks across the nation.

Synthesis of Themes

When faced with an active attack at their institution, participants relied on strategies to communicate information to their stakeholders. Through pre-established processes and systems, participants sent timely, frequent, and accurate emergency notifications via email, text messages, social media, loudspeakers, and computer monitors to inform their audience of the attacks and what actions the audience needed to take to remain safe. By relying on their previous systems and strategies, Powers was able to send 10 text messages in the first two hours. According to Powers, their strategy was to "send something every 20 minutes, even if it's just continue to do what you're doing." Additionally, participants monitored social media for rumors and communicated frequently to help dispel those rumors. To rebuild the university community after the attacks, participants established call centers, held events, and communicated individually to every audience including victims, students, families, employees, and alumni. At UAPV, Smith said they coordinated with the students to hold a memorial to honor the victims and allow the students to grieve.

Through pre-established processes and previous trainings, participants said they felt prepared for the attacks. The previous trainings allowed the participants to respond to the attacks as if it was a normal process. Smith said, "The more you can make the emergency normal and the better off you are." As part of their preparation, participants had established partnerships within the various roles on the emergency management team

(e.g., emergency management, public affairs, student affairs, and executive leadership) and external agencies. Smith described the partnerships with people on the team as a “key theme” to responding to an emergency. According to Smith, these relationships should be built beforehand because “as the events unfolding, is not a good time to talk to each other.”

All participants described of a large media presence. To help control media, participants worked with police to keep them contained to a specific area and coordinate messaging. Johnson said they hosted a combined press conference with the police. At this press briefing, the police spoke of the investigation, while he provided an update from the institution’s standpoint with a focus on the students.

Due to their strategies and quick response, all participants said they did not think their reputation was negatively impacted from the attacks. None of the participants said the attacks left a lasting impact on their institution. Powers said the attack showed the institution in a positive light in regard to safety. According to Powers, “As a result of this, you know, we have a positive, everyone looks at us positively when it comes to safety.”

In addition to these strategies, participants learned other best practices by experiencing and responding to the attacks. Communicating frequently and accurately to all faculty, staff, students, parents, visitors, and members of the emergency response team was the most frequently cited best practice and lesson learned. A best practice mentioned by Anderson was to use all communication mediums to reach as many people on and off campus as possible. When the attack at Almond State occurred, there were no outdoor sirens, loudspeakers, or outdoor digital signage on campus. This created a

communication gap and they were unable to notify the thousands of visitors on campus at that time. To remedy this, Anderson's team established outdoor speakers and a text message process that allowed visitors to opt-in to receive emergency messages for the limited amount of time they are on campus.

Other participants emphasized the need to communicate frequently to audience members, especially if they are on lock down. After a 55-minute lapse in sending emergency notifications, Powers purchased a timer that would remind the team to send a message every 15 to 20 minutes. After a similar incident, Anderson established a rule to send a communication every 15 minutes during an active incident.

Part of sending emergency notifications frequently and accurately, participants said, was having the staffing and resources to send the communications. Johnson expressed the need to establish redundancy among team members. After the attack on SVCC-H occurred when both him and his supervisor were off campus, Johnson realized the importance of cross-training employees to send emergency notifications.

It probably would have been more helpful if more people knew how to get into [the notification system], just because my boss was gone, I had just left campus.

And so, we were limited, they had to wait 'til I got back, you know, it was only a few minutes, but it was not easy.

This need for redundancy was further emphasized when Johnson and his team were evacuated from their offices due to the proximity to the attack.

Within a few minutes, we were being told you have to leave your offices. That really kind of highlighted the fact that, because you don't know how it's going to go down, you can't depend on the resources of your office. You really need

someone that's not going to be affected by whatever the, the actual situation is, in the moment, to have the ability to do some of that communication.

In case of future emergencies where the communication's office was unable to respond and send emergency notifications, Johnson's team trained additional personnel across campus, including the President, on the process of drafting and sending emergency notifications. This multi-level redundancy spreads the responsibility of sending emergency messages across campus and ensures stakeholders will receive timely notifications.

Conclusion

The purpose of this research study was to examine crisis communications during and after active attacks at higher education institutions. Specifically, this study sought to answer two research questions: (a) What crisis communication strategies did higher education leaders experience during and after active attacks at higher education institutions? and (b) What were the best practices for communicating during and after active attacks at higher education institutions? An analysis of the shared, lived experiences of the participants revealed a connection between each theme and the research questions.

The results of this study highlighted the need for decision makers to establish a crisis communication plan prior to an attack on their campus. This plan should document preparation and response strategies for communicating during and after an active attack. Based on the responses from participants, the plan should include policies and processes for (a) sending emergency notifications, (b) hosting press conferences and communicating to media, (c) evacuating during attacks, (d) training emergency

management team members and additional staff across campus, (e) communicating to individual audience, and (f) rebuilding after an attack. Additionally, the plan should include a breakdown of the emergency management team, both internal departments and external agencies, and their role on the team. Each member of the emergency management team should be familiar with each other and understand the partnership between the team members. In addition, the communication plan should be reviewed annually and after any attack.

The participants of this study noted that because their team communicated quickly, frequently, and accurately, the reputational impact to the institution was limited. By following the participants' recommendations for communicating during a crisis, executive leadership and crisis responders could improve their crisis communications, subsequently improving student safety and reducing reputational damage should an attack occur on their campus. Each theme of this section should be reviewed and added to institution's communication plans to improve the crisis communication response. By completing or updating a crisis communication plan to include these strategies, frequent training in communicating during a crisis, and establishing partnerships with internal and external agencies, crisis responders will be able to communicate more efficiently during an emergency.

