

An Ideal Model for
Responding to Active Shooter Incidents in Schools

By

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Applied Research Project

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DEDICATION

This paper is dedicated to the innocent victims of school shootings and their families and the brave emergency responders and school personnel who unselfishly risk their lives for the sake of others.

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I would like to thank my ARP committee members, Dr. Tajalli, Dr. Brown, and Ms. Garba, MPA, for their input and advice during the final stages of completion of this study. Their feedback was beneficial toward enhancing the quality of this paper. A special thank you goes to my research professor and committee chair, Dr. Tajalli, for his direction, insights, and support throughout the entire process.

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Finally, I thank God for His blessings in my life. Without His grace and strength, I would not be where I am today. “With God, all things are possible.” Matthew 19:26

ABSTRACT

Purpose. The purpose of this research is two-fold. First, this study develops an ideal model of strategies for school personnel to respond to an active shooter incident. The second purpose of this study is to assess the extent to which public school personnel in Texas are aware of the strategies and therefore prepared to respond properly to an active shooter incident.

Methods. The ideal model of response strategies for an active shooter incident was developed through literature review. An electronic survey questionnaire was sent to public school principals in Texas, who were asked to complete the questionnaire and forward the survey invitation to their school personnel. The questionnaire was designed to assess the training and knowledge of school personnel on how to respond to an active shooter incident.

Findings. The findings show that 68.38% of respondents indicated they had received active shooter response training. However, the data reveal that some of the respondents' responses to their awareness of certain strategies fell below this percentage. This suggests that additional training may be needed to ensure that school personnel are aware of strategies that may increase their ability to respond quickly and effectively to the crisis until the arrival of law enforcement.

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The inspiration to research active shooter events in schools started with the tragic December 2012 Sandy Hook Elementary School massacre in Newtown, Connecticut. Denise completed several courses in active shooter response in 2013: *Is Your School Ready for a Traumatic Event?* by EDU-SAFE; FEMA's *Emergency Operations, Active Shooter: What Can You Do?* online course; and *Civilian Response to Active Shooter Events Train-the-Trainer* course of the Advanced Law Enforcement Rapid Response Training (ALERRT) center.

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LIST OF ABBREVIATIONS

Abbreviation	Description
ALERRT	Advanced Law Enforcement Rapid Response Training Center
ALICE	Alert, Lock Down, Inform, Counter, Evacuate
ASE	Active Shooter Event
ASI	Active Shooter Incident
CNN	Cable News Network
CPTED	Crime Prevention through Environmental Design
DHS	Department of Homeland Security
EOP	Emergency Operations Plan
ERCM	Emergency Response and Crisis Management
ESC	Education Service Center
FEMA	Federal Emergency Management Agency
IACP	International Association of Chiefs of Police
ICS	Incident Command System
IP	Internet Protocol
IRB	Institutional Review Board
KCSS	Kentucky Center for School Safety
MVERS	Maryland Virtual Emergency Response System

OSDFS	Office of Safe and Drug-Free Schools
PA	Public Administration
SHAC	Sandy Hook Advisory Commission
SRO	School Resource Officer
SWAT	Special Weapons and Tactics
TEA	Texas Education Agency
UCPD	University of California Police Department
USDE	United States Department of Education

DEFINITIONS

Active Resistance:

A response option to an active shooter incident when evacuation and lockdown are not possible or have failed and the active shooter gains entrance to the room or location. This is a last resort option when there are no other alternatives and loss of life or injury appears imminent. (Blair et al. 2013; DHS 2008; FEMA 2012; USDE 2013)

Active Shooter Incident:

A situation in which one or more persons is/are actively engaged in killing or attempting to kill multiple people in a confined area populated by multiple, unrelated individuals. The primary motive appears to be mass murder, with victims randomly selected. (Blair et al. 2013; USDE 2013; Rocque 2012)

CPTED (Crime Prevention through Environmental Design):

The concept that the proper design and effective use of the environment can reduce the incidence of crime. (Stephens 1995)

Evacuation:

A response option to an active shooter incident when conditions outside the building are safer than inside, it is safe to evacuate, and an accessible escape path is available. (KCSS 2008; DHS 2008; FEMA 2012)

Facilities Access Control:

Strategy to control and monitor access to school facilities and grounds to ensure the safety of students and school personnel. (USDE 2007)

Functional Training Exercises:

Type of training similar to tabletop exercises, with the difference that tabletop exercises occur in an informal, stress-free environment, while functional exercises are interactive and time-pressured with interjections of a constant stream of new information and developments that add a high degree of realism and stress. (Dorn et al. 2004; USDE ERCM 2006)

Incident Command System:

A comprehensive structure, role assignment, and decision-making process to prepare for and respond to all types of crises. (IACP 2009)

Lockdown:

Lockdown is used when students and school personnel are locked in their rooms because evacuation would be dangerous or not feasible or the crisis is inside and movement

within the school would put students and school personnel in jeopardy, as in the case of an active shooter incident. Lockdown is a response option to an active shooter incident to deny the shooter access to the occupants. (Blair et al. 2013; KCSS 2008; USDE 2007)

Mitigation:

Actions school officials can take to eliminate or reduce the adverse effect of events that cannot be prevented. (USDE 2007)

Preparedness:

The process of planning for the worst-case scenario before the crisis actually occurs. (USDE 2007)

Prevention:

Proactive strategies school officials can take to decrease the likelihood that an adverse event or crisis will occur. (USDE 2007)

Recovery:

The process of restoring the environment after the crisis and returning to normal operations as soon as possible. (USDE 2007)

Response:

The process of implementing appropriate actions during a crisis. (USDE 2007)

School Officials:

School Board members, superintendents, chief executive officers, principals.

School Personnel:

All position types in a school setting, such as faculty and staff.

School Resource Officer (SRO):

Law enforcement officers in the school environment responsible for providing security, increasing deterrence, providing the capability of responding quickly to crises, and affording a visible sense of security to students, teachers, staff, and parents. (Wike and Fraser 2009)

Tabletop Training Exercises:

Type of training similar to group brainstorming activities, in which school personnel and emergency responders sit around a table and discuss steps they would take to respond to a crisis by mentally simulating various scenarios. (USDE 2007)

Target Hardening:

Strategy designed to minimize criminal opportunities, particularly through the use of security hardware and technology. (Stephens 1995)

Vulnerability Assessment:

Focuses on susceptibility to certain threats or hazards to assist administrators in identifying and prioritizing actions to be taken to mitigate or prevent potential hazards that might impact the school. Includes needs assessments, hazards assessments, threat assessments, consequence assessments, and risk analysis. (USDE 2008)

CHAPTER ONE: INTRODUCTION

Introduction

Although schools have historically been viewed as safe environments, school security can deteriorate in moments during an active shooter incident, resulting in tragic loss of life. When an active shooter enters a school, the perpetrator is usually determined to kill as many people as possible, regardless of age. In addition to the horrifying aspect of the death of innocent children and adults, it is alarming how quickly the event can unfold and end. Many active shooter incidents are over in minutes, with a significant number of people killed or injured during the event. For example, on January 17, 1989 at Stockton, California's Cleveland Elementary School, in as little as four minutes, the shooter succeeded in firing 106 bullets, killing five children, aged six to nine, and wounding twenty-nine pupils and one teacher (Time 2001). In just fifteen seconds, two shooters fired twenty-six shots, killed four students and one teacher, and wounded nine students and one teacher, at Westside Middle School in Jonesboro, Arkansas on March 24, 1998 (Kifner 1998). At Red Lake High School in Red Lake, Minnesota on March 21, 2005, in less than ten minutes, five students, one teacher, and one unarmed security guard were killed and twelve to fifteen people were injured (CNN 2005). The horrific attack at Virginia Tech's Norris Hall in Blacksburg, Virginia on April 16, 2007 resulted in the deaths of twenty-five students and five faculty and the wounding of seventeen others, all in a matter of ten to twelve minutes with 174 rounds fired (VA Tech Review Panel 2007). Sadly, on December 14, 2012, within six minutes or less, 154 rounds were fired, resulting in the deaths of twenty children, aged six to seven, and six adults, during the tragedy at Sandy Hook Elementary School in Newtown, Connecticut (Clines 2013).

Background Information

The Advanced Law Enforcement Rapid Response Training (ALERRT) Center at Texas State University analyzed active shooter events (ASEs) occurring in schools, businesses, and other public places in the United States from 2000 to 2010 based on news stories, reports from investigating agencies, and supplemental homicide reports produced by the FBI. According to the study, “The median time from first report until the ASE ended was 3 minutes. The vast majority (73%) of shooters were stopped within 9 minutes” (Blair et al. 2013, 51, 55-56). In addition, “...on average, it took police an average of 3 minutes to arrive on scene and an additional several minutes to locate and stop the shooter. *This means that for at least the first several minutes of an attack, the potential victims are essentially on their own* [emphasis added]” (Blair et al. 2013, 174). Therefore, it is imperative that school personnel are well prepared to respond to active shooter incidents in an effort to decrease the number of potential casualties and protect their students to the greatest degree possible.

In addition to developing response strategies, schools must take steps to ensure that intruders cannot easily gain access to school facilities. “Although no program can be 100% effective against a well-armed and determined attacker” (Gray 2012, paragraph 5), schools must have procedures in place to make it as difficult as possible for intruders to infiltrate the school and to impede and delay their actions if facility access control fails. “Throughout history, one notion is certain: a crisis can occur at any time and any location. Educational institutions ranging from daycare programs, public and private K-12 schools to universities can be exposed to crises that can cause tragic consequences to children” (McCarty 2012, 9). Consequently, policies of security, in addition to the

historical concern for student safety, must become a fundamental value for schools (DeMitchell and Cobb 2003).

Although school shootings are not new phenomena, “each time one occurs, it displays the unsettling susceptibility of schools ...to acts of violence” (Wike and Fraser 2009, 163, 168). Wike and Fraser (2009, 166) explain, “School shootings engender deep public concern. They violate strongly held cross-cultural beliefs about the sanctity of childhood and the obligation of society to protect children from harm.” Furlong and Morrison (2000, 74) suggest that “in some ways, society has expected a protective bubble to exist between the problems of our communities and the spillover into the school setting.”

Changing Landscape

Throughout the years, tragic school events have resulted in an evolution of crisis management and response strategies. “The 1999 Columbine High School tragedy created the greatest national attention to school safety and crisis planning. ... [and] forced the American public to realize that educational systems are as vulnerable to crisis as any other organizational structure” (McCarty 2012, 12). Gainey (2009, 267) asserts, “The Columbine tragedy significantly recast the role of crisis management in educational settings....[and] is generally credited with shaking school districts out of their complacency about the need for effective crisis management.” The Virginia Tech shooting raised many questions about the “safety of the educational institutions across the country” (McCarty 2012, 13). On a positive note, the Virginia Tech tragedy depicted the importance of proactively developing community partnerships. As described by Blair et al. (2013, 29), “The critical role of training, working together, and preplanning for critical

incidents before a tragic event was clearly demonstrated at Virginia Tech. The law enforcement community in Blacksburg, Virginia...had worked together for years, trained together for active shooter events, and the leadership from both agencies was progressive and forward thinking. The preexisting and established partnerships between the Virginia Tech University Police Department and the Blacksburg Police Department clearly led to a successful law enforcement response to the tragedy that could have been much, much worse.”

Finally, the Sandy Hook tragedy escalated the focus on civilian response to active shooters on campus. “Since the deadly school shootings in Newtown, Connecticut, last year, school security plans have included arming teachers, adding police officers and armed security guards, changing how schools are designed and adding bulletproof backpacks and small, lightweight, bulletproof whiteboards to schools. In the new school year, some educators are taking it upon themselves to be prepared for the unthinkable” (Segal 2013, paragraphs 5 & 6). Therefore, strategies for responding to active shooter incidents are constantly evolving due to lessons learned from each event.

A prime example of the changing landscape in crisis management in educational settings is the difference between guidance publications concerning school emergency plans published by the United States Department of Education (USDE) in 2007 and 2013. The 2007 document, titled “Practical Information on Crisis Planning: A Guide for Schools and Communities,” describes Mitigation-Prevention, Preparedness, Response, and Recovery strategies to various crises, but does not include strategies for “fight” (disrupting or incapacitating the shooter) responses to active shooter incidents. In contrast, the 2013 document, titled “Guide for Developing High-Quality School

Emergency Operations Plans,” includes a section on active shooter situations with “fight” as one of the response options.

As described by McCarty (2012, 9), “...crises in education have occurred over the years and as new tumultuous events occur, the educational landscape will continue to change.” It is important that school officials and personnel are kept up-to-date with the most effective strategies relative to active shooter incidents. “In a crisis situation, any individual can be catapulted into a leadership role without training or expertise. The decisions made surrounding the events of a crisis will ultimately affect the eventual outcome” (McCarty 2012, 5). Since, in most instances, the first contact with an active shooter will be school personnel rather than law enforcement, all school employees should understand that they could potentially find themselves in the role of first responder. “Faced with a school-invasion situation, school staff will have to make a quick assessment of the threat and take multiple steps in response. They must disseminate appropriate information to the school and to outside authorities and initiate available defensive mechanisms...and manage the incident until the police arrive” (Buerger and Buerger 2010, under “Situational Considerations and Intervention Training”). As the USDE (2013, 56-57) advises, “The better first responders and school personnel are able to discern these threats [of an active shooter incident] and react swiftly, the more lives can be saved. ...Many young lives are at risk in such a concentrated space. That is why it is critical that schools work with first responders, emergency management staff, and all community partners to identify, prepare, prevent, and effectively respond to an active shooter situation in a coordinated fashion.”

Research Purpose

Academic research regarding active shooter strategies appears to be under-researched. Most research on this topic is performed by the private sector and government agencies. The purpose of this research is two-fold. First, this study develops an ideal model of strategies for school personnel to respond to an active shooter incident. The second purpose of this study is to assess the extent to which public school personnel in Texas are aware of the strategies and therefore prepared to respond properly to an active shooter incident.

Significance of the Study

This study contributes to the field of education by providing school officials with a comprehensive list of strategies and pertinent information for responding to active shooter incidents and by identifying potential gaps in training and knowledge related to these strategies. The ideal model of response strategies developed from the extant literature on crisis management and active shooter events is not intended to be prescriptive since every school is unique. Instead, the model is designed to serve as a universal guide for school officials in the development of customized response procedures for their schools. The assessment of the school personnel's extent of knowledge on how to respond to an active shooter incident can assist school officials in identifying training needs in their schools regarding response to active shooter incidents. Trump (2011, 178) provides a reminder that two of the most common messages heard in the news during an account of a school crisis are: "We never thought it could happen here" and "There was nothing we could do to train or prepare for such a tragedy." What must be realized is that a crisis such as a school shooting can happen anywhere and

“although every incident cannot be prevented, steps can be taken to reduce the risks for such incidents, and preparations can be made to more effectively manage a crisis, should one occur” (Trump 2011, 179).

Chapter Summary

Historical data on active shooter events reveal that many incidents, while horrific, are short in duration and may end prior to the arrival of law enforcement or shortly thereafter. Since the potential victims will be on their own at the beginning of the incident and must respond quickly and effectively, school personnel need to know how to respond to an active shooter incident. According to Blair et al. (2013, 174), “The data show that many times the attack stopped because the potential victims took action to stop the shooter directly or made it difficult for the shooter to find targets. Our belief is that the actions of civilians can dramatically affect the number of casualties that occur during an attack. Civilians who are well prepared to respond to an attack can save not only their own lives, but also the lives of others.”

The next chapter, *Literature Review*, explores the extant literature on crisis management related to intruder access and active shooter incidents. The relevant literature serves in the development of the ideal model of response strategies. *Chapter Three: Methodology* provides specific information on the methods used to assess the extent of Texas school personnel’s awareness of how to respond to an active shooter incident. The fourth chapter, *Results*, discusses the results of the aggregate data obtained by the survey questionnaire administered to Texas school personnel. The final chapter summarizes the research and discusses limitations of the study and recommendations for further research.

CHAPTER TWO: LITERATURE REVIEW

Introduction to Literature Review

Schools tend to be soft targets for acts of violence, including horrific campus shootings. Since key responsibilities of school officials are to provide a safe, learning environment for children and to act immediately to keep students and school personnel safe during a crisis (Stephens 2006), school administrators must take a serious look at their security measures. Although there is a need for concerted security processes, Shelton et al. (2009) indicate there are no national standards of security strategies for school communities to employ. Additionally, school personnel have varying levels of familiarity or training in crisis response strategies (McCarty 2012). While governmental entities, school safety centers, and crisis management experts have provided resources to aid educational leaders in planning, preventing, responding, and recovering from crises, the resources are so extensive that it may be difficult for school officials to effectively utilize best practice strategies or to become familiar with all the tools at their disposal.

The purpose of this chapter is to review the literature on school security strategies relative to active shooter incidents in order to develop a proposed, comprehensive, ideal model of response strategies and practices that will serve as a universal guide for cultivating a safer school environment. Caution must be exercised by administrators, though, to avoid adopting a generic plan or model without customization because each school or campus has unique needs, risks, resources, and safety laws (Dorn et al. 2004; USDE 2007). Plans must be tailored to fit the local conditions of each campus organization (M. Dorn 2013b). However, the ideal model can serve as a framework for

developing individualized crisis management plans and strategies relative to active shooter incidents.

The United States Department of Education (USDE) Office of Safe and Drug-Free Schools (OSDFS) developed a guide in 2003, with revisions added in 2007, for crisis preparation for school officials, titled “Practical Information on Crisis Planning: A Guide for Schools and Communities.” In this guide, Margaret Spellings, former Secretary of Education, is quoted on the importance of developing a crisis management plan: “Knowing how to respond quickly and efficiently in a crisis is critical to ensuring the safety of our schools and students. The midst of a crisis is not the time to start figuring out who ought to do what. At that moment, everyone involved – from top to bottom – should know the drill and know each other” (USDE 2007, ‘1-1’). Furthermore, the USDE guide points out, “Knowing what to do when faced with a crisis can be the difference between calm and chaos, between courage and fear, between life and death” (USDE 2007, ‘1-2’).