CHAPTER V

Discussion

On average, shootings at educational institutions end within five minutes (FBI, 2013). Institutions must communicate to their stakeholders throughout the emergency to protect them until law enforcement agencies secure the scene. After the attack is finished, institutions switch their communication from response to recovery mode to begin rebuilding their reputation and reducing the damage of the crisis (Coombs, 2007a; Coombs & Holladay, 2002). Stein (2006) said communication to stakeholders during this time is critical to alleviate feelings of “uncertainty and instability” that stemmed from the attack (p. 101). To assist higher education leaders throughout these multiple stages of communicating during a crisis, communication strategies and best practices used by communicators and emergency managers during previous active attacks were explored in this research study.

This research study was grounded in Coombs’ (2007b) Situational Crisis Communication Theory (SCCT), a framework that uses specific factors of a crisis and stakeholder’s perception to determine the best communication strategy organizations should use to protect their reputation. Of the four SCCT response strategies, participants in this study used rebuilding and bolstering strategies to protect their reputations. Because of the quick response and frequent communications, participants were able to communicate positive information about the organization and rely on their previous good deeds (Coombs, 2007b). Due to the communication strategies utilized, all participants noted they believed their institution’s reputation was unharmed by the attacks. Instead, organizations were praised for their quick response and communication efforts.

In addition to SCCT, participants also utilized Dialogic Communication Strategy. In this strategy, two-way communication is used to build a relationship (Du Plessis, 2018) via “meaningful interactions” (Taylor & Kent, 2014, p. 388). This strategy helps organization rebuild after a crisis by communicating to stakeholders through authentic, real-time interactions (Du Plessis, 2018). Two of the four participants used Dialogic Communication Strategy to communicate to students and their families through call centers and events. Through these call centers and events, participants said students and families had an opportunity to voice their concerns and hear from university officials regarding the safety of campus. These meaningful interactions by stakeholders with the institutions helped to rebuild their communities. To rebuild the institutional community after an attack, higher education leaders should focus on increasing trust, safety, and transparency on campus.

In their interviews, participants discussed numerous themes and strategies that should be implemented in crisis communication plans at higher education institutions. In addition, participants highlighted the importance of partnerships throughout the emergency response team and noted innovative systems that should be used to send emergency notifications. The following sections explore the strategies used by the participants to communicate effectively during the active attacks on their campuses and explain how decision makers can implement these best practices to improve their communications in an emergency.

Communications Plan

Communication is a critical component to emergency response. According to the FBI (2018a), organizations should have a separate crisis communication plan that works

in conjunction with their overall emergency management plan. Researchers explained this plan should include policies and procedures related to all forms of traditional and digital media to communicate to all stakeholders during and after the crisis (Moore, 2018; Trump, 2015). Based on the results of this study, it is important that crisis communication plans also include specifics about: (a) sending emergency notifications, (b) communicating to all constituents, (c) roles of the members of the emergency response team, (d) plans for working with media, (e) training and education, and (f) evacuation procedures.

Emergency notifications. Timeliness and accuracy are two of the main pillars of effective crisis communications (Barker & Yoder, 2012; Brunner & Lewis, 2006, Centers for Disease Control, 2018; FEMA, 2011; Trump, 2012). Frequently cited by all four participants, these best practices are the key to a successful crisis communication response. During an emergency, however, it is easy to get caught up in other important tasks and forget to send an emergency notification. To prevent this, communicators should establish a rule in their crisis communication plans to send an emergency message every 15 minutes during an active attack, specifically if stakeholders have been instructed to lock down and not leave a room. To avoid missing a deadline to send a notification, an alarm should be set as a reminder to send another message.

In addition, communicators and emergency managers should create and include emergency notification templates in their crisis communications plans. These templates should include a variety of scenarios and allow for the personnel to type in the location and press send. The benefit to establishing emergency notification templates is that it allows the templates to be pre-approved by multiple administrators. Additionally,

language can be reviewed to ensure it is clear and effective. If communicators and emergency managers do not use templates, then they have to create and send a message as soon as they learn of the emergency. This manual process increases errors in the messaging and the amount of time it takes to send a message.

The designated staff members assigned to send emergency notifications should have the autonomy to decide if an emergency notification is necessary, draft an appropriate message, and send the notification without any additional approval. In an emergency, time is critical. Processes should be streamlined to reduce the amount of approval processes for sending emergency notifications as approval processes delay notifications being sent in a timely manner. Therefore, executive leadership should grant the personnel assigned the all-encompassing power to create and send notifications without approval. If full approval permission cannot be granted, then executive leadership should reduce the amount of approvals and bureaucracy needed to ensure notifications are sent in a timely manner.

During a crisis, accuracy is just as important as speed (Centers for Disease Control, 2018; FEMA, 2011) and frequency. When sending a message every 15 minutes, it may be tempting for communicators to try to send new information in each message to their constituents. Instead, communicators should only send information that has been verified. During a lockdown situation, it is better to send a repeat of a notification that was previously sent than to send an inaccurate notification. In addition, communicators should not be afraid to send notifications without all of the answers. Anderson gave an example of sending an initial notification with minimal information and then immediately sending secondary notifications once information was verified. Upon immediately

learning of the attacks, Anderson sent a message informing stakeholders to avoid a specific location. Within minutes, a second notification was sent informing stakeholders there had been a shooting on campus. If Anderson had waited until they had verified the shooting to send the initial notifications, members of the campus community could have unknowingly walked into a hostile situation, putting themselves in danger. The crisis communication plan should document the necessity of sending repetitive messaging if that is the only information available to send, as well as the importance of all information being accurate.