The USDE (2007) guide identifies four phases of crisis management: Mitigation-Prevention, Preparedness, Response, and Recovery, illustrated in *Figure 2.1 Four Phases of Crisis Management*. These four phases have become the foundational elements of many crisis management plans.

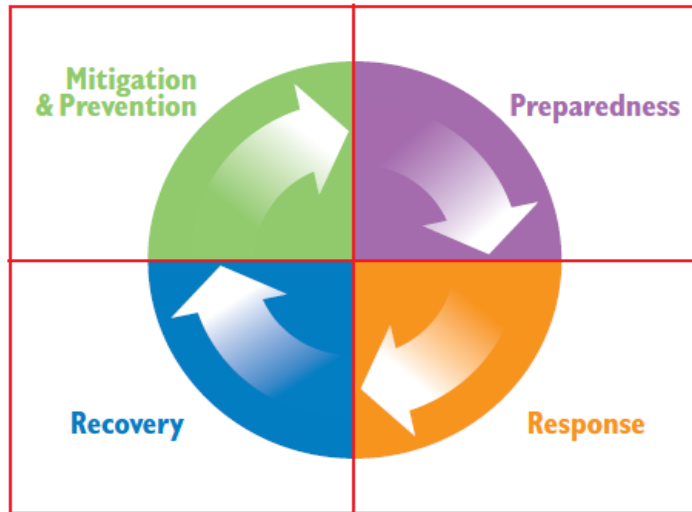


Figure 2.1. Four Phases of Crisis Management. This figure identifies the four phases of crisis management.
Source: USDE 2007, 1-7

Cox (2006, 11) explains, “The first stage of any emergency management program is mitigation.” In the Mitigation-Prevention phase, mitigation denotes the actions school officials can take to eliminate or reduce the adverse effect of events that cannot be prevented, whereas prevention refers to the proactive strategies school officials can take to decrease the likelihood that an adverse event or crisis will occur (KCSS 2008; Trump 2011; USDE 2007). The second phase, Preparedness, focuses on the process of planning for the worst-case scenario before the crisis actually occurs. Response, the third phase of crisis management, is the process of implementing appropriate actions during a crisis. According to Garcia (2012, 24), “The response phase of emergency management is a series of actions, directed by preparedness strategies identified in the second phase, that facilitate an adequate response to the public’s safety and welfare...” The final phase, Recovery, is the process of restoring the environment after the crisis and returning to normal operations as soon as possible (USDE 2007).

For the purpose of this study on response strategies, only the first three phases of crisis management are discussed. Due to the extensive amount of strategies existing for each phase, the development of the ideal model is limited to *response* strategies for active shooter incidents. However, strategies for prevention and preparedness must be explored first since they form the foundation for response strategies and have a direct impact on effectively responding to active shooter incidents.

Phase 1: Mitigation-Prevention

Mitigation-Prevention activities, by encouraging long-term reduction of hazard vulnerability, can help save lives (USDE 2007). Although administrators have no control over some of the hazards that may impact their schools and while very deliberate attacks or hazard events cannot be prevented, actions can be taken to minimize or mitigate the impact and potential effects of such incidents and to reduce the likelihood of occurrence (FEMA 2002; USDE 2007). Furthermore, mitigation can reduce exposure to liability (FEMA 2002). From a legal standpoint, if all necessary actions in good faith are not taken to create safe schools, the school or district or state could be vulnerable to a suit for negligence (KCSS 2008; Stephens 2011; USDE 2007). The catastrophes of Columbine and 9/11 “reshaped the litigation landscape for schools” and created an increased responsibility for schools and communities to raise their practices to a “new level of vigilance, competency and response” (Stephens 2011, 17). Courts tend to be more forgiving during school safety litigation when schools can “demonstrate reasonable intent and practices designed to keep their students and staff safe” (Stephens 2011, 17). Administrators should, therefore, be proactive and progressive in addressing school security (Trump 1998) and view security policies as a fundamental value in educational

policy making (DeMitchell and Cobb 2003). The Mitigation-Prevention phase includes the following categories of strategies: vulnerability assessments, communication protocols, application of Crime Prevention through Environmental Design (CPTED) principles to school grounds and structures, facility access control policies, and target hardening (IACP 2009; KCSS 2008; USDE 2007; USDE 2008).

Vulnerability Assessments

A valuable category of Mitigation-Prevention strategies is ongoing vulnerability assessments. In 2008, the USDE OSDFS created a companion piece to their “Practical Information on Crisis Planning” guide, titled “A Guide to School Vulnerability Assessments: Key Principles for Safe Schools.” This USDE (2008) guide explains that a vulnerability assessment focuses on susceptibility to certain threats or hazards, and although applicable to all four phases of crisis management, it is especially significant during the Mitigation-Prevention phase because it can help administrators “identify and prioritize what actions they should take to mitigate or prevent potential hazards that might impact the school” (USDE 2008, 7). As described by the USDE (2008), the term “vulnerability assessment” is comprehensive and includes needs assessments, hazards assessments, threat assessments, consequence assessments, and risk analysis. This study will use the generic term “vulnerability assessment” when discussing these assessment types and will focus on hazards and threats related to intruders and active shooters.

The goal of conducting a vulnerability assessment is not only to reduce the likelihood of incidents, but to also “assess and ensure that the school is adequately prepared in case a crisis arises” (Schwartz 2013, 38). Since “situations where there is a foreseeable danger can hold liability if the school does not make every reasonable effort

to intervene or remediate the situation,” a “careful assessment of the hazards faced by the school is critical” (USDE 2007, ‘3-11’). Schwartz (2013) cautions school officials not to be deceived by a false sense of security just because they have been fortunate enough to have had no significant incidents to date. It is important that vulnerability assessments are conducted on an ongoing basis (USDE 2007; USDE 2008).

A strong vulnerability assessment will: (a) utilize a team assessment approach to ensure a variety of perspectives; (b) identify a comprehensive assessment tool that includes rubrics for rating hazards; (c) consider existing resources and capabilities; (d) conduct a walk-through of all school grounds and facilities, utilizing the principles of CPTED to identify potential hazards; (e) include areas in which students travel to and from school; and (f) analyze the findings of the assessment to develop corrective actions and update the crisis management plan (USDE 2008). Schwartz (2013) recommends including a comprehensive assessment of the clarity of policies and procedures to determine whether the crisis management plan provides easy-to-follow instructions for how to respond to various types of crises.

Vulnerability assessments should include annual safety and security audits on all facilities and school grounds, including classrooms, portable or temporary classrooms, cafeterias, stadiums, playgrounds, parking lots, district offices, administrative buildings, storage facilities, and bus or transportation depots (Dorn et al. 2004; USDE 2008). “The audit should, [for example,] assess whether delivery persons are required to use designated entrances and whether they have unmonitored access to students” and whether there are “secluded areas on campus that may require additional lighting, access controls, or monitoring” (Schwartz 2013, 36-38). Additionally, an intruder assessment, with an

auditor posing as a stranger and entering the campus, should be administered to assess the effectiveness of the visitor procedures and to determine if any areas are easily accessible, how long it takes for an intruder to be identified as such, and how frequently the procedures are violated. The use of such an assessment tool may help identify weaknesses in security, thereby preventing future crises, which could make the difference between life and death (Schwartz 2013).

Key elements to consider during a vulnerability assessment include: (a) control of access and egress to buildings, including vehicular and pedestrian traffic patterns; (b) identification of all persons in the facilities, including contractors, food service workers, itinerant staff, and visitors; (c) interior and exterior facilities, including visibility and vulnerabilities to intruder access; (d) landscaping, noting areas in which intruders may hide or more easily access facilities or critical resources, such as phone or electric lines; (e) identification of evacuation routes and locations, including alternative locations and staging areas; (f) communication systems, including inter-school, intra-school, home-to-school emergency notification, first-responder interoperability, alarms, and surveillance equipment; (g) inventory of crisis kits and supplies; (h) staff and student knowledge of procedures, including training and practice drills; (i) supervision of students and grounds; (j) coordination and agreements with community agencies, including emergency first responders; (k) the crisis management plan; (l) identification of an established incident command system; and (m) the threat assessment team and process (Bennett-Johnson 2004; USDE 2007; USDE 2008).

Once hazards and vulnerabilities have been identified, written plans should be developed to outline the steps to be taken to address these hazards, including a timeline

and identification of persons responsible for completing the work (Schwartz 2013; USDE 2008). If an appropriate remedial action will require long-term capital planning to fully remove the hazard, immediate procedural modifications should be taken to reduce the impact of a potential crisis (USDE 2008). Schwartz (2013) recommends involving legal counsel in identifying and prioritizing the areas that pose the greatest legal risk and may need to be remedied first and also recommends involving legal counsel from the beginning of the process even if the school uses a security consultant to conduct the safety audit.

An important feature of a vulnerability assessment is to determine whether the school has adequate security personnel, whether they have appropriate training, and whether the addition of security personnel could improve safety if the school currently does not have security personnel (Schwartz 2013). Rocque (2012, 310) has found that school resource officers (SROs) have become a mainstay at many schools and, while the “effect of SROs on school rampage shootings is difficult to quantify given the small numbers, limited research has indicated that SROs do decrease school violence in general.” Wike and Fraser (2009, 168) concur: “Although there are no systematic evaluations of the effects of SROs, anecdotal evidence has suggested that ‘target hardening’ strategies such as altering ingress and egress, installing metal detectors, and increasing security ... produces a deterrent effect.” “In addition, the introduction of police in the role of school resource officers (SROs) into the school environment is a related effort to increase deterrence; to provide the capability of responding quickly to crises; and to afford a visible sense of security to students, teachers, staff, and parents. ... Most schools appear to regard SROs as contributing to security” (Wike and Fraser 2009, 166).

Clark (2011, 97) asserts that SROs can play a critical role in a school shooting since the “window of opportunity during which the potential shooter can be engaged and intercepted is brief, typically a matter of minutes. The presence of an armed and trained law enforcement officer who can respond instantly to the scene of the crime can be critical in saving lives.”

School officials should take advantage of community resources in conducting a vulnerability assessment rather than perform the assessments in isolation (Gerl 1991; USDE 2008). Although self-assessments can be conducted by school officials, the outcome will be limited (Trump 2011). Assessments should be performed by individuals who are trained, knowledgeable, and experienced with professional security standards as well as school environment dynamics (Trump 1998). Police, firefighters, facilities managers, public works staff, and public health agencies can be useful in the development of crisis management plans, in the identification of hazards and procedures that should be addressed in the preparedness process, and in the provision of training in emergency responses and medical triage (USDE 2007). On the other hand, while “community partners bring fresh eyes and different expertise to the process” (Stephens 2006, 24), Dorn et al. (2004, 28) advise that, “While experienced consultants can be a valuable asset to the site survey process, it is critical that school and emergency response officials participate in the actual site surveys,” because school personnel will be most familiar with unique aspects of the campus and hazards. Vulnerability assessment teams composed of district, school, and community members provides multiple perspectives based on a wide variety of experiences, which can lead to better identification of potential hazards and specific vulnerabilities (USDE 2008).

Communication Protocols

The second category of Mitigation-Prevention strategies involves communication protocols. Good communication during a crisis is crucial because “regardless of the amount of training staff members have received, there is going to be chaos and fear. Communication mitigates those reactions and helps regain a sense of calm and control” (USDE 2007, ‘6-12’). Persons who are managing students during the crisis must receive timely and accurate information in order to keep the students as safe as possible. Families need to be informed that a crisis has occurred, that all possible steps are being taken to protect the students, and when and where to be reunited with their children (USDE 2007). School officials should understand that emotions will be running high and parents will want immediate access to their children; therefore, families should receive timely updates on the situation, especially in the case of delayed reunification (USDE 2007).

Several important communication strategies exist. First, a clear, common, and consistent vocabulary for school personnel and emergency responders is critical (USDE 2007). Using plain language, such as “evacuate,” rather than a code, such as “code blue,” will ensure that everyone, including new staff, substitutes, and visitors, will understand the situation and will know what type of response or action is needed (IACP 2009; USDE 2007). Second, systems should be created by which students, teachers, and staff will be able to identify whether commands, such as “open the door,” are coming from responders or from the offender (IACP 2009). Third, communication gear should be available and accessible to appropriate personnel. For example, a backpack containing a cell phone and walkie-talkie may be utilized by a principal during a crisis (USDE 2007). Fourth, two-

way communication between the office and other school personnel, such as classroom personnel, cafeteria personnel, custodians, or bus drivers, should be available through the use of applicable technology devices, such as alarms, intercoms, cell phones, building paging, two-way radios, or monitoring systems on buses and campuses (IACP 2009; Gray 2012). Fifth, several modes of communication for internal and external exchanges should be available since intercoms, telephones, cell phones, computers, and hand-held radios may fail to work or may be dangerous to use during a crisis due to the potential of certain electronic devices to trigger bombs (Bennett-Johnson 2004; USDE 2007). In addition to the variety of modes of communication, the school should have a private, unlisted phone number for emergency communication (Gerl 1991). Sixth, in conjunction with the various modes of communication, the devices must be compatible with emergency responder devices and must not interfere with their equipment (USDE 2007). Seventh, protocols should include methods for communicating an emergency situation to “those who have language barriers or need other accommodations,” such as visual signals to advise individuals with hearing impairments (USDE 2013, 57). “School wide ‘reverse 911-style’ text messages sent to predetermined group distribution lists can be very helpful in this regard. Posting this protocol near locations where an all-school announcement can be broadcast (e.g., by the microphone used for the public announcement system) may save lives by preventing students and staff from stepping into harm’s way” (USDE 2013, 57). Finally, a calling tree should be established and posted in strategic locations, including offices of superintendents, principals and assistant principals, nurses, counselors, custodians, crisis team representatives, school departments, school districts, and local police and fire departments (Bennett-Johnson 2004; IACP 2009). The calling

tree is described by the Kentucky Center for School Safety (KCSS 2008) as a simple, widely used system for notifying school personnel of a crisis, with the first call going to the Principal or Incident Commander, then members of the crisis management team, and finally to other personnel groupings, such as teachers, support staff, etc. The first person on the list calls the next several people on the list, who in turn call others, etc., until everyone on the list has been notified.

The Kentucky Center for School Safety's "Emergency Management Resource Guide" (KCSS 2008) provides the following strategies and information for the most effective use of various communication tools: (a) telephones – use standard jacks and mark them clearly so emergency personnel can locate them; use automated phone systems for contacting 'sub-populations' within the school instantly; (b) intercom systems – provide teacher-initiated communications with the office as well as office-initiated communication; use a handset rather than a wall-mounted speaker; ensure instructions for how to use the system are readily accessible; (c) bullhorns and megaphones – battery-powered megaphones should be included in the school's crisis toolbox; (d) two-way radio – train all personnel to operate the two-way radio; provide the radios to appropriate personnel, including a representative for each grade level; establish a designated frequency and share with emergency responders; ensure each radio includes a visible warning that some electronic devices can trigger bombs; (e) computers – email can serve as a tool for informing and updating school personnel, other schools in the affected area, and applicable community resource agencies of the current situation and other pertinent information; (f) fax machines – may serve as a useful tool when lists of students, telephone numbers, medical information, release forms and authorizations need

to be quickly and accurately communicated; (g) panic buttons – may be connected directly to the police or other emergency services to solicit a response; (h) alarm systems – bells or buzzers could be sounded in different ways to signal different types of emergencies; and (i) cell phones – caution must be used because cell phone usage could inadvertently trigger bombs; however, although cell phones are often the first form of communication to fail in a large scale emergency due to overloaded networks, cell phones may be the only working communication tool available when electric service is out. The Sandy Hook Advisory Commission recommends that school facilities evaluate cell phone coverage throughout their facilities and grounds and make reasonable efforts to address deficiencies (SHAC 2013).

CPTED (Crime Prevention through Environmental Design)

The application of CPTED (Crime Prevention through Environmental Design) principles to school grounds and structures is the third category of Mitigation-Prevention strategies. CPTED is “based upon the concept that the proper design and effective use of the environment can reduce the incidence ...of crime” (Stephens 1995, 26). In accordance with CPTED principles, school facilities should be properly designed to enhance natural surveillance by utilizing building design, lighting, proper landscape maintenance and removal of architectural barriers to keep sight lines open (Stephens 1995). Safe landscaping eliminates areas, such as overgrown bushes or shrubs, in which intruders may hide or easily access critical resources, such as phone, gas, or electric lines (Dorn et al. 2004; USDE 2008). Another aspect of natural surveillance is the designation of formal gathering areas, thereby creating clear spatial definition that automatically subjects anyone observed in the informal and off-limit areas to scrutiny (Stephens 1995).

Additionally, areas of greater activity or higher risk should be located where natural surveillance and higher levels of adult supervision can take place (Dorn et al. 2004; Trump 2011). In conjunction with natural surveillance, formal surveillance should be administered through security equipment and technology and the use of personnel to supervise high-incident areas (Stephens 1995).

A third component of CPTED is access control, which involves: control of the campus perimeter by minimizing the number of entrances and exits; requiring that visitors and guests pass through a particular entrance for screening; limiting and controlling access to parking areas; and ensuring that visitor traffic, both pedestrian and vehicular, are easily supervised from the main office or by security personnel (Dorn et al. 2004; Stephens 1995). One example of implementing CPTED principles, described by Stephens (1995), is to eliminate multiple access points to the school parking area, thereby reducing the number of escape routes for potential offenders. Stephens (1995, 27) also suggests that “the use of barricades to close off unnecessary entrances during low-use times controls access and reinforces the perception that the parking area is private,” contributing to the perception that the space is defensible and possibly risky to a potential intruder. A fourth component of CPTED, target hardening, is a strategy designed to minimize criminal opportunities, make it more difficult for criminals to carry out their plan, slow their progress, and increase the chances of apprehension (Stephens 1995). Although access control and target hardening are elements of CPTED, this researcher is giving additional priority to these components by designating them as separate strategy categories for Mitigation-Prevention.

Facility Access Control Policies

Facility access control policies, therefore, comprise the fourth category of Mitigation-Prevention strategies. These policies and procedures are important because they may prevent dangerous intruders from entering school grounds (USDE 2007). Visitor IDs should be mandatory in all schools. Time-lapse visitor badges are available that change colors after a predetermined time for following exposure to outside light (Trump 2011). In addition to the minimum requirement that all visitors, including vendors and contractors, be required to sign in and out and to wear a visible visitor's pass, experts suggest: (a) using a buzzer system at the front entrance to prevent access until the identity of the visitor and purpose of the visit are ascertained; (b) training all staff members to question visitors observed in the building without a proper pass [while using caution in doing so], to report unidentified visitors and/or escort them to the office to be properly processed, and to discern behaviors that may be attributable to potential perpetrators; and (c) requiring students and staff to wear IDs in order to distinguish them from outsiders (Gerl 1991; Gray 2012; Hylton 1996; IACP 2009; KCSS 2008; Stephens 2002; USDE 2008). The Kentucky Center for School Safety (KCSS 2008) also suggests that building entrances and exits should be numbered, designating the visitors' entrance as number one. Additional strategies include maintaining a clear line of sight to the front office, installing a door bell or buzzer on the back door of the kitchen or warehouse to allow access only to vendors who are making deliveries, and numbering all emergency exits in a clockwise motion to aid responders when assisting in an emergency (USDE 2008).

According to Trump (2011), most schools have far too many access points and most of these doors are left unlocked and accessible from the outside.

This problem could be corrected rather easily by using panic bars that secure the door from the outside but will facilitate egress from inside the building in the event of such an emergency as a fire. ...The reality is that access control is more an issue of convenience than anything else. ...If school officials educate parents, staff, students, and visitors of the necessity for access control, resistance could eventually decrease. Some schools have secured all doors from the outside and established one designated entrance point. This designated entrance door is also secured from the outside and access is controlled by electronic buzzer, frequently integrated with video surveillance, speaker systems, or both. ...What [one] principal failed to consider was that more than half of the main entrance was made of glass, creating an easy target for those choosing to simply knock out the glass. ...Fortunately, a security assessment at that school resulted in a change in the type of door. Open windows accessible from ground level and unsecured roof hatches also present access control problems. ...Persistent individuals will likely gain access to the school if they really want to do so. Doors will be left partially open by legitimate users, and ...students will inevitably open doors for individuals coming in. Still, an aggressive effort to control access points should be maintained and signs should be posted on all doors directing visitors to the main office, along with signs posted throughout the building indicating the actual location of the main office. Regardless of the number of secured doors or signs, school staff must assertively challenge visitors and strangers observed in their building. Security assessments of various schools have found staff to be extremely friendly and blatantly indifferent to the presence of strangers in their school. Staff awareness programs must be implemented in concert with other access control measures. (76-78)

Although access control and sign-in procedures are fairly simple security strategies, Kimberling and May (n.d.) state that a large portion of schools tend to overlook or not enforce them. Therefore, Kimberling and May (n.d.) advocate for training students and staff of the importance of access control so they will not prop doors open, and/or allow visitors or strangers to freely enter the facility without signing in, thereby nullifying the positive effects of the access control strategy. No matter how effective and robust the visitor management technology or procedures, they can be defeated if the school employee who conducts or oversees the screening is not alert or does not follow procedures (M. Dorn 2012a). Brunner and Lewis (2009) declare that inconvenience to

staff or patrons is not a reason to ignore established access control procedures. “No one should be allowed to enter a school campus without first interacting with a staff member to ensure they are authorized to be there and are complying with specific school check-in regulations. No one, other than students and staff, should be inside the school, unescorted, without a valid visitor badge” (Murzycki 2012, under “All Persons Coming onto Campus”). “Although visitor check-in procedures and other routine security practices may not deter an active shooter who is intent on carrying out a violent attack, any measures that can impede and delay entrance can potentially limit the number of deaths or injuries” (Lewis 2013, presentation February 22).

Target Hardening

The fifth category of Mitigation-Prevention strategies involves target hardening, particularly the utilization of security hardware and technology. Although no amount of force or protection can prevent all violent incidents and tragedies from occurring, Gerl (1991, 75) points out that administrators must take steps to “make it as difficult as possible for outside elements to infiltrate the school.” Common applications of security hardware used for target hardening include: (a) lighting, (b) solid doors with locks, (c) improved locks, (d) minimal interior windows, (e) thick walls, (f) alarms, (g) closed-circuit television, (h) portable video cameras in buildings and buses, (i) access-control systems and identification badging programs, and (j) fences and other barriers (Gray 2012; Hylton 1996; USDE 2013).

Classrooms should have locks on the doors that can be *locked from the inside* during a crisis event that requires lockdown (Blair et al. 2013; IACP 2009; SHAC 2013; Watson et al. 1990). According to the International Association of Chiefs of Police

(IACP 2009, 20), “In an active shooting scenario, locked doors can save lives.” Doors and hardware should be institutional grade; doors should be constructed properly with pry-proof frames; door locks should not be able to be reached or manipulated by breaking out glass (Gray 2012; Hylton 1996; Stephens 1995). Since the body’s response to stress results in reduced efficiency of fine motor skills, Blair et al. (2013, 189) advise: “Locks that can be secured without the use of a key will be more useful in a crisis than locks that require one (putting a key into a lock is a fine motor activity that will likely be impaired in an active shooter attack).” The Sandy Hook Advisory Commission (SHAC), while recognizing that the expense of certain safe school design and construction features may be significant, offers the following recommendation concerning doors:

Notwithstanding the Commission’s endorsement of local process over required outcome, the Commission has highlighted a singular element in which it believes the potential benefit outweighs the cost in all K-12 facilities. As precious seconds matter in an episode like the tragedy at Sandy Hook Elementary School, the Commission believes that the State of Connecticut should carefully consider:

16. Requiring that all classrooms in K-12 schools be equipped with locking doors that can be locked from the inside by the classroom teacher or substitute. These doors should be compliant with building code, fire safety code, and other regulations as required.

17. Requiring that all exterior doors in K-12 schools be equipped with hardware capable of implementing a full perimeter lockdown. (SHAC 2013, 10)

Windows should be properly secured yet allow for emergency exit, and be wide enough to permit exit by students and adults with disabilities (Hylton 1996; Watson et al. 1990). “Enhanced WiFi ...and the usage of IP-enabled cameras (to support response capacity) ... [with] special attention ...given to perimeter security and areas of assembly” should be deployed in schools (SHAC 2013, 12-13). An important feature of target hardening is a well-regulated key control and issuance program (Haynes and Henderson 2001) to ensure keys are not lost, stolen, or duplicated and made accessible to

unauthorized persons (Trump 1998). Heavy-duty padlocks on gates should have common keys that permit emergency responders to enter with minimal delay (Stephens 1990). However, Sutsos (2009) cautions that master key systems have limitations because they are often not shared with the law enforcement community, do not allow for mutual aid operations with responders from adjacent cities or boundaries, and only provide access via gates, without access to buildings.

While sophisticated door and access control systems may assist in keeping unwanted individuals out, they create a challenge for first responders. In order to save lives and minimize harm, first responders need to be able to quickly and safely access gates and buildings (Gray 2012; Sutsos 2009). Sutsos (2009) recommends a universal overlay emergency access control system with features that: (a) allow responders and school officials equal access to barriers, (b) allow any emergency responder access control, (c) facilitate a fast response time, (d) support officer safety functionality and stealth operation by not requiring siren activation, (e) provide for control of electromagnetic systems for both gate and door access control, and (f) can be easily carried and used.

In the last two decades, many schools have modified their security strategies through proactive techniques, such as the "...the installation of video cameras, the utilization of weapon-detection systems, [and] the restriction of access to school facilities through entry-control devices..." (Maskaly et al. 2011, 161). However, school officials are cautioned that security "equipment should be a supplement to, not a substitute for, professional security personnel, policies, procedures, and programs. Any security

equipment is only as strong as the weakest human link behind it. ...The first and best line of defense is a well-trained, highly alert staff and student body” (Trump 2011, 89-90).

Phase 2: Preparedness

The second phase of crisis management is Preparedness. “Despite everyone’s best efforts at crisis prevention, it is a certainty that crises will occur in schools” (USDE 2007, ‘3-1’). Even as early as 1927, as illustrated by the Bath Consolidated School tragedy, where a suicidal board member killed thirty-eight students, the superintendent, and five other adults by a bomb attack, schools have faced security risks as public institutional targets (CNN Library 2013; Lindle 2008). Security risks based on public access to schools continue to this day and necessitate the implementation of preparedness strategies. Ronald Stephens, Executive Director of the National School Safety Center, describes the importance of preparation:

Now, more than ever, Americans are aware of the real threat posed by both terrorism and disaster. ... [W]e have witnessed bombings, sniper slayings, campus massacres ...in our own communities, close to home. We are now acutely aware of the devastation and destruction that can befall us any time and any place. Recognizing our vulnerability forces us to accept a new kind of ‘normal.’ Americans must now think about keeping their communities safe and the homeland secure. The new normal requires vigilance and responsibility. ...Communities and schools alike must consider the compelling question, ‘what if?’ What if we experience:

- a catastrophic terrorism incident?
- a violent attack at school? ...
- a sniper attack? ...

Every weekday in America, nearly 25 percent of our total citizenry attends school. ...Recent catastrophes have taught us several important lessons about school emergency preparedness:

- The likelihood of violent attacks is incalculable. ...
- We have not yet begun to comprehend the forms that future terrorist acts or school violence may take.
- In some situations, even the best crisis response plan may be tested beyond its scope.

- Actions taken during the first few minutes will determine the course of events to follow. ...

School communities and their law enforcement partners cannot predict if, when, where or how schools will become targets of terrorism or when an act of school violence may strike again. ...What they can do is to anticipate and prepare. (Stephens 2006, 11)

Good (2006, 22-23) points out, “The central and crucial element of preparedness is that of planning. The process of bringing together representatives responsible for responding to emergencies for the planning activity initiates the cooperation and coordination required for a successful broad based coalition.” Categories of Preparedness strategies include the development of a crisis management plan; establishment of an Incident Command System (ICS); procedures to account for students, school personnel, and visitors during a crisis, including those with special needs; implementation of training and drills; creation of crisis kits; and coordination with community partners, including access to maps, floor plans, and location of utility shutoffs (IACP 2009; USDE 2007; USDE 2008).

Crisis Management Plan

The first category of Preparedness strategies involves the development of a crisis management plan. “Responses for different types of crises should be planned in advance and reviewed, updated, and practiced periodically. The chaos and panic created by these situations cannot be effectively handled without a plan of action” (IACP 2009, 20).

Although it is imperative that a crisis management plan be comprehensive and utilize an all-hazards approach (Dorn et al. 2004), this study is limited to those aspects of the plan that are applicable to facilities access control and response to active shooter incidents.

Each school’s crisis management plan should include certain commonalities applicable to all crisis management plans but should also be tailored to the unique

characteristics of the specific school or district (USDE 2007). The plan should describe how the school will operate during a crisis by defining what should happen, when, and at whose direction. The plan should also create an organizational system that defines the roles and responsibilities of the school commander, liaison to emergency responders, student caregivers, security officers, medical staff, and spokesperson, and designate the individuals and backups assigned to these roles (USDE 2007). Effective crisis planning should be proactive and developed in collaboration with stakeholders, including community partners and school personnel; the plan should be reviewed, tested, and practiced regularly to ensure that all affected persons are aware of their role in a crisis and understand the actions that should be taken (Bennett-Johnson 2004; KCSS 2008). “Many young and innocent lives are at risk in such a concentrated space. This is why it is critical that schools work with first responders, emergency management staff, and all community partners to identify, prepare, prevent, and effectively respond to an active shooter situation in a coordinated fashion” (USDE 2013, 55-56).

An important element in a crisis management plan is to develop a mechanism for notifying staff, students, and emergency responders that an incident is occurring and what to do, taking into account the limitations of certain communication devices, including the potential of wireless electronic devices, such as cell phones and radios, to trigger bombs (USDE 2007). In the event of a crisis, parents are likely to descend upon the school in search of their child or to frantically call the school seeking information. Therefore, an important part of pre-planning is to establish a system for responding quickly to parents’ needs for information about the situation and the status of their children (KCSS 2008). Another critical element of the plan is that schools and emergency responders use the

same definitions for the same terms and use plain language rather than code words (USDE 2007). The plan should also be designed to address the unique needs and challenges of students and staff with disabilities or limited English proficiency (USDE 2007).

Ideally, the crisis management plan should be designed as a series of documents targeted to various audiences, such as a detailed response guide for planners and administrators, a flipchart for teachers that allows for quick responses and is specific to the differences between elementary and secondary students, and wallet cards containing evacuation routes for bus drivers (USDE 2007). According to Dorn et al. (2004, 21), “Experience has shown that combining other plans with the emergency operation and response plans can make them extremely difficult for staff to use under stress. A principal faced with a raging fire in his/her building does not have time to wade through pages of information on how to prevent a fire – they need step-by-step instructions on how to handle the crisis at hand.” Therefore, each of the four phases of the crisis management plan “should be a separate document that when combined form the complete ...plan” (Dorn et al. 2004, 21). Crisis management plans should also take into account the importance of ensuring that substitutes, transient staff, and volunteers are not overlooked and are provided training and access to information on procedures to be followed during a crisis (USDE 2008).

The planning and assessment team should consider limitations to resources, such as the possibility that communication mechanisms could become inoperable due to cellular service network overload or electrical outages. Another limitation to be considered is the availability and response times of local first responders, noting potential

factors that could prevent or delay their response and the amount of time a school might need to be prepared to independently manage a crisis while waiting for assistance (USDE 2008). Of particular importance in crisis planning is to be aware that most incidents of school shootings are quick and of short duration (Kimberling and May, n.d.) and that “despite prompt law enforcement responses, most attacks are stopped by means other than law enforcement intervention” (Vossekuil et al. 2002, 37). The USDE (2013, 57) warns, “Active shooter situations are unpredictable and evolve quickly. Because of this, individuals must be prepared to deal with an active shooter situation before law enforcement officers arrive on the scene.”

Dorn et al. (2004) suggest that during the development of a crisis management plan, it is useful to ask questions that fall into the six categories of who, what, when, where, why, and how for each type of potential hazard or vulnerability to ensure a thorough assessment process and response procedures. “For example, a response plan for an incident involving an armed intruder should address ...questions [such as]: ...WHO will notify authorities ... [and] the district office ... [and] advise the staff? ...WHAT form of alert will be used to notify and implement lockdown? ...WHEN is the alarm activated for lockdown? ...WHERE are exits located in relation to classrooms? ...WHY would an armed intruder enter the building? ...HOW would an intruder gain access to the building ... [and] HOW will restrooms and other areas be checked to ensure that students are in a secure area?” (Dorn et al. 2004, 53-56).

ICS (Incident Command System)

An Incident Command System (ICS) is another category for Preparedness strategies and provides a “comprehensive organizational structure, role assignment, and

decision-making process to prepare for and respond to all types of crises” (IACP 2009, 20). The ICS is a nationally recognized standard of managing incidents by delegating responsibilities among school officials and all emergency responders during a crisis since such incidents require a clear chain of command and control between all responders (IACP 2009; KCSS 2008; USDE 2007). “An effective Incident Command System is vital to safe and successful emergency scene management” (O’Neill 2008, 8).

The International Association of Chiefs of Police (IACP 2009) recommends that all faculty, staff, and emergency responders be assigned to clearly defined roles and that critical assignments be staffed with two iterations of back-up to ensure coverage at all times. The chain of command should be clearly established and publicized, so the next designated crisis management team member will know to take charge if the appointed member is unavailable (IACP 2009). Personnel who will have master keys, codes, and access to secured areas at the site should also be identified (IACP 2009). *Figure 2.2 Incident Command System* illustrates the functional divisions of an ICS.