As the pillars of effective crisis communication, timeliness and accuracy must be balanced or the pillars will collapse. If timely notifications are inaccurate, informing stakeholders of incorrect information, their lives could be in danger. If accurate information is not sent in a timely manner, stakeholders will not receive the message in time to avoid areas or perform necessary steps to ensure their safety. Communicators must find a balance between the two to ensure stakeholders receive essential information in the shortest amount of time.

Failure to communicate accurate information to stakeholders in a timely manner creates a communication void that will be filled with inaccurate information. Three of the four participants battled rumors during the active attack at their institution. To dispel rumors, communicators and emergency managers should: (1) monitor social media, (2) communicate frequently, and (3) ensure executive leadership is aware of both the rumors and the correct information. During an attack, students turn to social media because they think it is the fastest and most credible source (Austin et al., 2012). To understand any external messaging students and other stakeholders are receiving, a member of the crisis

communication team should be dedicated to monitoring social media for rumors or inaccurate information throughout the duration of the attack and the institution's response. To correct any misinformation, this team member should both respond to inaccurate information and release reliable and up-to-date information as frequently and quickly as possible. By sharing the correct information on social media, stakeholders will be able to turn to the official source for their information. The crisis communication plan should designate a team member to monitor, respond, and release information on social media.

Students are not the only stakeholder susceptible to misinformation. Executive leadership can also receive inaccurate information. Because executive leaders are working to maintain campus operations during an emergency, it is vital all of their information is accurate. Therefore, emergency managers should maintain open communications with executive leaders through establishing Emergency Operation Centers (EOCs) or virtual EOCs, and hosting reoccurring, scheduled updates with the leaders. Emergency managers should determine the system or process that would be used to communicate with leaders during an active attack. This process, as well as a set, reoccurring schedule for updating leaders, should be included in the crisis communication plan.

Multiple audiences. Institutions have multiple stakeholders (e.g., students, employees, parents, community members, alumni, and legislative), each with unique needs. During an attack, decision makers must communicate to each group. As a whole, the group will be devastated and grieving, but each group will have different questions. Students will need to know about classes, residence halls, dining facilities. Parents will

be concerned about their students' safety. Employees will need information about business operations. Alumni and community members may want to know how they can help, while legislatures and representatives may want to come to campus for support. Since it is impossible to directly speak with each individual impacted by the attack, strategies and best practices should be used to communicate messages, provide stakeholders an opportunity to be heard, and promote a sense of healing among the community.

The broadest way to communicate to all stakeholders is through websites, email, social media, and traditional media. Communication plans should include specific strategies and key messaging to communicate frequently following an active attack to provide information and rebuild the campus community. Communicators should send targeted emails from executive leaders to each specific audience detailing important information days, weeks, and months following the attack. This frequent, targeted communication will resonate with the community members and provide them a chance to hear from their campus leaders. Additionally, a campus website dedicated to providing information, answering questions, and healing the community should be created. This website can be updated in real-time and allows audiences the ability to access information when they need and want it. Social media should be utilized to push important information in the digital location people visit most, social media. During the attack, messaging should be specifically related to the emergency and actions needed to ensure the safety of the campus community, but after the attacks, messaging should be geared toward answering questions and uniting the community. Traditional media should

also be used as a way to reach audience members. Communicators and emergency managers should partner with media to provide updates and information to be released.

After the attack and immediate response is over, executive leaders and communicators can focus on rebuilding the community. To meet the individual needs of each audience, emergency managers should establish a call center to take and answer questions. Two of the four participants set up a call center following the attacks at their institutions. Call centers allow for a variety of audiences to ask questions, receive answers, and feel heard. In addition, call centers provide the institution a unique opportunity to know the concerns of its stakeholders, while also appearing transparent and forthcoming with information. The communication plan should include a detailed plan for establishing a call center. This detailed plan should include a list of locations where the call center could operate. It is important this list includes multiple locations across the institution's campus as an attack could occur anywhere. In addition, the plan should include a list of necessary equipment, explain the area in charge of answering calls, and detail which area will be supplying messaging.

Events are another format to communicate to stakeholders and help the rebuilding process. Two of the four participants discussed events held on their campuses following the attacks. Events such as memorial services, safety forums, and government representatives appearing on campus help bring the community together while providing a chance for communication between stakeholders and executive leadership. Specifically, one participant stressed the importance of a memorial service as vital to helping their students grieve. The communication plan should include a list of potential events to host after an active attack as well as areas assigned to organizing the events.

During an emergency, it is easy to overlook an audience or communication method. By creating a crisis communication plan that includes a breakdown of each stakeholder, the most effective method to communicate with each stakeholder, and a list of potential events, communicators reduce the chance of missing a critical component of the communication and rebuilding process. Additionally, following the aforementioned information in the plan, communicators increase their likelihood of resonating with each individual audience.

Media. A timely response to a crisis is important because it reduces media's ability to sensationalize the crisis and allows the public to hear accurate information directly from the organization (Stein, 2006). Media should be used as a partner to help disseminate accurate information and reduce rumors (FEMA, 2011, Jones et al., 2017; Scanlon et al., 1985). Partnership with media should be built prior to an attack at an institution. This partnership should be established via reoccurring communication and meetings with media representatives.

To help disseminate initial messaging, media should be included as contacts in the emergency notification system. Immediately following the attacks, a safe holding area should be established for media. Participants worked with law enforcement agencies to establish these holding areas and to help control media. Press briefings should be held on a reoccurring schedule immediately following the attack. Participants partnered with the law enforcement agencies to host press briefings. The briefings can reduce following the days, weeks, and months after the attack.

The crisis communication plan should include a section dedicated to partnering with media. This section should include set up information such as multiple media

holding locations and press briefing locations in case the attack occurs at a predesignated location; a list of necessary equipment; and the area responsible for establishing the media location and hosting press briefings. In addition, the plan should include a designated public information officer, the person or area in charge of writing messaging, a predetermined media briefing schedule, and a list of media contacts.

Roles. To effectively manage a crisis, organizations need emergency response teams that consist of representatives from across the organization, in addition to partnerships with law enforcement agencies. By establishing a diverse emergency management team, institutions will have the necessary personnel on the team to address complex issues that arise during a tragedy such as communications, emergency response, and institutional day-to-day operations. In this study, participants mentioned three areas that participated in their institution's crisis communication responses: (a) emergency management, (b) public affairs or marketing and communications, and (c) external law enforcement agencies. To reduce confusion and set clear expectations between the departments, decision makers should create communications plan that include a breakdown of each area on the emergency management team with an explanation of that area's role in crisis communications. Specifically, this plan should include clarification of who is sending initial emergency notifications, how members of the emergency management team and executive leaders will be notified of the attack, and who will act as the institutions Public Information Officer in the event of an attack.

Emergency management. The emergency management office is responsible for managing the response to the attack for the entire institution. This department is in charge of establishing the Emergency Operations Center, notifying the emergency

management team and executive leadership of the attack, and coordinating response efforts between internal departments and external agencies. In addition, some emergency operations staff members oversee emergency notifications while the attack is ongoing. Three of the participants who worked in emergency management created and sent emergency notifications during their attacks. Because these participants were not communicators, but emergency managers, they relied on pre-approved templates to ensure their messaging was clear and concise.

Decision makers should evaluate the role of the emergency management office in regard to sending emergency notifications. Two of the participants noted a gap of sending emergency notifications due to not having the time to send the messaging as they were working on other duties related to the emergency. Thus, executive leaders should examine if the emergency managers can send clear, concise, and accurate notifications both quickly and frequently during an emergency. If emergency managers are unable to send emergency messages due to time constraints or communications not being their strongest skill, decision makers should consider moving the responsibility of sending emergency notifications to the marketing and communications team or another area.

Marketing and communications. Most marketing and communications offices are responsible for managing the communications response after the attack at an institution. In addition to overseeing the entire crisis communications strategy, some public affairs staff members draft and send messages and notifications on multiple platforms, establish media holding sites, and host press conferences. One of the four participants worked in communications and public affairs. In his role, he sent emergency notifications, acted as a media liaison, and spoke to media on behalf of his institution.

Additionally, two of the other participants mentioned the role of public affairs and communications on their campus during an emergency was to craft messaging once the actual attack was finished.

Effective communication is a difficult skill to master. Instead of relying on staff members from other areas, institutions should rely on their paid communications professionals to oversee their crisis communications. Personnel trained in marketing, communications, and public affairs have extensive knowledge of communication strategies and platforms, as well as how both should be utilized to communicate effectively to their target audiences.

Decision makers should evaluate the role of the communications office in regard to sending emergency notifications. Specifically, executive leaders should examine if the communications team can send clear, concise, and accurate notifications both quickly and frequently during an emergency. In order for the communications team to be able to send emergency notifications, they will have to work in conjunction with the emergency management team. This partnership could allow both areas to fulfill duties that meet their skill qualifications. For example, the emergency management office can manage the overall response to the attack, while the communications office manages the crisis communications, including emergency notifications. Through an evaluation of both communications offices and emergency management offices, executive leaders can determine which area should be responsible for creating and sending emergency messages.

Law enforcement agencies. Due to the organizational structure of some institutions and the nature of some attacks, external law enforcement agencies may

become the lead agency on crisis communications. Half of the participants noted the law enforcement agencies oversaw media response, including hosting media. When external agencies lead communications for multiple organizations, there can be mistakes. To reduce errors, decision makers should include a process in their crisis communication plan to partner with police to ensure consistent messaging. Additionally, this plan should include a separate, internal communications plan in case law enforcement's communication plan does not include specific messaging to the campus community. According to one participant, law enforcement leading the communications response led to lack of internal messaging. Due to law enforcement controlling the communications, the campus community was unaware of the attacks that occurred. To prevent this, decision makers need to ensure their communication plans include an internal communications section, specifically if law enforcement is leading the entire communications process.

Breaking down silos. Instead of operating holistically, some higher education institutions operate in individual areas. Department heads and representatives try to keep information, access, and power to their respective silos. In order to be effective in crisis communications, these barriers must be broken. The emergency management team must be able to share information and technology access with staff outside of their own areas. Not sharing information in a crisis, whether intentionally or unintentionally, could be detrimental in an emergency, resulting in serious harm to the stakeholders and the institution's reputation.

Leaders of higher education institutions must break these silos, specifically when it comes to emergencies. Executive leaders and staff must work together to communicate

the correct information in the fastest way possible. When building an emergency management and crisis communication teams, leaders must assess each member to ensure they have the correct knowledge and skill, but are also willing to work as a team to achieve the common goal of protecting stakeholders and the institution.