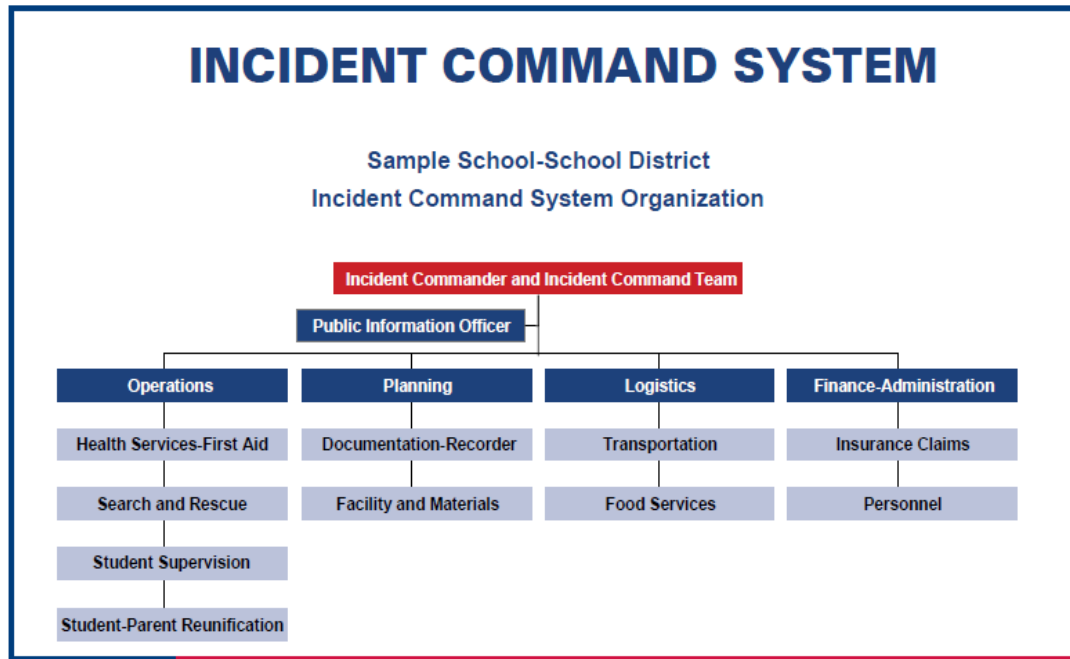


Figure 2.2. Incident Command System. This figure illustrates the functional divisions of an Incident Command System relative to schools. Source: USDE ERCM 2006, 4

The critical functions and responsibilities of the ICS are: (a) Incident Commander who manages the entire incident and answers: ‘What are we going to do?’; (b) Public Information Officer, who releases information to families, community members, and the media; (c) Operations Officer, who manages student and staff care, including physical, medical, and mental needs, and student release, and answers: ‘How will we do it?’; (d) Planning and Intelligence Officer, who documents the event, analyzes what is transpiring, and plans for possible further action, and answers: ‘What do we need to know?’; (e) Logistics Officer, who manages the supply and staffing needs of the situation, acquires supplies needed to assist the emergency responders, and locates and assigns staff to fill various tasks, and answers: ‘What will it take?’; and (f) Finance and Administration Officer, who tracks incident costs for reimbursement and reporting purposes, and answers: ‘What will it cost?’. Two additional functional roles include the Safety Officer,

often an emergency responder, who is responsible for the safety of the scene and the individuals at the scene, and the Liaison Officer, who coordinates with all the agencies that have responded to the crisis (Dorn et al. 2004; KCSS 2008; Stephens 2006; USDE 2007).

When multiple agencies are on the scene, there must be one incident commander who will take charge of coordinating the responses. Since the urgency of most emergencies creates confusion and chaos, the ICS addresses the problem by establishing a single incident commander (O'Neill 2008). Dorn et al. (2004) explain that the type of crisis determines who fulfills the role of incident commander.

For example, the police will assume incident command if there is a crime and the fire department will do so if there is a fire. ...The incident commander (IC) for a school [typically the school principal or district superintendent or designee] will have direct authority over response areas that are school-specific in the event of an emergency. Any areas that tend to fall outside of a school's traditional purview and into areas that are normally handled by police, fire, emergency medical personnel and others will, in all likelihood, remain under their control. Therefore, it is important to have all incident commanders in continuous communication so that incident response may be coordinated in a timely and effective manner. (Dorn et al. 2004, 120)

One of the concepts of ICS is Span of Control that dictates that no one person should be in charge of more than seven other people, unless a large number of people are performing the same function, such as one person being in charge of ten teachers who are all caring for students (KCSS 2008). An important feature of ICS is common terminology since responders and school personnel will communicate and function more effectively if using similar words and common definitions (KCSS 2008). O'Neill (2008, 26) explains: "A uniform and controlled communications system is essential to an effective Incident Command System. The adoption of standard terminology is a key aspect of effective communications. ...Coded terminology leaves room for misinterpretation and error."

Procedures to Account for Students, School Personnel, and Visitors

The third category of Preparedness strategies comprises the development of procedures to account for the well-being of students, school personnel, and visitors during a crisis, including those with special needs. When a crisis occurs, decisions need to be made quickly to determine which type of response will be needed, such as evacuation, reverse evacuation, shelter-in-place, or lockdown. The Preparedness phase develops action steps for each of these scenarios in preparation for an immediate response (USDE 2007) and should include procedures for how to evacuate or lockdown individuals who are not with staff or in a classroom when the crisis occurs, such as those in the hallway, restroom, or break room (USDE 2013). Evacuation is used when students and school personnel must leave the building, whereas reverse evacuation calls for persons who are outside to be returned to the building quickly. “Shelter-in-place is used when there is no time to evacuate or when it may be harmful to leave the building,” (USDE 2007, ‘3-10’), as in the case of hazardous material spills (KCSS 2008). Lockdown is used when students and school personnel are locked in their rooms because evacuation would be dangerous or the crisis is inside and movement within the school would put students and school personnel in jeopardy, as in the case of an active shooter incident (KCSS 2008; USDE 2007).

Although most schools have procedures already in place for lockdown, many have not developed procedures for what to do when a lockdown fails or is insufficient or unrealistic as a response to a specific violent intruder situation (Kozlowski 2009; Lupkin 2012). Former SWAT officer Greg Crane cautions that locked doors during lockdown have been defeated before (Lupkin 2012); therefore, potential victims should be taught

“other choices to aid their survival in the event of a violent intruder situation” (Kozlowski 2009, 58). Consequently, school administrators should collaborate with law enforcement to develop response alternatives for when prevention to access fails, in order to maximize the chances of surviving an active shooter incident (Kozlowski 2009). Administrators should also keep in mind that most incidents of active shooter situations evolve quickly, are brief in duration, and the majority of attacks often end either through actions by school personnel or students or by the attacker stopping on his/her own or committing suicide, rather than by law enforcement intervention (Kimberling and May, n.d.; USDE 2013; Vossekuil et al. 2002). This information should be taken into consideration when developing response procedures.

Specific locations of safe havens for students should be determined in advance and publicized so students, school personnel, parents, crisis team members, and emergency response personnel will know where to go during different types of emergencies, keeping in mind that some aspects of response plans should be restricted to select personnel for security reasons (Bennett-Johnson 2004; IACP 2009). Multiple evacuation routes and rallying points should be predetermined in case primary routes are blocked or sites are unavailable at the time of the crisis (Dorn et al. 2004; Trump 2011). Response procedures should include measures to account for all students, school personnel, and visitors to determine if anyone is missing, since emergency responders will need to adapt their responses accordingly (USDE 2007). The International Association of Chiefs of Police (IACP 2009, 21) suggests “using digital technology and computer databases to store photographs and demographic information that would enable

easy and accurate identification of students, teachers, and staff.” Hard copy versions should also be available in the event computers are inaccessible (IACP 2009).

In developing response procedures, special consideration must be given to the unique needs of school personnel and students with disabilities, addressing the mental, physical, motor, developmental, and sensory limitations that need to be taken into account during a crisis (IACP 2009; USDE 2007; USDE 2008). The following considerations should be addressed in the procedures: (a) how to evacuate individuals with limited mobility, including the identification of “alternative, accessible, safe shelter locations” that are communicated to emergency responders; (b) how to communicate emergency signals to individuals with hearing disabilities; (c) how “visual impairments might impede reading signs or traversing unfamiliar or altered terrain”; (d) how debris might obstruct the evacuation of individuals, especially those with mobility impairments; (e) how staff should be “trained to assist students with developmental disabilities” who could “become upset if routine patterns of activity are disrupted”, and (f) how to provide “medicines, power supplies, or medical devices” necessary for those with special medical needs (USDE 2007, ‘6-30’-‘6-31’).

To assist in accounting for students during the crisis and for student release after the crisis, procedures should be developed in advance that ensure student rosters are kept updated, possibly on a weekly basis, and distributed to classrooms, the principal and other stakeholders, and placed in the crisis response box (USDE 2007). Student release procedures should incorporate methods that allow for: (a) communication with families, community members, and the media so families will know how and where to collect their children; (b) transferring student emergency cards and student release forms to the

student release areas; (c) ensuring students are released only to the authorized individuals listed on the student emergency cards and that proof of identity must be shown; and (d) tracking released students (USDE 2007). Student emergency cards should include contact information for several other adults in addition to parents/guardians who can be contacted and are authorized to pick up the child in case the parent/guardian is unavailable during a crisis (Dorn et al. 2004; USDE 2007). Trump (2011) offers the following recommendations and considerations concerning parent-student reunification procedures:

Parent-student reunification plans are one of the most undeveloped or underdeveloped aspects of school emergency planning. School officials often grossly underestimate the overwhelming aspect of parents flocking to the school and the overwhelming impact of releasing students to parents in an efficient, effective, and safe manner. A host of issues must be built into such planning including having remote access to student emergency contact and release authorization information, sign-out procedures for students, and the ability to trace back specific information on who students were released to. School officials should include mechanisms in their crisis communications plans for directing parents to reunification sites at the first appropriate opportunity rather than delaying notifications and having parents reporting to the incident site. Emergency guidelines should include steps for sending crisis team members to the reunification sites, along with student emergency information data, student release cards, communications equipment, and other necessary items. ...Parents should be encouraged during the crisis to avoid visiting the regular school site and to avoid calling the regular school or using cell phones so that they do not tie up lines or overload communications systems. ...Because a presumably large number of individuals will be relocating from the crisis scene to this center, it will, in essence, operate much like the command site where the actual crisis is taking place. It is therefore important to have advance arrangements for use of this site and a thorough knowledge of communications capabilities (e.g., phone, fax, and e-mail) and other logistical needs. (221-222)

Training and Drills

Training and practice drills comprise the fourth category of Preparedness strategies. While most states require and are adept at fire drills and severe weather drills, they should also require drills to rehearse responses to other types of emergencies, such as intruders and active shooters (KCSS 2008; USDE 2007). Kozlowski (2009) states, in

addition to lockdown training, intruder response training is becoming a regular practice for many schools and law enforcement agencies. Training on alternative responses to an active shooter situation is also necessary and can aid survival in the event that lockdown fails. In some instances, lockdown is not an option because the victims may be trapped by the active shooter or lockable doors are not available (Dorn and Satterly 2012). “Because we’ve never trained beyond the level of a lockdown, we didn’t know what to do when the prevention of access [lockdown] failed. ... While the lockdown remains an important option in the response to an active shooter or violent intruder, [we must realize] that there are other options available ... and the choice must depend on the situation” (Kozlowski 2009, 58-59). Training should include how to lock and barricade doors, how to get away from the intruder or neutralize the intruder, how to use the victims’ environment to their advantage, and how to recognize the sound of gunshots (Blair et al. 2013; FEMA 2012; Kozlowski 2009). “No single response fits all active shooter situations; however, making sure each individual knows his or her options for response and can react decisively will save valuable time. ... There is no single answer for what to do, but a survival mindset can increase the odds of surviving” (USDE 2013, 63).

Dorn and Satterly (2012) found that training and drills should not be too narrowly focused or overemphasize one type of threat, but should instead provide a broad base of knowledge for various types of crises to better prepare students and school personnel to respond to a variety of crisis situations. The USDE (2013, 63) states, “Depicting scenarios and considering response options in advance will assist individuals and groups in quickly selecting their best course of action.” Trump (2011) explains that diversifying drills to reflect different types of scenarios, and requiring different responses, is more

effective than doing the same thing over and over because crises don't follow a script. "To be truly prepared, we have to practice for reality, not for convenience. One of the best ways to practice for reality is to diversify drills. ... The goal is to teach people, especially the adults responsible for managing the crisis, to be flexible and to think on their feet" (Trump 2011, 218).

During a crisis, most people experience panic and anxiety and do not have time to think about what to do next, but rather tend to go on autopilot (USDE 2007). By providing training and practice drills in advance, the chances of responding appropriately during a crisis are increased because the school personnel and students have practiced the basic steps that need to be taken and should know immediately how to respond (Bennett-Johnson 2004; USDE 2007). "Training provides the means to regain your composure, recall at least some of what you have learned, and commit to action" (USDE 2013, 63). Since the first reaction of many individuals confronted with a threat is to deny the possible danger rather than recognize the threat and respond, school personnel should be trained to overcome denial, shift their emotion, take immediate action, and forcefully communicate the danger to those in their charge (Blair et al. 2013). Training should simulate the situations that are most likely to be encountered. The more realistic the training, the greater the reduction in the overall stress reaction experienced during an actual crisis event in real life (Blair et al. 2013). Repetition in training and preparedness shortens the time it takes to orient, observe, and act (USDE 2013). Schools should ensure that training and practice are performed regularly with faculty, staff, students, volunteers, interns, substitute teachers, emergency responders and law enforcement (IACP 2009; USDE 2007). Trump (2011) asserts that school support staff, such as custodians and food

service workers, must be an integral part of emergency preparedness training but are often overlooked. New substitutes should be provided with written summaries of crises instructions when given their specific classroom materials (IACP 2009).

School officials should consider the legal implications related to the provision of training: “One of the first areas attorneys will look at in their lawsuits against school employees for negligent security claims is the amount, type, and quality of training provided to administrators, teachers, and support staff related to school safety and emergency preparedness” (Trump 2011, 99-100). School officials should also determine an appropriate balance between performing drills often enough to ensure that responses will be based on rehearsed constructive skills and behaviors rather than on impulsive actions, but not so often that it causes undue fear (IACP 2009). Although arguments have been made that crisis drills can increase children’s levels of anxiety and fear, Zhe and Nickerson (2007) found that research in this area has remained largely unexplored. The preliminary evidence of their study using an intruder drill found that the treatment and control groups did not differ in their state of anxiety or perceptions of safety. Therefore, Zhe and Nickerson (2007, 506) argue that “such training fosters a sense of preparedness for a quick response during a real-life crisis situation.” Furthermore, drills and training could potentially help counteract optimistic bias, where a student may perceive that ‘bad things happen to other people, but not to me’ (Chapin and Coleman 2006) and increase overall awareness of campus security issues and the importance of learning self-protective measures.

Training can include a variety of methods, such as in-service events, tabletop and functional scenario-based exercises, drills, and written materials (USDE 2007). Training

should include techniques for how to manage students during a crisis, especially those experiencing panic reactions or those with special needs (USDE 2007). When practicing drills, the medical condition of a student with a disability should be taken into account and, if necessary, a mannequin should be used during the practice (Brunner and Lewis 2009). School personnel and students should also be trained on personal survival strategies for different scenarios and the types of physical and physiological reactions that may be experienced during a traumatic situation (IACP 2009). Understanding these physical limitations in advance can be beneficial toward preparing individuals for what to expect during their response to a crisis. The USDE (2013) recommends that students and school personnel should also be trained how to cooperate and not interfere with first responders, such as the need to display empty hands with open palms when law enforcement arrives in response to an active shooter situation.

Tabletop exercises, or group brainstorming activities, in which school personnel and emergency responders sit around a table and discuss steps they would take to respond to a crisis by mentally simulating various scenarios, have proven very useful in practicing and testing the procedures specified in their crisis plans (USDE 2007). Functional exercises are similar to tabletop exercises, with the difference that tabletop exercises occur in an informal, stress-free environment, while functional exercises are interactive and time-pressured with interjections of a constant stream of new information and developments that add a high degree of realism and stress (Dorn et al. 2004; USDE ERCM 2006). Since actual events that require a lockdown response often take place in parts of the school away from the main office, training and drills should include staff-initiated decision-making activities to prepare individual school personnel on how to

make lockdown or evacuation decisions without consulting anyone else (C. Dorn 2013). In addition to providing practice, drills are beneficial because they allow an evaluation of what works and what needs to be improved before an actual crisis occurs (USDE 2007). School officials should ensure that in addition to the implementation of training and drills, time should be allotted to analyze the results of the practice and to review, evaluate, and revise the crisis plan and response procedures as needed (Dorn et al. 2004; USDE 2007).

Crisis Kits

The fifth category of Preparedness strategies involves crisis kits and supplies. Crisis response kits should be prepared, kept updated regularly, and available for immediate use by administrators, office staff, nurses, teachers, bus drivers, custodians, and other applicable personnel (Dorn et al. 2004; USDE 2007). The crisis kits should be placed in strategic locations inside and outside schools (IACP 2009). Kits should include items such as first aid supplies, flashlight and batteries, blankets, activities for students, paper and pens, clipboard, emergency medicines, food and water, communication devices, crisis management reference guide, up-to-date student/class rosters, and contact information of crisis responders and families (USDE 2007).

Crisis boxes or kits for school administrators “become the portable command post for the lead school administrator during the first critical minutes of a crisis, which may include the evacuation of a facility. ...The kit will allow the administrator to integrate quickly into the incident command system and provide the critical information needed by responding agencies. ...Kits must also be taken during drills for consistency with response protocols” (Dorn et al. 2004, 60). The administrator’s crisis kit should include:

(a) ICS key responders' contact information and list of cell phone numbers of school personnel; (b) easily readable copy of the crisis plan; (c) up-to-date student rosters, schedules of students and school personnel, list of students and school personnel with special needs, staff roster, and bus rosters and routes; (d) student disposition forms and emergency data forms; (e) keys; (f) aerial photos of the campus; (g) maps of the surrounding neighborhood, campus layout, evacuation sites, designated command post and staging areas, gas and utility lines layout, and utility shutoff valves; (h) fire alarm and sprinkler systems turn-off procedures; (i) communication devices, including megaphones and handheld radios; and (j) first aid supplies, blankets, tools, flashlight and batteries, notebooks, and pens and markers (IACP 2009; USDE 2007). A digital photo database or hard copy photos should be included to assist with student and school personnel identification (IACP 2009).

Master keys, floor plans, and facilities information should be readily available for emergency responders (USDE 2007). The International Association of Chiefs of Police (IACP 2009) recommends creating a system of lock boxes outside school buildings to provide staff and emergency response personnel with access to master keys, thereby facilitating entry into locked buildings or rooms during a crisis. All faculty, office staff, cafeteria workers, custodians, bus drivers, and other appropriate personnel should have abbreviated guides that can be quickly referenced and followed during an incident (USDE 2007). The pages of the guides should be water resistant and organized according to type of incident so personnel can quickly flip to the procedures relevant to the current situation (USDE 2007). Dorn et al. (2004) found that small crisis cards that can be kept in

a wallet or worn with an identification badge have proven successful for some schools in providing short, concise action steps for lockdowns or evacuations.