Training. As previously mentioned in this section, emergency management teams should consist of members throughout an organization as well as external law enforcement agencies. Given the team should consist of different departments that may not normally work together, it is vital emergency management teams train together prior to an emergency. Through this training, individuals can learn of each area's responsibilities, find ways to help each other during an emergency, and build partnerships that will help them get through tragic experiences together.

According to researchers, the most effective crisis teams have trained together prior to a catastrophe (Mitroff et al., 2006), as this training ensures everyone on the team is aware of their role and responsibilities (FBI, 2018a). The emergency management team should train on crisis communications annually, at a minimum. This training should include setting up and hosting press conferences, drafting and sending frequent emergency notifications, and practicing communicating internally throughout the emergency management team and the executive leaders.

Training allows for more than assigning roles and responsibilities. Frequent trainings normalize emergencies and make the processes more of an instinct. This normalization of emergencies is critical as emergencies are tragic times. Frequent trainings allow employees to not focus on the tragedy but focus on the tasks they have practiced numerous times before. Through these trainings, the steps team members

familiarize themselves with the steps they need to take, so much that it becomes second nature.

Preventative relationships. Partnerships with internal departments, external agencies, and media should be established prior to an attack occurring. Relationships between these groups during a crisis require trust and rapport that is not established overnight. Crisis communicators should work to establish relationships across campus departments, different external agencies (e.g., police departments, fire departments, city government, and state government, etc.), and media immediately to ensure the partnership is established prior to an attack or crisis occurring at the institution. Once these relationships are established, crisis communicators will be able to rely on each agency to obtain and release information as needed.

Partnerships are built through frequent trainings, exercises, and communication. According to Smith, the trainings he hosted prior to the attack at UAPV brought the emergency team together emotionally. These trainings helped the team be able to support and lean on each other during the tragedy. Through frequent trainings and communication, team members will create partnerships, both professionally and personally, that will allow them to successfully navigate during an active attack.

Evacuations. Active attacks can happen anywhere, including the office responsible for handling crisis communications. In Johnson's scenario, he was forced to leave his office 20 minutes following the attacks. Communicators and emergency responders should be prepared to respond to an emergency from anywhere. To do this effectively, these staff members should pack go-bags that include everything they would need to send an emergency notification remotely, including laptops, chargers, templates,

and media lists. Similarly, more than one person should have access to send an emergency notification. This redundancy should include representatives from different areas across campus. Emergency managers should train multiple people on how to use the system and allow them to frequently test the system to ensure they are comfortable with using the system. Through evacuation procedures and redundancy, executive leaders will ensure the continuity of crisis communications.

Systems

In an emergency, quickness is imperative and the key to saving lives. To reach the most people in the quickest amount of time possible, decision makers should purchase and install multi-modal emergency notification system. This recommendation was echoed by researchers (Lightfoot, 2013; Schaffhauser, 2007; Staman et al., 2009), as these systems will send an emergency notification through multiple communication mediums (e.g., text message, email, website, phone calls, digital signage), with one click. Anderson used his integrated system, for example, to send a text message, email, voice message, and even AM radio message about the attacks on their campus. Through integrated, multi-modal systems, members of the crisis communication team can send emergency messaging within minutes of learning of an active attack.

An innovative addition to the integrated, multi-modal system is the “easy button.” With an easy button, dispatchers can press a button and automatically send a notification to the entire campus community through all of the mediums previously set up including text message, desktop computer, social media, website, and digital signage. Powers’ team used the “easy button” during the active attack that occurred on his campus and credited it to the reason they were able to send messages quickly to a large number of

stakeholders. Although an additional cost, decision makers should consider splurging on the “easy button” to increase notification response time. If unable to afford the extra cost, decision makers should purchase an integrated, multi-modal system to send messages to multiple devices at one time, improving the time to send notifications and the effectiveness of messages.

People are only as fast as the tools they have available to them. Decision makers should evaluate their emergency notification system to ensure it is capable of sending messaging via multiple methods in a timely manner. If the system is unable to send to multiple platforms and devices such as text messaging, voice calls, websites, social media, desktop alerts, and digital signage, decision makers should consider upgrading to an integrated, multi-modal system. Additionally, decision makers should consider upgrading their systems to include an “easy button” as this is the fastest way to send an emergency notification. In seconds of receiving the call of an active attack, a dispatcher could immediately press the button, automatically alerting the entire campus community of an emergency. With the initial notice sent, crisis communicators can send follow up messaging with more information within minutes of the first notice.

As part of their evaluation, decision makers should examine the settings to ensure the systems are completely installed. This assessment should include checking the system’s generic messaging to ensure it is the correct message that institutions want to send and checking the branding to ensure it is in line with the institution’s brand standards. When Powers sent the emergency notification for the active attack at Almond State, the desktop alert messaging was not set up correctly. Due to this installation mistake, the message sent was incorrect and the messaging did not have the institution’s

branding. An error, such as this, could cause audience to be confused about the authenticity of the message. To reduce these mistakes, decision makers should evaluate their systems and test them frequently.

Conclusion

To prepare for potential active attacks at an educational institution, decision makers should create a crisis communication plan that works in conjunction with their overall emergency disaster plan (FBI, 2019, Moore, 2018). A crisis communication plan documents the strategies, processes, procedures, and systems needed to communicate necessary information to stakeholders during an emergency. To ensure their plan includes necessary information to successfully communicate during an active attack, the findings of this study should be used to evaluate the institution's current crisis communication plan or establish a new plan.

Based on the findings of this study, it is recommended that institutions review existing or create a new crisis communication plan that work in conjunction with their emergency response plan. Decision makers should specifically examine their process and systems for sending emergency notifications, their roles and relationships between internal and external members of the emergency response team, their preparation and training program, their response protocols, and their media partnerships. This plan should be reviewed annually and after every emergency.

In this study, participants reflected on the attacks at their institutions and how they assisted in the crisis communications process. Through these interviews, participants described how they communicated to stakeholders, how they responded to media, and how they used communications to help their community heal from the attacks. In

addition, participants also described the lessons they learned from going through an active attack at their institution. These lessons learned provided invaluable information, which one may not have known if they had not gone through the experience. During these interviews, participants shared the strategies they used and the best practices they recommended others use for responding to active attacks at a higher education institution. Through these findings, a shared, lived experience was established between the participants. Additionally, the participants' overarching responses corresponded to the literature review to highlight the importance of the eight themes to crisis communication response. In conclusion, the findings of this study answered the two research questions by providing strategies and best practices used by higher education leaders during active attacks on their campus.

Decision makers should use the findings of this study and the experience of participants to establish their own crisis communications plan. Participants of the study credited the strategies and best practices mentioned in this study as the reason their institution's reputation did not suffer after the attack. By following these strategies and best practices, university decision makers will be better prepared to handle an active attack at their institution. Specifically, they will be more knowledgeable about sending notifications, working with media, evaluating a multi-modal notification system, communicating with all audiences, and collaborating with internal and external agencies.

Limitations. One limitation of this research study was the participant sample. Due to the research being completed during the 2019 novel coronavirus, the participant sample was limited. The participant sample was limited to only those in specific leadership positions. At the time of the research completion, these positions were

increasingly busy due to the ongoing individual institutional response to the novel coronavirus. Another reason for the participant sample being limited could have been the type of study. Specifically, participants may have wanted to avoid discussing the experience and the potential trauma associated to the attacks.

Another limitation was the participant selection of three emergency managers and one communication manager. As the participant role was skewed toward emergency managers, this could have impacted the results of the study. Future research should narrow the sample criteria to include only one department category as this may increase the shared, lived experiences among participants. Despite the differences in the roles, there were still commonalities among participants and their experiences.

Similarly, another limitation to the study could have been the amount of time passed between the attacks experienced by each participant and the time of the interview. All four attacks occurred between 2013 and 2016, which was seven to four years before the interviews occurred. Due to the amount of time passed between the attacks and the interviews, as well as the tragedy surrounding the attacks, participants could have inaccurately remembered information related to their response efforts. To ensure information was accurate, however, most participants used after action reports and presentations about the attacks to answer questions in the interviews. Time also can allow for a period of reflection. As it relates to this study, participants were far enough removed from the study to reflect on their experiences and lessons learned. In addition, they were able to rely on documentation to ensure information presented was accurate.

In this study, participants were limited to those who experienced any active attack while employed at the institution. Attacks experienced by participants ranged from a

targeted shooting to an untargeted stabbing. The different types of attacks could be seen as a limitation as communications may have varied based on the type of attacks. Future researchers could evaluate the communication responses of an individual type of attack.

Of the four institutions, only one institution previously experienced an active attack. It is unsure whether the participant was employed at the institution at the time of the attack. The different experiences of participants responding and communicating after an active attack could be considered a limitation. Future researchers should evaluate the years of experience of each participant as well as the institution's history of attacks.

Additional research. Due to the limited literature related to crisis communications and active attacks, additional research is needed. Future researchers should consider changing the sample population. Specifically, a future study could narrow the population sample to a specific employee role. The roles of emergency management, public relations, and law enforcement, as it relates to crisis communications and active attacks, should all be explored individually. This examination would allow for a more shared, lived experience among participants (Treadwell, Lane, & Paterson, 2020). In addition, researchers could expand the population to include those in K-12 communication and emergency management. This population may provide more valuable recommendations, not provided by a higher education population.

One participant noted their reputation was unharmed because there were no student deaths. Further research into the topic could evaluate the difference in the crisis communication response of attack that resulted in student deaths versus attacks that did not result in death. In addition, researchers could evaluate media response to death tolls

to see if there is a correlation to coverage. Similarly, future research could evaluate an institutional response to increased media coverage.

Due to the increase and popularity of social media, future research could specifically examine institution's responses to active attacks on social media. Particular interest could be given to rumors and false information. Future researchers could evaluate the types of rumors, the number of rumors, and the institutions response to rumors.

Summary

Studying the strategies and best practices of communicating throughout an active attack in higher education highlighted the need for decision makers to create a crisis communication plan that works in conjunction with their emergency operations plans. Due to an increasing number of active attacks across the country, it is important for decision makers to be prepared to respond to an attack at their institution. Effective communication is the key to protecting stakeholders, reducing reputational damage, and rebuilding a community after an active attack and should be a top priority for higher education leaders.

It is often difficult to imagine tragedy striking so close to home. But executive leaders need to plan and be prepared to keep their community safe. By evaluating their crisis communications plans and having difficult conversations, decision makers are putting processes in place that will protect their entire community.

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APPENDIX A

Participant Criterion Matrix

Institution Name, Institution Type	Position Title	Active Attack During Employment	Meets Requirement	Does Not Meet Requirement

APPENDIX B

Dear _____,

My name is Amanda Coleman, and I am a doctoral candidate in the Higher Education Leadership program at Sam Houston State University. I am currently beginning my dissertation research on communicating during and after an active attack at higher education institutions. Additionally, I am an administrator of a four-year public university and assist in our university's emergency response communications.