Coordination with Community Partners

The final category of strategies for the Preparedness phase of crisis management is coordination with community partners. It is vital to include the media during community collaboration because they can be a valuable asset during a crisis by being a conduit of information to the community and families (USDE 2007). School administrators should designate in advance a representative to deal with the media and a predetermined staging site for the media that is away from students and staff (KCSS 2008; USDE 2007). School personnel should be trained to direct media people to the media area and the designated spokesperson rather than give live interviews themselves (KCSS 2008; USDE 2007). School officials should work with state and local emergency management agencies to have the Federal Aviation Administration restrict air space over the campus site because the noise factor makes it difficult for those on the ground to hear and media helicopters can be frightening to children (USDE 2007; Williams, n.d.).

Relationships with community partners should be developed in advance and well established so emergency responders are familiar with the school, its floor plans, and the procedures that will be followed during a crisis (Gray 2012; USDE 2007). Ideally, the crisis management plan is developed in partnership with community groups, including law enforcement, fire safety officials, and emergency medical service providers in order to benefit from their unique perspectives and expertise, since emergency responders have substantial training in this area (Bennett-Johnson 2004; Gerl 1991; USDE 2007). It is crucial that school administrators understand the roles community partners will play

during different types of crises, including their response and communication responsibilities (USDE 2007). Emergency responders and law enforcement should be included in tabletop and functional training exercises and practice drills throughout the school year (Gray 2012; IACP 2009).

As part of the coordination strategy, maps and facilities information should be created and shared in advance so emergency responders are enabled to respond expeditiously and efficiently (Gray 2012; USDE 2007). During a crisis, responders immediately need a great amount of information about the school campus and especially the location of everything in a school. The International Association of Chiefs of Police (IACP 2009, 21) recommends “color coding interiors of buildings and numbering doors to assist responders.” Site maps should include information about classrooms, offices, stairwells, hallways, the location of utility shut-offs, potential emergency responders staging sites, medical treatment areas, student reunification areas, and media staging areas, which should be as far away from the student reunification site as possible (USDE 2007). The Sandy Hook Advisory Commission (SHAC) recommends the implementation of “a program which requires that each school provide local police, fire, and emergency response personnel with up-to-date copies of building floor plans, blueprints, schematics of school interiors, grounds, road maps of the surrounding area, evacuation routes, alternative evacuation routes, shelter sites, procedures for addressing medical needs, transportation, and emergency notification to parents. Efforts should be made to digitize plans and schematics to assist in disseminations in case of emergency” (SHAC 2013, 12).

Some cities and states have implemented a secure website accessible only to appropriate persons and entities, enabling school administrators to upload their maps and

facilities information and enabling emergency responders to access the information from laptops at the scene (USDE 2007). For example, the Maryland Virtual Emergency Response System (MVERS) was created to provide emergency responders with an electronic floor plan of a campus, thereby allowing responders to understand the building layout prior to entering and to have information on locations of potential hazards, instructions on how to disconnect utilities, and how to gain access to a certain area (USDE 2007). A similar program was developed by the Charlotte-Mecklenburg, North Carolina Police Department to allow “emergency responders to move around the school building from the safety of a laptop as they prepare to respond to the crisis...[while identifying] potential hazards such as closets, windows in unusual places, and crawl spaces” (USDE 2007, ‘6-29’).

In addition to sharing building schematics, photos, etc., with law enforcement agencies on secure websites, the USDE (2013, 58) recommends: “Technology and tools with the same information (e.g., a portable USB drive that is compatible with computers used by first responders) should be maintained at the front of the school, in a lock box, or other secured location from which school officials can immediately provide it to responding officials or first responders can directly access it. The location of these materials at the school should be known by and accessible to a number of individuals to ensure ready access in an emergency. Every building should have more than one individual charged with meeting first responders to provide them with the school site assessment, the school EOP [emergency operating plan] and any other details about school safety and the facility.”

Phase 3: Response

The third phase of crisis management is Response. This is the implementation phase of the strategies and appropriate actions identified during the Mitigation-Prevention and Preparedness phases. School officials should be aware that no matter how much planning and preparedness activities have occurred, “there will always be an element of surprise and accompanying confusion when a school is confronted with a crisis” (USDE 2007, ‘4-2’). An assessment of the situation and decisions regarding the appropriate action must be made very quickly as most responses are needed within seconds (USDE 2007). If staff and students have engaged in regular training and practice drills, the chances of quick and appropriate responses will be enhanced (USDE 2007). As described by the USDE (2007, ‘4-2’), “An immediate, appropriate response depends on a plan with clearly articulated roles and responsibilities, as well as training and practice.”

Initial Response Decisions and Actions

The first thirty seconds of an active shooter incident are critical. FBI Special Agent Katherine Schweit indicates that most active shooter incidents are of short duration: “Thirty-seven percent last less than 5 minutes. ... Forty-three percent of the time, the crime is over before police arrive” (Schweit 2013, under “Active-Shooter Statistics”). During the Sandy Hook Elementary School massacre on December 14, 2012, twenty-six innocent people were killed within six minutes or less (Clines 2013). The ten to twelve minute attack on Norris Hall at Virginia Tech, April 16, 2007, resulted in the deaths of thirty persons (VA Tech Review Panel 2007). On March 24, 1998, two shooters killed five people in just fifteen seconds at Westside Middle School in Jonesboro, Arkansas (Kifner 1998). The U.S. Department of Homeland Security states, “Because

active shooter situations are often over within 10 to 15 minutes, before law enforcement arrives on the scene, individuals must be prepared both mentally and physically to deal with an active shooter situation” (DHS 2008, 2). School personnel should realize that from the initial onslaught, between the first contact with the armed intruder and the arrival of help, school personnel will essentially be on their own (Blair et al. 2013; Williams, n.d.) and should, therefore, consider the police as second responders rather than first responders (Buerger and Buerger 2010). According to Buerger and Buerger (2010, paragraph 3), “Unless a situation begins with the shooter confronting a school resource officer, the first reaction will come from individuals whose professional orientation is far removed from armed conflict.”

During the first critical moments, the school personnel confronted with the active shooter situation must quickly determine the most reasonable way to protect their lives and those under their care (DHS 2008). “Primary and secondary schools have an inherent in loco parentis responsibility for their minor charges” (Buerger and Buerger 2010, under “Information Transmission”). “Responding personnel will have to use individual judgment as to what they can and should do first, keeping in mind that their primary role is taking care of children at risk” (IACP 2009, 24). During life-threatening situations in which the first thirty seconds are most critical, teachers and other school personnel “should not rely on top administrators for directions on how to respond” (Gray 2013, under “Assume the Worst, Hope for the Best”). Buerger and Buerger (2010, under “Information Transmission”) explain, “Response plans cannot be strict chain-of-command protocols that gridlock in the absence of key hierarchical personnel. Authority and responsibility must be fluid and flexible.” In addition to the possibility that principals

may be out of the office at the time the active shooter event occurs, the possibility of incapacitation of key administrative personnel is another reason for allowing any school personnel confronted with the situation to determine an immediate response:

Most school entrances have open space nearby, populated offices with transparent glass windows, and corridors. It is entirely possible that an invader's first victims will be the administrators and staff charged with initiating the emergency procedures. In that case, the first notification that an emergency is underway may be the sound of gunshots and screams.

If administrative personnel are killed or driven to take cover, no one may be able to initiate a formal alert, thereby forcing teachers and other staff to make autonomous decisions for the protection of their charges. School policy and related police response protocols must be adaptable. Specific parameters when teachers have the freedom to initiate a lockdown of a classroom, even in the absence of formal notification from the office (i.e., when shots or shouts are heard), and under what conditions lockdown should be abandoned and evacuation initiated should be developed at the local or district level.

Faced with a school-invasion situation, school staff will have to make a quick assessment of the threat and take multiple steps in response. They must disseminate appropriate information to the school and to outside authorities and initiate available defensive mechanisms. (Buerger and Buerger, 2010, under "Situational Considerations")

Michael Dorn posits that school personnel must act immediately at the first indication of a crisis with the first solution that provides the greatest chance of survival (satisficing), rather than waste valuable time trying to determine the perfect solution (optimizing) (Gray and Dorn 2013). For example, "Information in the first few minutes may be scant, fragmentary, and sometimes ambiguous. If lockdown is ordered swiftly and clearly ..., the associated protective factors take effect almost immediately. If such action is not an automatic response because of uncertainty, the intruder gains an advantage that expands risk to the school population" (Buerger and Buerger 2010, under "Information Transmission"). Therefore, it is wise to assume the worst and respond accordingly (Gray 2013). It is better to overreact and call for a level of response that is

not necessary and then scale it back rather than underestimate the situation and under-react with caution (Gray 2013). A common mistake is to believe the situation can be handled in-house and therefore, create a delay in contacting emergency responders when in reality it is always better to have emergency responders on the scene as soon as possible to help prevent potential loss of life or serious property damage (USDE 2007).

Blair et al. (2013, 175) describe the findings of Amanda Ripley on “the common response patterns of people in disaster situations.” It is common for people to deny that a disaster is happening due to normalcy bias where the tendency of our brains is to “underestimate both the likelihood of a disaster and the possible effects of the disaster. It takes time for the brain to process the novel information and recognize that the disaster is a threatening situation” (Blair et al. 2013, 175-176). Quickly overcoming denial and making a deliberate decision to act “can have a dramatic impact on how many people are injured or killed in an active shooter event” (Blair et al. 2013, 186).

The number one sign of an active shooter event is gunfire. This may sound obvious, but remember that your brain will try to describe unusual events as normal first (i.e., the normalcy bias). Most of us do not hear gunfire on a regular basis. Because of this, our brains will usually try to describe the gunfire as some more usual occurrence, like fireworks. This has happened in numerous active shooter events. People hear gunfire, but report that they thought it was firecrackers. Because firecrackers are not life threatening, the people at the scene delay taking action. ... [T]his delay can cost lives. ... [D]oes it not make sense to treat any sound that could be gunfire as gunfire and take immediate action? You might be embarrassed somewhat if it turns out that it was just firecrackers, but if the sound is actually gunfire, you may save your life and the lives of others. (Blair et al. 2013, 187)

It is also important for persons to understand the human body’s response to sudden and severe stress. The body will release a massive amount of hormones, including adrenaline, to prepare the body for fight or flight (Lewis 2013; Stephens 2006). The body’s reaction to stress and the ‘adrenaline rush’ can have the following side effects:

(a) visual acuity is reduced and tunnel vision may occur, where the field of focus is narrowed to a line of vision straight out in front without peripheral vision; (b) audio acuity is reduced and the person may even stop hearing what is happening; (c) the ability to think clearly and rationally is impaired; (d) a person's sense of time is distorted and things may seem to move in slow motion, in addition to the possibility of an out-of-body experience where it seems as if the person is out of his or her body and watching the event happen; (e) efficiency of fine motor skills is reduced, even to the extent that a simple activity such as putting a key into a lock can be impaired; and (f) loss of bladder and bowel control may occur (Blair et al. 2013; Lewis 2013; Stephens 2006).

It is therefore important that “responders are aware of the potential impact these bodily changes have on their ability to effectively respond during a crisis” and to use “special tactics to counter the effects of the adrenaline rush and improve the quality of their response” (Stephens 2006, 35). The following stress management techniques performed during the crisis event can counter the effects of the adrenaline rush: (a) breathe deeply; (b) relax tight muscles by taking a moment to stretch; (c) shift the emotion; when experiencing feelings of panic and fear, shift the fear response to anger against the offender; and (d) perform any type of action because taking action enables a person's brain to focus on something other than its alarm signals (Stephens 2006; Blair et al. 2013). It is also important to project a calm, confident, and serious attitude to assure others of the seriousness of the situation and the wisdom of the directions being given (USDE 2007).

Michael Dorn, Executive Director of Safe Havens International, in an interview with Robin Gray of Campus Safety Magazine on March 13, 2013 (Gray and Dorn 2013)

recommends the ‘Window of Life’ protocol of responsibilities during the first critical seconds of an active shooter incident. The protocol is described as follows by Gray (2013, under “Window of Life”) and Dorn (Gray and Dorn 2013): (1) Protect yourself first in order to protect others. A person’s first responsibility is for one’s own safety because the individual is an important asset in a crisis. If incapacitated, the loss will be felt in successive areas; (2) Protect those in the immediate vicinity who are in immediate danger. The individual must recognize his or her importance in the situation and help others, especially those who are within line-of-sight or ear shot; (3) Protect the building or broader campus, alerting those who may be affected by the crisis but may have more time to react; and (4) Call 911.

If possible, the public address system or other communication system should be used to alert others of the danger and necessary action (USDE 2013). Persons sounding the alert should not use code words that may not be known or understood by all persons involved in the crisis, especially visitors and substitutes; instead, simple, clear language should be used (KCSS 2008). If available, personnel should use a mobile panic alarm button to immediately and inconspicuously call for security assistance and to inform school officials of the situation (Tracey, n.d.). The following information should be provided to the 911 operator, if possible: location of the shooter(s), number of shooter(s), description of the shooter(s), number and type of weapons in the possession of the shooter(s), and the number of potential victims at the location of the active shooter event (DHS 2008; FEMA 2012). Michael Dorn (Gray and Dorn 2013) suggests repeating the information twice to ensure the information is given and understood accurately, thereby reducing a delayed response due to unclear communication.

Determination of Response Action

One of the first and most critical Response actions during a crisis is to immediately discern the type of crisis and appropriate response, such as whether to initiate an evacuation or lockdown (USDE 2007). School personnel confronted with an active shooter event must make autonomous decisions immediately to determine whether evacuation or lockdown will give the children under their charge the greatest chance of surviving the incident (Buerger and Buerger 2010). Campus law enforcement and security professionals, however, disagree on the correct approach for civilian response to active shooters on campus (Gray 2013). “Some believe evacuation should be the first option for campuses, while others give it a lower priority, preferring to lockdown (which includes barricading doors, turning off the lights, closing the blinds and hiding) so a gunman can’t access or find his or her targets” (Gray 2013, paragraph 2). Some campus officials prefer evacuation when faced with an active shooter situation because evacuation removes the targets, which should result in lower body counts (Gray 2013). Others believe lockdown to be the best option in most cases, especially on elementary campuses where it could be difficult to manage young children during a chaotic evacuation (Gray 2013). However, lockdown may not be effective in a situation where the shooting occurs during non-classroom times, such as lunch time, or during transition periods with hallways full of students changing classrooms (Buerger and Buerger 2010). Evacuation, on the other hand, can prove problematic if the shooter is waiting outside to shoot at victims as they flee the building or the gunman booby has trapped or blocked the exits in order to increase the number of targets and impede law enforcement’s response (Buerger and Buerger 2010; Williams, n.d.). While some contend that lockdown is a

failed concept, Michael Dorn suggests that alleged lockdown failures are usually due to application failure rather than concept failure: the cause for failure can be linked to doors left unlocked during the attack, rooms with no locks on the door, or lack of lockdown drills or protocols (M. Dorn 2013a). According to Blair et al. (2013, 189), “In the attacks that have occurred in the United States, no shooter, to our knowledge, has breached a locked door.”

Most important in deciding the correct response is understanding that one response cannot fit all situations. Various types of crisis events require certain actions to be taken to respond appropriately to the specific situation (KCSS 2008). While universal emergency response procedures that could be implemented across a number of situations can be advantageous by providing simple, specific directions that can be easily learned and remembered (KCSS 2008), Chris Dorn (2013) cautions that schools that only have one protocol for a particular crisis event could have a greater degree of failure because situations vary. Buerger and Buerger (2010, paragraph 3) assert that “enough contingencies have occurred to justify developing flexible response plans that can account for and adjust to several broad categories of incidents. While even a limited plan is better than no plan at all, neither schools nor police should confine themselves to a ‘one size fits all’ planning protocol.”

Lewis (2013) provides the following suggestions for different scenarios involving an active shooter incident:

If the active shooter is inside the building, personnel and students who are inside the building should be evacuated, if safe to do so, or engage in lockdown. Persons outside the building when the active shooter is inside the building should immediately flee the area to the closest area providing cover (ballistic-stopping capability) and concealment (hiding) and maintain custody of students to the degree possible. If the active shooter is outside, all interior and exterior doors should be

secured and persons inside the building should follow lockdown procedures. Persons outside the building when the active shooter is also outside, should enter the closest available building, ensure the exterior door is secure, and move to an interior room, if available. Once inside, engage in lockdown. If it is not safe or possible to enter a building to seek shelter, then move in the opposite direction from where the threat is located. Continue to look for anything that will provide cover and concealment while moving away from the threat.

If taking cover in a classroom and it appears the active shooter is attempting entry or is in the process of trying to enter the classroom, barricade the doorway(s) using any available objects, such as desks and file cabinets. A proactive strategy is to arrange classrooms ahead of time with file cabinets located close to the door to make it easier to barricade the door during a crisis. Even if the door swings open into the hallway rather than into the classroom, pile as much furniture as possible at the door to impede and delay entrance by the perpetrator. If it appears the active shooter may gain access to the classroom, use any available alternative means of safe egress, if possible, such as exterior windows. If the active shooter gains entrance to the classroom and loss of life appears imminent, take whatever action is believed necessary to neutralize the assailant and protect life. (Presentation February 22, 2013)

Although the strategies suggested by Lewis provide a variety of response options based on the location of the assailant and the potential victims, Michael Dorn (2012b) and Chris Dorn (2013) caution that basing lockdown protocols on inside versus outside threats may not be a reliable approach and could be dangerous. Based on analysis of crisis simulations performed over the past few years, school employees were found to “have an extremely difficult time fitting the appropriate response to situations where they have been taught to do so based on the location of the incident rather than by the nature of the threat. For example, when posed with scenarios depicting violators with different types of weapons in various locations in and outside of schools, staff are usually unable to determine the need for a lockdown in the first thirty seconds even though the scenario clearly calls for one” (M. Dorn 2012b, paragraph 4).

The USDE (2013) describes three basic options for responding to an active shooter situation: run (evacuate to get away from the shooter), hide (lockdown to seek a

secure place to hide and deny access to the shooter), or fight (incapacitate the shooter to survive and protect others from harm). The fight aspect of the Run, Hide, Fight program is controversial, however, especially when applied to the K-12 setting (Gray 2013).

Although the fight component is taught as a last resort when all other options have been exhausted, Michael Dorn cautions that, since the Sandy Hook incident, there has been a tendency for people to misapply the Run, Hide, Fight options and choose the Fight component first instead of last when placed in decision-making training scenarios (Gray 2013). One of the greatest challenges is knowing when to apply the Fight option, which takes a significant amount of training to develop the critical decision-making ability (Gray 2013).

In some cases, students and school personnel will need to use more than one option as the situation develops and changes. According to Blair et al. (2013), the hide (lockdown) option should be regarded as an initial strategy of providing immediate safety, especially if hiding in a room without locks on the doors. Once initially secured, personnel should begin looking for alternative ways to avoid the shooter, such as evacuating through a window or preparing for active resistance if the shooter gains access to the room. During the Columbine tragedy in 1999, people in the library sat there for five minutes before the shooters entered the room and shot eighteen (Lupkin 2012). In contrast, during the Virginia Tech massacre of 2007, an Israeli lecturer, Librescu, sacrificed himself to save the lives of several students in his classroom by blocking the doorway to allow time for the students to escape out the windows (Blair et al. 2013; Haaretz 2007).

Whether inside or outside, persons should seek cover, if possible, behind items with ballistic-stopping capabilities, such as heavy furniture, bulletproof whiteboards, brick walls, large trees, or parked vehicles (DHS 2008; FEMA 2012; Perin 2013; UCPD, n.d.). If cover is not available, concealment is an alternative option; although concealment cannot stop a bullet, it can hide a person from the shooter's view to possibly enhance survival (DHS 2008; FEMA 2012; Williams, n.d.). Regardless of the response option used, school personnel should shield students from disturbing scenes as much as possible (IACP 2009).

Run (Evacuate)

Evacuation is an option when conditions outside are safer than inside (KCSS 2008) and an accessible escape path is available (DHS 2008; FEMA 2012). If it is safe to do so, running out of the building should be the first course of action according to the USDE (2013). Students and school personnel should leave their personal belongings behind but take the crisis kit and roll book or student roster with them, if doing so will not impede a quick evacuation (DHS 2008; FEMA 2012; KCSS 2008; USDE 2007; USDE 2013). Persons evacuating should assist those needing special assistance and help others escape, but not stay behind if others will not go (DHS 2008; FEMA 2012; KCSS 2008; USDE 2013). Blair et al. (2013) advise that it is important to move far enough away from the location of the active shooter situation to be safe. "In an active shooter event, more distance (often a few blocks) is usually required to ensure that the shooter cannot shoot at you from inside the building and to ensure that if the shooter moves from his or her current location, you do not end up in the line of fire again" (Blair et al. 2013, 188).

The closest and safest way out should be taken, using secondary routes if the primary route is blocked or hazardous (KCSS 2008). Windows and uncommon doors, such as loading dock doors, should be considered during evacuation, especially if common exits are unavailable or blocked (Williams, n.d.). Escalators and elevators should be avoided (USDE 2013). During the evacuation, all persons should keep their hands visible to assist law enforcement in distinguishing victims from assailants (DHS 2008; FEMA 2012). Evacuators should prevent others from entering the area where the active shooter may be and should not attempt to move seriously wounded people (DHS 2008; FEMA 2012). Once assembled at the designated safe area, students and personnel should be checked for injuries; attendance should be taken and results reported according to the school's student accounting and release procedures (KCSS 2008; USDE 2007).

Hide (Lockdown)

Lockdown should be implemented to protect building occupants from potential dangers in the building and to deny the shooter access to the occupants (Blair et al. 2013; KCSS 2008). Students and school personnel already in a room should stay in the room and secure it (UCPD, n.d.). Hallways should be cleared immediately and all persons should seek shelter in a room that can be secured (KCSS 2008; Trump 2011). The University of California Police Department (UCPD) caution that people should not hide in restrooms. Also, unless very close to an exit, persons should not run through a long hall to get to an exit because they may encounter the gunman (UCPD, n.d.).

All windows and doors should be closed and locked, including doors interconnecting to adjacent rooms (Blair et al. 2013; DHS 2008; FEMA 2012; IACP 2009; KCSS 2008; Lewis 2013; USDE 2013). According to Blair et al. (2013, 188-189),

“The simplest action – the one that has been extremely effective in the active shooter events that we have studied – is to lock the door to the room. ...Locks that can be secured without the use of a key will be more useful in a crisis than locks that require one (putting a key into a lock is a fine motor activity that will likely be impaired in an active shooter attack).” Doors should be equipped to allow locking from the inside to prevent school personnel from coming into contact with the shooter in the hallway (Lewis 2013; SHAC 2013). If the door has no lock and opens inward, doorstops or other items, even folded magazines or newspapers, can be wedged between the door and floor or frame in an attempt to keep the door from opening (Blair et al. 2013; UCPD, n.d.; Williams, n.d.).

After securing the door, the doorway should be barricaded using available objects, such as desks, heavy furniture, and file cabinets (Blair et al. 2013; DHS 2008; FEMA 2012; Lewis 2013; UCPD, n.d.; USDE 2013; Williams, n.d.). The file cabinets or desks should be filled with books or other materials to increase the ballistic-stopping capability of the barricade and to make the blockade heavier and more difficult for the perpetrator to move out of the way (Williams, n.d.). Blair et al. (2013) caution that piling items on the classroom side of the door when the door swings outward into the hallway will have little effect in denying the assailant access to the room. However, Lewis (2013) recommends the barricade because it can at least impede and delay entrance into the room by the perpetrator since every second of delay can make a difference in limiting the number of casualties while waiting for police to arrive. Another strategy is to use a rope or belt in an attempt to tie the door handle to something else, although this action may be difficult to perform under stress (Blair et al. 2013). For rooms with no locks, it might be more feasible to focus on finding a means of escape. During lockdown, school personnel

should be mindful that the assailant may be able to gain access, especially if there are no locks on the door; therefore, alternative methods of escape should be considered (Blair et al. 2013; UCPD, n.d.).

In an effort to restrict viewing of the room and inhabitants by the shooter, all windows, including door windows, should be covered and the lights turned off (DHS 2008; FEMA 2012; KCSS 2008; Lewis 2013; Trump 2011; UCPD, n.d.; USDE 2013). However, school officials should discuss the window covering strategy with local law enforcement in advance because some law enforcement officers prefer that windows remain uncovered to allow police tactical response officers to see what is occurring inside the room (KCSS 2008; Trump 2011). The USDE (2013, 65) recommends using “strategies to silently communicate with first responders if possible, for example, in rooms with exterior windows make signs to silently signal law enforcement officers and emergency responders to indicate the status of the room’s occupants.” Williams (n.d.) suggests using color coded cards or posters in the windows to alert those on the outside of the status of the individuals inside, such as whether there are life-threatening injuries, injuries that are not life-threatening, or no injuries. However, Trump (2011) recommends discussing this strategy in advance with local law enforcement because it may not be as effective as anticipated. The use of status cards could have the unintentional consequence of alerting the shooter to locations of potential victims, in addition to adding an extra step in securing the classroom. With both the window covering and the status cards decisions, the time spent performing those activities might be better spent performing other survival tasks since time is critical (Nichols 2013, personal communication).

The room should be kept as quiet as possible by keeping students quiet and turning off all sources of noise, such as radios, television, and electronic devices, including the ringer and vibration mode of cell phones (Blair et al. 2013; DHS 2008; FEMA 2012; KCSS 2008; Trump 2011; USDE 2013). Students should be moved to a location in the room where they will be least likely observed through a window or by reflection, if the windows are left uncovered (DHS 2008; FEMA 2012; Lewis 2013). Students should stay low to the ground and be moved to interior walls and kept away from all doors and windows (KCSS 2008; Trump 2011; USDE 2013). The inhabitants of the room should not be positioned “directly in front of the door in case the shooter decides to fire through the door as he or she is trying to enter” (Blair et al. 2013, 190). If possible, items in the environment should be used as cover (ballistic-stopping capability) to provide as much of a barrier as possible to slow down or impede bullets in case shots are fired through the doors, windows, or walls, or the intruder gains access to the room (DHS 2008; FEMA 2012; Williams, n.d.). The individuals in the room should “hide along the wall closest to the exit but out of the view from the hallway (allowing for an ambush of the shooter and for possible escape if the shooter enters the room)” (Blair et al. 2013; USDE 2013, 65).

The door should not be opened to anyone other than emergency responders or administration (KCSS 2008; Trump 2011). If someone knocks on the door demanding entry, the person knocking could be the person who poses the danger (Trump 2011). School personnel should keep vigilant during lockdown, being aware that if the assailant encounters a locked door, he or she could be moments away from appearing at the window to attempt to gain access or may shoot into rooms from the inside or outside

(Buerger and Buerger 2010). “Denial [lockdown] is... a temporary phase because a determined attacker will eventually be able to gain access to your location. After you have provided yourself some immediate safety by securing your location, you should either begin looking for ways to avoid the shooter (such as going out a window) or prepare to defend yourself if the shooter gets into the room” (Blair et al. 2013, 189-190).

Fight (Active Resistance)

If evacuation or lockdown are not possible or have failed and the active shooter gains entrance to the room or location, the inhabitants must make a decision to either stay still, run, or fight (UCPD, n.d.). If it appears the gunman is not shooting and the decision is made to stay still, the individuals should do what the assailant says, not provoke the assailant, and not make any sudden moves (UCPD, n.d.). In making the decision as to whether to freeze or run, inhabitants should be cognizant that a moving target is more difficult to hit than a stationary one (UCPD, n.d.). Huddling should be avoided because “huddling makes you a bigger target and the shooter won’t have to move the gun muzzle very far to target his next victim” (Williams, n.d., 10). Williams (n.d.) cautions that freezing is not a realistic option because the individuals become easy targets for the assailant. Blair et al. (2013, 187-188) report, “In case after case, people who either froze in place when the shooting started or attempted to play dead (another form of freezing) were attacked by the shooter anyway. The case study of Virginia Tech...make[s] this clear.” During the Virginia Tech incident, the shooter entered Room 206 three times and Room 211 twice, moving up and down aisles shooting people who were either dead or pretending to be dead:

In room 206 where the potential victims took no defensive actions other than freezing, 92% of the people were shot and more than three-quarters of them died.

In room 211 ...everyone was shot and about two-thirds were killed. In room 207, no initial defensive action was taken, but the potential victims successfully barricaded the door to prevent the shooter from reentering. Here, 85% of the people were shot and 38% died. Room 204 performed a denial [lockdown] and then attempted to avoid the shooter [evacuate]. While the denial was ultimately unsuccessful, it provided most of the students with time to escape. In this room, 36% of the occupants were shot and 14% were killed. Room 205 successfully denied the shooter access to the room. ...The data show a clear pattern that those who took some form of defensive action at Virginia Tech fared much better than those who did not. Freezing or playing dead were not good options. (Blair et al. 2013, 196-197)

If the assailant begins shooting, the other two options are to flee or fight (UCPD, n.d.). The inhabitants should use any available alternative means of safe egress, such as windows (Lewis 2013). When running for an exit, individuals should run in a leap frog or zigzag manner, using cover [ballistic-stopping capability] along the way (UCPD, n.d.; Williams, n.d.). If there are no other alternatives and loss of life appears imminent, or there are already victims, individuals should take whatever action is believed necessary to neutralize and/or incapacitate the assailant and protect life (Blair et al. 2013; DHS 2008; FEMA 2012; IACP 2009; Lewis 2013; USDE 2013). The last thing an intruder will expect is to be attacked by unarmed persons (UCPD, n.d.).

Individuals should be mindful that they are in a deadly force situation and must attack aggressively with the purpose of causing severe injury or death to the assailant (Williams, n.d.). When the assailant breaches the door, there will only be seconds to launch a counterattack (Williams, n.d.). Since the intruder typically looks straight ahead when first entering the room, the inhabitants should be positioned on the same wall as the location of the door, preferably on the hinged side of the door, to enable an ambush while hiding the inhabitants from the view of the intruder as he or she enters the room (Blair et al. 2013; Williams, n.d.). The inhabitants should act aggressively by yelling, punching,

kicking, pulling hair, biting, gouging, throwing items such as chairs or fire extinguishers, improvising weapons, and should try to attack the perpetrator's vitals (eyes, nose, throat, head, groin), if at all possible (Blair et al. 2013; DHS 2008; FEMA 2012; Lewis 2013; USDE 2013; Williams, n.d.). Blair et al. (2013) provide the following advice:

The point of defending yourself is not for it to be a fair fight. The purpose is to survive so that you get to go home. The shooter has superior firepower. You will probably have superior numbers. Use them. You want to plan with your group to swarm the shooter with as many people as possible when the shooter enters the room. You want to place yourself and others near, but not directly in front of, the door. ... You want to be close enough so that you can quickly attempt to get hold of the gun when the shooter enters. Generally, a few feet away is enough to keep you out of the line of fire, but close enough to get the shooter quickly. You also want to be in a position that requires the shooter to enter the room before you are seen. This positioning will usually be on the same wall on which the door is located. ... The task of the person nearest the door should be to get his or her hands on the shooter's gun as soon as possible. Once his or her hands are on the gun, the person should attempt to get it pointed in a safe direction. ... The job of the rest of the group is to swarm the attacker and stop him or her. This is a deadly force situation. ... This is not a fair fight. You want to stop the attacker as soon as possible... [and] do anything... necessary to stop the attacker. This will be an extremely violent encounter. The gun may go off. ... You may be shot. Unlike what happens on TV and the movies, being shot does not mean that you are dead. The fact that you are still conscious and aware after being shot means that there is a good chance you will survive. Keep fighting until the shooter is stopped no matter how injured you are. (190-191)

Dorn and Satterly (2012) and Trump (2011) advocate that the fight option should not be taught or expected of students in K-12, especially special needs students or students in elementary school. "Responsibility for taking the lead with these judgment calls should be the primary responsibility of well-trained adult professionals, not emotional, frightened children" (Trump 2011, 217). While the fight option should only be considered as a last resort during life-threatening situations, the decision to directly confront a shooter should always be the decision of the school personnel themselves (USDE 2013). "While talking to staff about confronting a shooter may be daunting and

upsetting for some, they should know that they may be able to successfully take action to save lives. To be clear, confronting an active shooter should never be a requirement in any school employee's job description; how each staff member chooses to respond if directly confronted by an active shooter is up to him or her" (USDE 2013, 66). It is important for adults, when making the decision on whether to fight, to be aware that "there have been instances where direct confrontation of armed aggressors has resulted in clearly preventable death [of the targeted victims]" (Dorn and Satterly 2012, under "Reasons Some are Concerned"). However, it is also important to understand that research by Blair et al. (2013) suggests it is possible for unarmed persons to successfully defend themselves, subdue the attacker, and save their own lives in an active shooter event:

About half of all active shooter events between 2000 and 2010 ended before the police arrived. In 39% of the attacks that were stopped before the police arrived, the victims took action to stop the shooter themselves either by physically subduing the attacker (81%) or by shooting him with their own personal weapons (19%). ...In the other 61% of ASEs [active shooter events] that stopped before the police arrived, the shooter either left the scene (16%) or killed himself or herself (84%). While we cannot know for certain why the shooter chose suicide or to leave before the police arrived, it seems, in many cases, that the shooter killed himself or herself or left when there were no more easily accessible victims to attack. In other words, it appears that the potential victims in many of these cases successfully avoided or denied the shooter access to their locations and the shooter then either killed himself or herself or left. (197)

Dorn and Satterly (2012, under "Successful Interventions have Occurred") state, "There are times when an active shooter can and should be immobilized through direct action by staff and students who feel capable and comfortable in doing so. We agree with the assertion by those who advocate a physical response as one option to an active shooter who has trapped victims, that victims should generally not stay passive in these

situations.” Former SWAT officer Greg Crane points out, “We’ve taught a generation of Americans to be passive and static and wait for police. ...[P]eople shot and killed in the Columbine library sat there for five minutes before the shooters entered and shot 18 of them” (Lupkin 2012, lines 24, 28). When Crane teaches a school safety program called ALICE, which stands for alert, lock down, inform, counter, evacuate, “teachers often tell him standard lockdown drills involve turning out the lights and sitting quietly for 20 minutes, which doesn’t make them feel safe” (Lupkin 2012, lines 13, 29).

Response to Law Enforcement

Once law enforcement arrives on the scene, it is important for students and school personnel to respond in an appropriate manner to maximize effective intervention by the police. Law enforcement’s immediate purpose and primary responsibility upon arrival is to stop the active shooter and eliminate the threat (Blair et al. 2013; DHS 2008; FEMA 2012; USDE 2013; Williams, n.d.). Therefore, responders will not be able to stop and help injured persons or escort people from the building until the scene has been secured (Blair et al. 2013; DHS 2008; FEMA 2012; Williams, n.d.). When law enforcement arrives, victims should refrain from pointing, screaming, or yelling or trying to hold on to officers for safety and should not ask law enforcement officers for help or directions (DHS 2008; FEMA 2012).