During an active attack, effective communication can save the lives of students and employees. This research study will explore how leaders responded and communicated during and after the attack at their institution. To assist university leaders in their crisis communication preparation and response efforts, this research study will examine the strategies and best practices used by leaders who have responded to active attacks on their campus.

I am writing to request your assistance and participation in my research study by sharing your experience of communicating during the attack on your campus. Interviews will be conducted via video or phone conferencing for one 90-minute session. A follow up interview may need to be conducted. The semi-structured interview will be scheduled at a day and time that is convenient for you within Summer of 2020. Prior to the interview, I will share the interview questionnaire. Additionally, I will send a consent form for your approval to participate.

For further questions, please contact me at acoleman@shsu.edu or 936-294-4308 or my dissertation chair, Dr. Matthew Fuller, at mbf005@shsu.edu or 936-294-1147.

Thank you for your consideration.

Amanda Coleman

Sam Houston State University
Consent for Participation in Research

**KEY INFORMATION FOR *STRATEGIES AND BEST PRACTICES*
FOR COMMUNICATING DURING AN ACTIVE ATTACK IN HIGHER
*EDUCATION***

You are being asked to be a participant in a research study about communicating throughout an active attack at higher education institutions. You have been asked to participate in the research because of your previous experience in a leadership role during an active attack on your campus and may be eligible to participate.

WHAT IS THE PURPOSE, PROCEDURES, AND DURATION OF THE STUDY?

By doing this study, we hope to learn about strategies and best practices for communicating throughout an active attack on a higher education campus. Your participation in this research will last about three and a half hours. Participants will be interviewed regarding their experience on the crisis communication team during the attack that occurred on their campus. Following the interview, participants will be provided with a transcript of the interview to review for accuracy purposes.

WHAT ARE REASONS YOU MIGHT CHOOSE TO VOLUNTEER FOR THIS STUDY?

By completing in this study, participants will help add to the literature of communicating during active attacks on higher education campuses. Additionally, this research will provide crisis communication recommendations and strategies for university administrators to utilize in preparing for, responding to, and recovering from active attacks on their campuses.

For a complete description of benefits, refer to the Detailed Consent.

WHAT ARE REASONS YOU MIGHT CHOOSE NOT TO VOLUNTEER FOR THIS STUDY?

Given the nature of the study is for participants to relive and discuss a potentially tragic time in their lives, participants may not want to volunteer for this study as it could cause psychological harm such as anxiety, depression or guilt. To assist with these feelings, participants will be provided debriefing information that will include a list of counseling resources available to them.

For a complete description of risks, refer to the Detailed Consent.

DO YOU HAVE TO TAKE PART IN THE STUDY?

If you decide to take part in the study, it should be because you really want to volunteer. You will not lose any services, benefits, or rights you would normally have if you choose not to volunteer.

WHAT IF YOU HAVE QUESTIONS, SUGGESTIONS OR CONCERNS?

The person in charge of this study is Amanda Coleman of the Sam Houston State University Department of Educational Leadership who is working under the supervision of Matthew B. Fuller, Ph.D. If you have questions, suggestions, or concerns regarding this study or you want to withdraw from the study his/her contact information is:

Amanda Coleman
Principal Investigator
936-294-4308
acoleman@shsu.edu

Matthew B. Fuller
Assistant Professor and Director
Higher Education Leadership
936-294-1147
Mbf005@shsu.edu

If you have any questions, suggestions or concerns about your rights as a volunteer in this research, contact the Office of Research and Sponsored Programs – Sharla Miles at 936-294-4875 or e-mail ORSP at sharla_miles@shsu.edu.

Sam Houston State University
Consent for Participation in Research
DETAILED CONSENT STRATEGIES AND BEST PRACTICES
FOR COMMUNICATING DURING AN ACTIVE ATTACK IN
HIGHER EDUCATION

Informed Consent

My name is Amanda Coleman, and I am a doctoral student of the Department of Higher Education Leadership at Sam Houston State University. I would like to take this opportunity to invite you to participate in a research study of crisis communications during after attacks in higher education. I hope that data from this research will help provide best practices for future administrators to utilize if their campus experiences an active attacked. You have been asked to participate in the research because of your previous experience communicating during an active attack.

The research is relatively straightforward, and we do not expect the research to pose any risk to any of the volunteer participants. If you consent to participate in this research, you will be asked to answer questions about crisis communications and active attacks in an interview. Any data obtained from you will only be used for the purpose of understanding the phenomenon surrounding crisis communications and active attacks in this study. Under no circumstances will you or any other participants who participated in this research be identified. In addition, your data will remain confidential.

This research will require about 3 and a half hours of your time. Participants will not be paid or otherwise compensated for their participation in this project. Audio from interviews will be recorded and participants can review the transcripts for accuracy purposes. Files will be transferred to the researcher's private computer and encrypted with the password changed every four weeks. Files will be deleted within one year of the recording.

Your participation in this research is voluntary. Your decision whether or not to participate will involve no penalty or loss of benefits to which the subject is otherwise entitled, and the subject may discontinue participation at any time without penalty or loss of benefits to which the subject is otherwise entitled. If you have any questions, please

feel free to ask me using the contact information below. If you are interested, the results of this study will be available at the conclusion of the project.

If you have any questions about this research, please feel free to contact me, Amanda Coleman, or Matthew B. Fuller, PhD. If you have questions or concerns about your rights as research participants, please contact Sharla Miles, Office of Research and Sponsored Programs, using her contact information below.

Amanda Coleman SHSU Department of Higher Education Leadership Sam Houston State University Huntsville, TX 77341 Phone: (936) 294-4308 E-mail: age001@shsu.edu	Matthew B. Fuller, Ph.D. SHSU Department of Higher Education Leadership Sam Houston State University Huntsville, TX 77341 Phone: (936) 294-1147 E-mail: mfuller@shsu.edu	Sharla Miles Office of Research and Sponsored Programs Sam Houston State University Huntsville, TX 77341 Phone: (936) 294- 4875 Email: irb@shsu.edu
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☐

I understand the above and consent to participate.

☐

I do not wish to participate in the current study.

AUDIO/VIDEO RECORDING RELEASE CONSENT

As part of this project, an audio/video recording will be made of you during your participation in this research project for transcription purposes only. This is completely voluntary. In any use of the audio/video recording, your name will not be identified. Audio from interviews will be recorded and participants can review the transcripts for accuracy purposes. Files will be transferred to the researcher's private computer and encrypted with the password changed every four weeks. Files will be deleted within one year of the recording. You may request to stop the recording at any time or to erase any portion of your recording.

☐

I consent to participate in the audio/video recording activities.

☐

I do not wish to participate in the audio/video recording activities.

APPENDIX C

Interview Questionnaire

Attribute Codes: Gender: _____ Ethnicity: _____ Age: _____ Institution Type: _____

Time/date: _____

In-Person/Skype: _____

1. Tell me about your role at [Institution Name] when the attack occurred.
2. Tell me about the attack that occurred in your career.
3. Tell me about your involvement in the communication process during and after the attack.
4. What communication strategies were used during and after the attack?
5. Of these strategies, which were deemed successes and why?
6. Of these strategies, which were deemed failures and why?
7. What lessons were learned about communication after responding to the attacks?

Possible Probe Questions

8. How prepared was your institution to communicate during and after the attacks?
9. Who was on the crisis communication team?
10. Who made the communication decisions?
11. What methods were used to communicate about the attack and after the attack?
12. What, if any, was the media response to the attacks?
13. How were the media handled during the response period?
14. What, if any, was the role of social media during the communication process to the attacks?
15. How did the attacks effect the reputation of your institution?

16. How was communication used to rebuild the reputation of the institution after the attacks?
17. Given your experience with communicating throughout an active attack, what advice would you give other higher education leaders?

APPENDIX D*Prominence of Structural Code from Themes*

Structural Code	Themes	Frequency
Communications Decision for Victims Emergency Operations Center Messaging Frequency Language Redundancy Relationships Set Up Strategy Template Text Messaging	Lessons Learned	45
Briefing Focus Hostile Local National Media	Media	11
Accuracy Approval Branding Buttons Email Frequency Initial Language Monitors	Notifications	80

Social Media Speakers Systems Template Text Timeliness Notifications		
Processes Redundancy Relationships Training Systems Preparedness	Preparedness	25
Reputation	Reputation	11
Alumni Call Center Campus closed Checklist Communication Document Emergency Operations Center Events Families Grief Investigations Parents Police Signage Students	Response	69

Text Messages		
Timeliness		
Response		
Administration	Role	67
Approval		
Emergency Managers		
Fire Department		
Partnerships		
Police		
Public Affairs		
Redundancy		
System		
Role		
Rumors	Rumors	16
Social Media		

VITA

Curriculum Vitae for
Amanda Earp Coleman

Academic Degrees

Master of Arts, Baylor University
Journalism

Bachelor of Arts, Sam Houston State University
Mass Communication

Professional Experiences

Assistant Director of Marketing 2018 – Present
Sam Houston State University, Department of Marketing & Communications

Marketing Automation Specialist 2016 - 2018
Sam Houston State University, Department of Marketing & Communications

Lecturer, Part-time in Mass Communications 2016 - 2017
Sam Houston State University, College of Fine Arts & Mass Communications

Marketing & Intake Coordinator 2015 - 2016
Schechter, McElwee, Shaffer & Harris

Marketing Coordinator 2013 - 2015
Lovett Homes

Marketing Director 2012 – 2013
The Finger Companies

Communications Specialist 2012 – 2012
Texas A&M University, College of Veterinary Medicine & Biomedical Sciences

Publications

Assistant Editor, Journal of the American Studies Association of Texas 2010

Presentations

Alexander, D. A., & Coleman, A. G. (2017). *Social Media Audit*. Presented at the SHSU Come to Coffee Professional Development Session, Huntsville, TX.

Coleman, A. G. (2018). *Factors of Alumni Giving*. Presented at Southwest Educational Research Association, New Orleans, LA.

Coleman, A. G., & Alexander, D. A. (2018). *Reaching the Seven Kingdoms from the Iron Throne: Creating Content Your Audience Wants to See*, CASE District VI, Ft. Worth, TX.

Earp, A. G. (2010). *The Blind Side of Poverty*. Paper presented at the Baylor Poverty Summit, Waco, TX.

Honors and Awards

Baylor's Journalism Graduate Student Scholarship 2011 – 2012

Baylor's Frank Bulkhalter Scholarship 2011 – 2012

Kappa Tau Alpha Journalism Honor Society 2011 – 2012

Golden Key International Honour Society 2008 – 2010

SHSU Dean's List Fall 2007, Fall 2008, Fall 2009