Victims should be cognizant that they may fit the profile of the shooter and must not act in a way that could cause the responders to mistake them for the attacker; victims should expect to be treated like a suspect until officers can thoroughly assess the situation (Blair et al. 2013; Williams, n.d.). Students and school personnel must: slowly put down any items in their hands; immediately raise their hands and spread their fingers or place

their hands on their heads; keep hands visible at all times; and avoid making quick movements toward officers (Blair et al. 2013; DHS 2008; FEMA 2012; USDE 2013). If a person was successful in subduing and disarming the assailant, he or she must not hold the firearm in a way that the officers might mistake the survivor for the shooter (Williams, n.d.). Blair et al. (2013) describe the following ways to assist the officers and make their jobs easier while they respond to the active shooter event:

Show the palms of your open hands. Do not move. If you have to move, move slowly. Comply immediately with any commands you are given. You may be handcuffed while the situation is sorted out. Do not argue with the officers. The time for complaints and arguments is after the situation has been resolved. (193-194)

Conceptual Framework

The literature involving crisis management for schools is broad and covers a wide range of measures for providing a safe learning environment for children. The review of scholarly literature identified numerous processes and strategies for the four key phases of crisis management: Mitigation-Prevention, Preparedness, Response, and Recovery. Due to the extensive amount of strategies existing for each phase, the development of the ideal model is limited to *response* strategies for active shooter incidents. However, the Mitigation-Prevention and Preparedness phases are discussed in the literature review because they form the foundation for the Response phase and must be understood and implemented in order to develop effective response strategies.

The general, overall strategies relevant to active shooter incidents found in the first three phases of crisis management are categorized in a practical ideal type conceptual framework. Shields explains the *practical ideal type* conceptual framework:

From a PA [public administration] perspective, ideals are useful because they provide a point of departure for policy recommendations. To sanctify the ideal, and to disparage the actual because it never copies the ideal, misses the point. ...Practical ideal types can be viewed as standards or points of reference. It should be noted that this conceptual framework is generally organized by category. And, the elements of the ideal type are not rigidly fixed. There is more than one useful way to envision the “ideal.” ...Practical ideal types provide benchmarks with which to understand (and improve) reality. (Shields 1998, 215)

Shields and Tajalli (2006, 325) explain that a “search for best practices is akin to the search for a practical ideal type; the best practice is what should be in place.” The practical ideal type addresses ‘what should’ questions, comprises the best components found after engaging in a careful review of literature, and provides “benchmarks and/or best practices that enable the manager/researcher to understand and improve reality” (Shields and Tajalli 2006, 325). *Table 2.1: Conceptual Framework Linked to Literature* links the best practice general strategy categories from the Mitigation-Prevention, Preparedness, and Response phases with the literature.

Table 2.1: Conceptual Framework Linked to Literature. This table links the general strategy categories of the first three phases of crisis management to literature.

Conceptual Framework Linked to Literature	
Category	Source
1. Mitigation-Prevention Strategy General Categories:	
<p>I. Conduct Vulnerability Assessments on an ongoing basis to identify potential hazards and assess actions or plans needed to mitigate or prevent the hazards.</p> <p>II. Establish Communication Protocols prior to a crisis to ensure timely and accurate information is disseminated during the crisis.</p> <p>III. Apply CPTED (Crime Prevention through Environmental Design) principles to school grounds and structures to reduce the incidence of crime.</p> <p>IV. Establish Facility Access Control Policies to prevent intruders from entering school grounds.</p> <p>V. Implement Target Hardening strategies to deter infiltration of school facilities.</p>	<p>Bennett-Johnson (2004), Blair et al. (2013), Brunner & Lewis (2009), Clark (2011), M. Dorn (2012a), Dorn et al. (2004), Gerl (1991), Gray (2012), Haynes & Henderson (2001), Hylton (1996), IACP (2009), KCSS (2008), Kimberling & May (n.d.), Lewis (2013), Maskaly et al. (2011), Murzycki (2012), Rocque (2012), Schwartz (2013), SHAC (2013) Stephens (1990; 1995; 2002; 2006), Sutsos (2009), Trump (1998; 2011), USDE (2007; 2008; 2013), Watson et al. (1990), Wike & Fraser (2009)</p>
2. Preparedness Strategy General Categories:	
<p>I. Develop a Crisis Management Plan in advance and update it periodically to describe how the school will operate during a crisis.</p> <p>II. Develop an Incident Command System (ICS) in advance to establish a clear chain of command for response during a crisis.</p> <p>III. Establish in advance procedures to Account for the Well-Being of Students, Personnel, and Visitors during a crisis.</p> <p>IV. Conduct Training and Drills regularly to ensure responses during a crisis will be based on rehearsed constructive skills and behaviors.</p> <p>IV. Prepare Crisis Kits, update regularly, and make available for immediate use during a crisis.</p> <p>VI. Facilitate Coordination with Community Partners in advance to provide a collaborative response to a crisis.</p>	<p>Bennett-Johnson (2004), Blair et al. (2013), Brunner & Lewis (2009), C. Dorn (2013), Dorn & Satterly (2012), Dorn et al. (2004), FEMA (2012), Gerl (1991), Gray (2012), IACP (2009), KCSS (2008), Kimberling & May (n.d.), Kozlowski (2009), Lupkin (2012), O'Neill (2008), SHAC (2013), Stephens (2006), Trump (2011), USDE (2007; 2008; 2013), USDE ERCM (2006), Vossekuil et al. (2002), Williams (n.d.), Zhe & Nickerson (2007)</p>

<i>Table 2.1, continued</i>	
Category	Source
3. Response Strategy General Categories:	
I. Implement initial response decisions and actions within thirty seconds of an active shooter incident. II. Determine whether to Run (Evacuate), Hide (Lockdown), or Fight (Active Resistance). III. Run (Evacuate) if there is an accessible escape path and it is safe to evacuate. IV. Hide (Lockdown) to deny the assailant access to persons in the building. V. Fight (Active Resistance) as a last resort when life is in imminent danger. VI. Respond appropriately when law enforcement arrives in order to maximize effective intervention during an active shooter incident.	Blair et al. (2013), Buerger and Buerger (2010), DHS (2008), C. Dorn (2013), M. Dorn (2012b; 2013a), Dorn & Satterly (2012), FEMA (2012), Gray (2013), Gray and Dorn (2013), IACP (2009), KCSS (2008), Lewis (2013), Lupkin (2012), Nichols (2013), Perin (2013), Schweit (2013), SHAC (2013), Stephens (2006), Tracey (n.d.), Trump (2011), UCPD (n.d.), USDE (2007; 2013), Williams (n.d.)

In this chapter, strategies for the Mitigation-Prevention, Preparedness, and Response phases relative to active shooter incidents are identified to serve as a basis for developing an ideal model of *response* strategies. The extensive amount of strategies existing for each phase limits this study to the development to an ideal model of response strategies only. The Conceptual Framework serves as a guide for constructing the ideal model of response strategies, illustrated in *Appendix A: An Ideal Model for Responding to Active Shooter Incidents in Schools*.

The ideal model is comprised of the six key Response categories identified in the Conceptual Framework. In addition to the six general categories illustrated in the Conceptual Framework, the actual model provides a comprehensive list of specific strategies and pertinent information for each of the six general Response categories, based on the extant literature. The ideal model can be beneficial to school officials by

providing a comprehensive list of strategies and pertinent, current information related to active shooter incidents for consideration when developing their emergency crisis plans. The strategies offered in this model are not intended to be prescriptive, but rather to serve as guidelines for school officials in developing customized and individualized plans and strategies for cultivating a safer school environment. The Conceptual Framework and the ideal model form the basis for the development of a survey questionnaire designed to gauge the extent to which school personnel are familiar with the identified response strategies and pertinent information. The next chapter discusses the methodology for assessing the training and knowledge of Texas school personnel on how to respond to an active shooter incident.

CHAPTER THREE: METHODOLOGY

Chapter Purpose

This research study has two objectives: (1) Develop an ideal model of strategies for school personnel to respond to an active shooter incident; (2) Assess the extent to which school personnel in Texas are aware of the strategies and therefore prepared to respond properly to an active shooter incident. The ideal model was developed from the findings of the literature review and is outlined in *Appendix A: An Ideal Model for Responding to Active Shooter Incidents in Schools*. The purpose of this chapter is to describe the research methodology used to meet the second objective of this study. As described in the previous chapter, the ideal model is limited to *response* strategies due to the extensive amount of strategies existing for all phases of crisis management. Therefore, the research methodology described in this chapter will be used to assess the extent to which school personnel are familiar with the strategies and pertinent information identified in the ideal model illustrated in *Appendix A: An Ideal Model for Responding to Active Shooter Incidents in Schools*.

The response strategies developed through the literature review and outlined in the ideal model are operationalized to construct an online self-administered, voluntary, and anonymous questionnaire for school personnel in Texas. The questionnaire is designed to gauge the respondents' awareness of the response strategies. The findings will identify areas of possible gaps in school employees' knowledge of how to respond to active shooter incidents. The findings can assist school officials in determining training needs for their school personnel, based on the generalized results of the study.

Survey Research

According to Babbie (2010), survey research is the best method to be used for collecting original data to describe a population too large to observe directly. Surveys are conducive to studies that have individual people as the units of analysis. Self-administered surveys make large samples feasible (Babbie 2010). “Survey methods can question attitudes and measure perspectives unavailable to other scientific methods” (Mohayer 1992, 43). Carefully constructed questionnaires solicit data in the same form from all respondents, thereby making surveys a useful tool for obtaining data for analysis and interpretation. Standardized questionnaires with close-ended questions “provide a greater uniformity of responses and are more easily processed than open-ended ones. ...Closed-ended responses...can often be transferred directly into the computer format” for statistical analysis (Babbie 2010, 256). In addition, anonymous, self-administered surveys are advantageous for soliciting responses regarding sensitive or controversial issues, as respondents will feel less threatened in providing honest responses.

Leedy and Ormrod (2005), however, caution that questionnaires have drawbacks due to the potential of a low return rate and the possibility that the people who do participate may not necessarily be representative of the population. Also, responses will reflect the reading and writing skills of the participant and some of the questions may be misinterpreted by the respondent. Another disadvantage of self-administered questionnaires is that the researcher is not provided an opportunity to clarify questions, probe the participant, or develop a rapport with the participant (Babbie 2010; Leedy and Ormrod (2005). Babbie (2010, 287) identifies another weakness of survey research: “Standardized questionnaire items often represent the least common denominator in

assessing people's attitudes, [and] orientations..." Although there are weaknesses and disadvantages in survey research, the advantages of being able to collect uniform data from a large population makes survey research an appropriate tool for this study.

Sampling

The researcher solicited participation in the study from all principals from Texas public schools for which contact information was available. The principals were asked to forward the survey invitation to their school personnel since contact information for all school personnel in Texas was not available. The invitation encouraged all school personnel to participate in the study. According to Babbie (2010), snowball sampling is a nonprobability sampling method that can be used when members of the population are difficult to locate. "In snowball sampling, the researcher collects data on the few members of the target population he or she can locate, then asks those individuals to provide the information needed to locate other members of that population whom they happen to know. ...Because this procedure also results in samples with questionable representativeness, it's used primarily for exploratory purposes" (Babbie 2010, 193). Since the researcher is not performing advanced statistical analysis but is only collecting basic descriptive statistics, snowball sampling is an appropriate method for obtaining data from Texas public school personnel.

Research Methodology

The sampling frame used to solicit respondents is a list of public school principals obtained from the Texas Education Agency's "School, District, and ESC Personnel Data File" (TEA 2013). The original sampling frame contained 9,408 contacts. The researcher removed 1,395 contacts that lacked email addresses and 496 duplicates, leaving 7,517

principals of whom to solicit participation in the study. The principals were asked via email to forward the survey invitation to the school personnel on their campuses because the units of analysis in this study are individual school personnel. The study population is school personnel of K-12 independent school districts and open-enrollment charter schools in Texas. The researcher used Survey Monkey, an online survey tool, to administer the survey. The respondents were given eight days to complete the online questionnaire.

Operationalization of the Conceptual Framework

The Operationalization Table connects the *Response* category of strategies identified in the Conceptual Framework and the research methodology. Due to the extensive number of Mitigation-Prevention, Preparedness, and Response strategies for active shooter incidents which limited the development of the ideal model to response strategies, the Operationalization Table for this study is also limited to response strategies. Furthermore, the Operationalization Table is relevant to the assessment of school personnel's awareness of the strategies and pertinent information identified in the *Ideal Model for Responding to Active Shooter Incidents in Schools (Appendix A)*.

Table 3.1 Operationalization Table illustrates how the response strategies identified in the literature are operationalized into a survey questionnaire. The six categories of Response strategies identified in the Conceptual Framework are general, overall strategies. Each general category has numerous specific strategies that are listed in the ideal model. Since the specific strategies are extensive, the Operationalization Table only describes the six general categories of Response strategies in the column on the left of the table. The numbered survey questions for the specific strategies that

correspond to the general strategy category are listed in the middle column of the table. The description of each specific strategy and pertinent information related to active shooter incidents, formatted as a survey question, is illustrated in *Appendix B: Survey Questionnaire*. The column on the right of the Operationalization Table identifies the measurement of “Yes” or “No,” with a few questions also providing a choice of “Unsure” or “Not Applicable.” The first question asked of the participants in the survey questionnaire, which is not included in the Operationalization Table is, “Have you been trained on how to respond to an Active Shooter Incident in your school?” The measurement is “Yes” or “No.”

Table 3.1: Operationalization Table. This table connects the six general Response Categories identified in the Conceptual Framework to the research methodology.

3. Response Strategy General Categories		
General Category:	Corresponding Survey Question:	Measurement:
I. Implement initial response decisions and actions within thirty seconds of an active shooter incident.	#2- #22	Yes/No; Exception - #16: Yes/No/Unsure
II. Determine whether to Run (Evacuate), Hide (Lockdown), or Fight (Active Resistance).	#23 - #32	Yes/No
III. Run (Evacuate) if there is an accessible escape path and it is safe to evacuate.	#33 - #50	Yes/No; Exception - #43: Yes/No/ Not Applicable
IV. Hide (Lockdown) to deny the assailant access to persons in the building.	#51 - #82	Yes/No
V. Fight (Active Resistance) as a last resort when life is in imminent danger.	#83 - #97	Yes/No
VI. Respond appropriately when law enforcement arrives in order to maximize effective intervention during an active shooter incident.	#98 - #110	Yes/No

Statistical Technique

To determine the type of statistical technique to use for analyzing the collected data, the scale of measurement must first be determined. Leedy and Ormrod (2005, 25) explain that the “scale of measurement will ultimately dictate the statistical procedures that can be used (if any) in processing the data.” The measurement used in this study is a nominal scale of measurement. The characteristics of nominal measurements are

exhaustiveness and mutual exclusiveness, with attributes that are merely different rather than reflecting a particular order or sequence (Babbie 2010). In a nominal scale, numbers are used to identify and divide data into discrete categories that can then be compared with one another without reflecting a particular quantity or degree (Leedy and Ormrod 2005). For this study, all “Yes” responses in the data set are coded “1” and all “No” responses are coded “2.” Leedy and Ormrod (2005, 25) explain that “only a few statistics are appropriate for analyzing nominal data”, such as mode and percentage. The responses to the close-ended questions are measured nominally and calculated using basic descriptive statistics. Survey Monkey’s analytical tool is used to analyze the responses and provide cumulative data in an SPSS compatible worksheet.

In addition to questions concerning the respondents’ awareness of response strategies to active shooter incidents, seven additional close-ended questions are asked to ascertain if certain security recommendations identified through the literature review are practiced in the school setting. The questions asked are:

111. Are you allowed to use independent judgment for determining a response to an Active Shooter Incident?
 - Measurement: Yes/No/Unsure
112. Is your room equipped with a locking door?
 - Measurement: Yes/No/Unsure
113. If your door has a lock, can the door be locked from the inside of the room?
 - Measurement: Yes/No/Unsure/Not Applicable
114. If your door has a lock, does it require a key to lock the door?
 - Measurement: Yes/No/Unsure/Not Applicable

115. Are you provided with a mobile alarm panic button?
- Measurement: Yes/No
116. Is your room equipped with two-way communication technology?
- Yes/No/Unsure
117. Is your room equipped with bullet-proof whiteboards?
- Yes/No/Unsure

If a significant number of responses are “No,” this could bring awareness to school officials of improvements needed to correct critical deficiencies in their school’s security programs.

Demographics

In addition to questions used to assess the employee’s knowledge of each school security strategy relative to response to active shooter incidents, demographic questions are included in the survey. Respondents are asked to identify their job position type, years of experience in the education field, years of experience in security, and their school’s campus type. This will provide insights into the respondents backgrounds and place of employment and detailed analysis of questions that have unexpected results.

Human Subjects Protection

In social research, ethical norms involve voluntary, anonymous, and confidential participation by the subjects of research. The Texas State University Institutional Review Board (IRB) granted an exemption for approval of the questionnaire for this study because the research involved minimal risk to the participants and the information obtained through the survey was recorded in such a manner that human subjects could not be identified, directly or through identifiers linked to the subjects. Refer to *Appendix C*:

IRB Exemption for a copy of the IRB exemption granted to the researcher. In this study, no identifiable information from participants was collected. The survey instrument was set up to not collect the Internet Protocol (IP) addresses from the computers used by the participants who participated in the study. The participants were not asked to provide any information that would identify them or their schools. Participants were informed that participation is voluntary, anonymous, and confidential. Refusal to participate involved no penalty and the respondents could discontinue participation at any time. No benefits or compensation were offered or provided for participation in this study.

Chapter Summary

This chapter discussed the research methodology used in this study to assess the knowledge of school personnel on how to respond to active shooter incidents. A survey questionnaire was used to gauge the respondents' awareness of the Response strategies and pertinent information outlined in the *Ideal Model for Responding to Active Shooter Incidents*, illustrated in *Appendix A*. The findings will be beneficial in informing school officials of how prepared their personnel may be in properly responding to active shooter incidents, based on the generalized results of the study. The next chapter presents the results of the survey questionnaire.

CHAPTER FOUR: RESULTS

Chapter Purpose

The purpose of this chapter is to discuss and analyze the aggregate data collected from the survey questionnaire described in the previous chapter. The results will address the second objective of the purpose of this research: to assess the extent to which school personnel in Texas are aware of response strategies for active shooter incidents. The response strategies and pertinent information used in the survey questionnaire were based upon the ideal model developed through literature review and outlined in *Appendix A: An Ideal Model for Responding to Active Shooter Incidents in Schools*.

Demographic Results

The invitation to participate in the study was sent via email to 7,517 public school principals throughout Texas, with a request that, in addition to completing the survey themselves, the principals would also forward the invitation to their school personnel. A total of 668 emails were returned as undeliverable and 36 recipients responded via email stating they could not participate without prior district approval. At the close of the survey, 724 survey responses were received.

Responses by Position Type

The demographics revealed that the majority of the respondents were principals and teachers. Principals or assistant principals accounted for 54.21% of the respondents, followed by teachers at 28.97%. A combined total of principals and teachers accounted for 83.18% of the questionnaires that were submitted. *Figure 4.1 Responses by Position Type* illustrates the percentages by position type of the respondents.

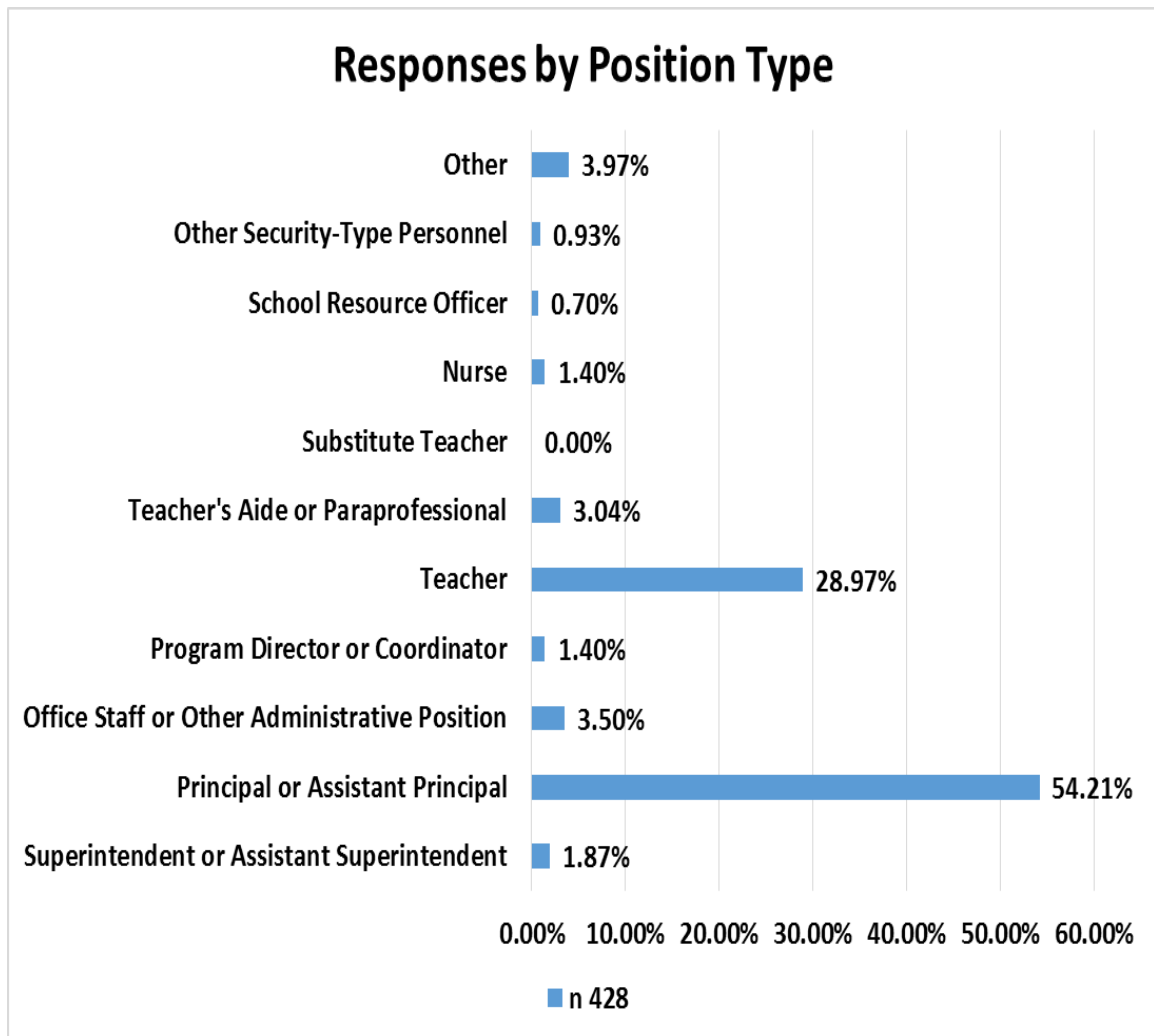


Figure 4.1 Responses by Position Type. This clustered bar chart illustrates the response rate to the survey questionnaire by position type.

Responses by Campus Type

The demographic data indicated that most of the respondents, in terms of campus type, were from elementary schools. *Figure 4.2 Campus Type of Respondents* illustrates the percentages of respondents by campus type.

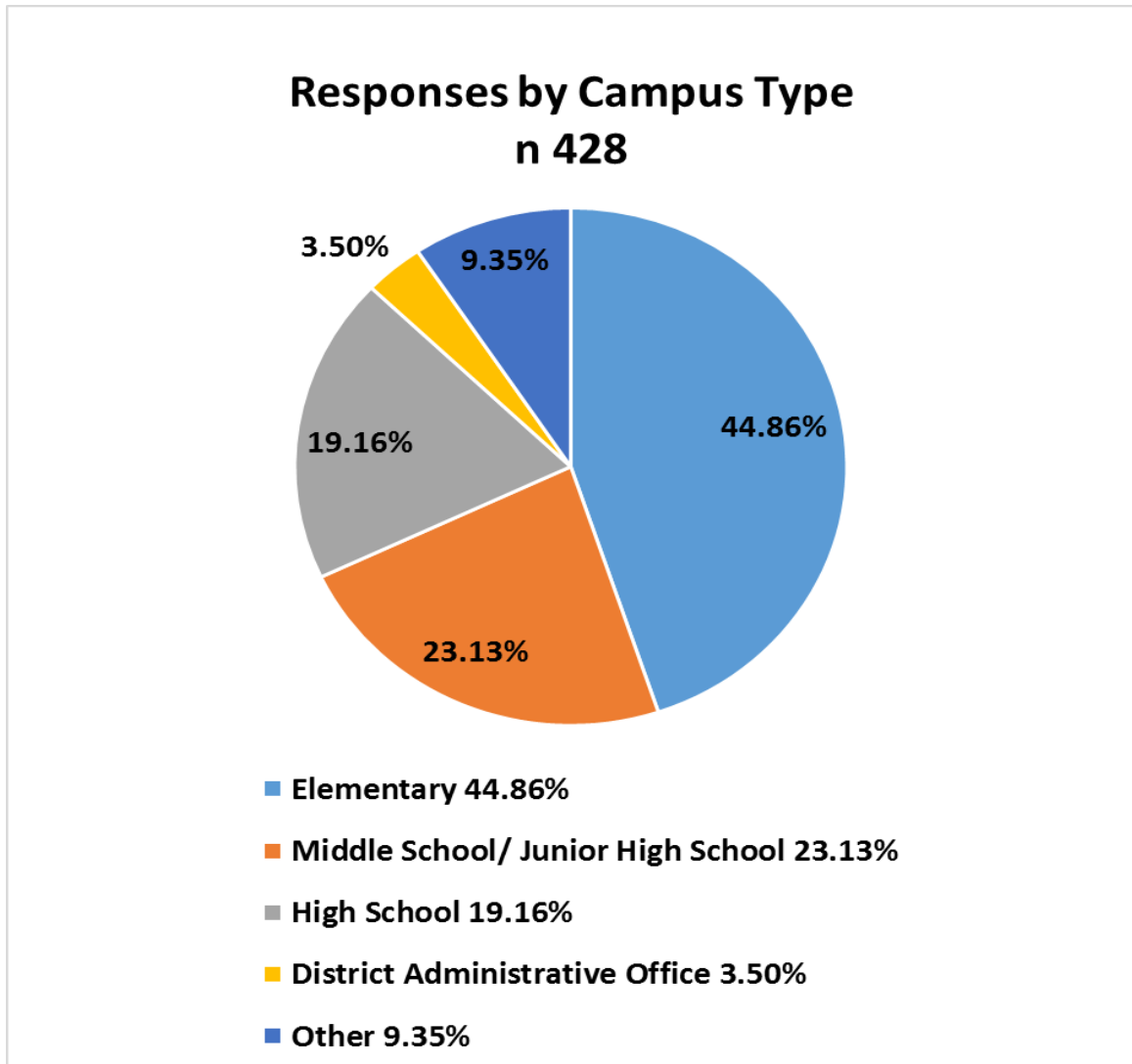


Figure 4.2 Responses by Campus Type. This pie chart illustrates the response rate to the survey questionnaire by campus type.

Non-Demographic Generalized Results

The first non-demographic question on the survey asked the respondent, “Have you been trained on how to respond to an Active Shooter Incident in your school?” The data indicated that 68.38% of the 718 respondents who answered the first question on the survey indicated they had been trained on how to respond to an active shooter incident.

Figure 4.3 Received Active Shooter Response Training? provides an illustration of the percentages of affirmative and non-affirmative responses.

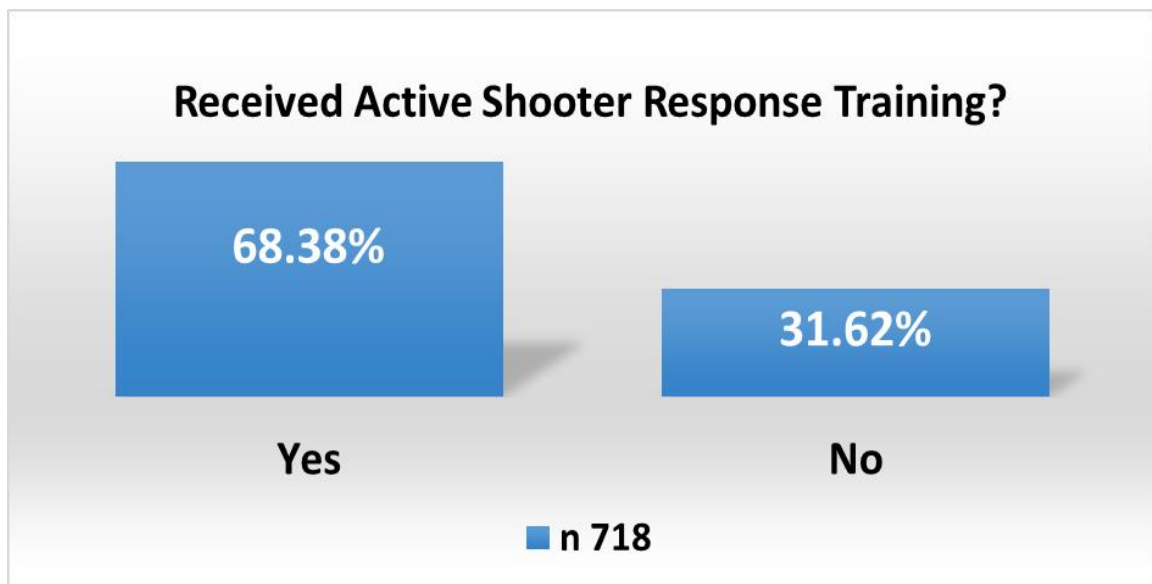


Figure 4.3 Received Active Shooter Response Training? This chart illustrates the percentage of respondents who indicated whether they had received active shooter response training.

Since 68.38% of the respondents indicated they had received active shooter response training, it is assumed that affirmative response levels below 68.38% on the survey questions regarding awareness of specific strategies or pertinent information could indicate that particular strategy may be inadequately addressed in active shooter response training.

When the number of affirmative responses to the training question was analyzed according to position type, the data indicated the principals/assistant principals group had an affirmative response rate of 75.32%. In contrast, teachers had an affirmative response rate of only 56.45%. The analysis is incomplete, however, due to the large number of participants who indicated they had received active shooter training but did not specify their position type. Based on the data available, though, it appears that teachers, who may be the most likely of school personnel to find themselves in a situation of needing to protect the lives of children during an active shooter incident, may not be given the same opportunities as principals for receiving active shooter training. It is recommended that this discrepancy be addressed by school officials to ensure that all personnel, regardless of type, are adequately trained in how to respond to an active shooter incident. *Figure 4.4 Active Shooter Training by Position Type* provides an illustration of the percentages of affirmative responses for active shooter training by position type.

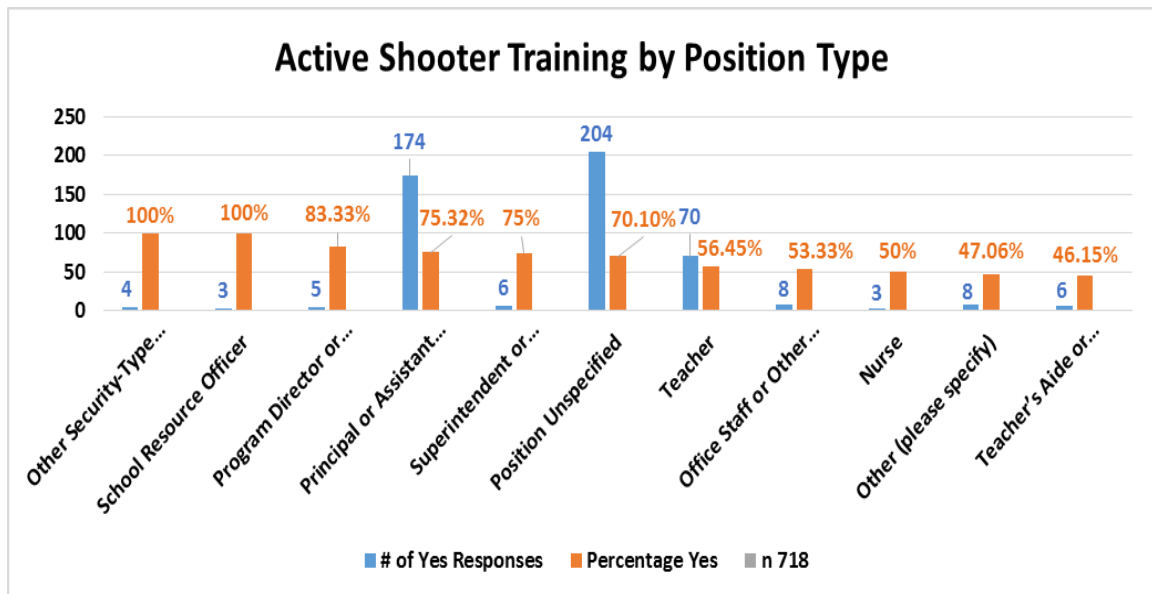


Figure 4.4 Active Shooter Training by Position Type. This chart illustrates the number and percentage of respondents, by position type, who indicated they had received active shooter response training.

Category I: Initial Response Decisions and Actions

Category I: Initial Response Decisions and Actions is comprised of 21 specific questions related to this general category of response strategies. The specific questions are outlined in *Appendix B: Survey Questionnaire*. The *Table 4.1 Responses to Category I: Initial Response Decisions and Actions* depicts the percentages of responses to each of the closed-ended response choices.

Table 4.1 Responses to Category I: Initial Response Decisions and Actions. This table indicates the percentage of affirmative and negative responses to the specific Response strategies and pertinent information of Category I. The responses coded in yellow indicate the affirmative responses that fall below 68.38%.

Q#	% YES	% NO	% UNSURE	% N/A	n
2	78.53	21.47	-----	-----	624
3	93.28	6.72	-----	-----	625
4	93.58	6.42	-----	-----	623
5	77.83	22.17	-----	-----	618
6	81.26	18.74	-----	-----	619
7	93.40	6.60	-----	-----	621
8	94.37	5.63	-----	-----	622
9	47.58	52.42	-----	-----	620
10	73.54	26.46	-----	-----	616
11	75.28	24.72	-----	-----	623
12	78.25	21.75	-----	-----	616
13	89.01	10.99	-----	-----	619
14	84.01	15.99	-----	-----	613
15	94.51	5.49	-----	-----	619
16	10.31	56.04	33.66	-----	621
17	85.15	14.85	-----	-----	613
18	80.61	19.39	-----	-----	619
19	90.18	9.82	-----	-----	621
20	71.61	28.39	-----	-----	620
21	65.59	34.41	-----	-----	619
22	37.06	62.94	-----	-----	618

Four of the questions in Category I had average response percentages that fell below the 68.38% threshold for affirmative responses. These response percentages are coded in yellow in *Table 4.1*. Data from Question #9, “*Did you know that your brain will attempt to normalize sounds of gunfire and cause you to deny the likelihood of an ASI?*” indicated only 47.58% of the respondents were aware of this strategy. Only 10.31% of the participants responded affirmatively to Question #16, “*Are you aware of the ‘Window of Life’ protocol for the sequence of initial responsibilities in response to an ASI?*” The affirmative response rate for Question #21 was close to the 68.38% threshold, but fell short. In response to the question, “*Did you know that you can counteract the effects of adrenaline rush by breathing slowly and deeply, stretching muscles, and forcing yourself to perform any type of action?*” 65.59% of the respondents indicated they were aware of this protocol. Finally, data for Question #22, “*Did you know that you may be able to counteract the effects of adrenaline rush by shifting your feelings of panic and fear to feelings of anger at the offender?*” yielded only 37.06% affirmative responses.

The results of the findings suggest there may be gaps in training related to understanding some of the effects of the body’s response to stress and how to counteract the negative effects of adrenaline rush. While the results of the Window of Life question may indicate that personnel are unaware of the sequence of responsibilities to follow during a crisis, it is possible that the results may only indicate that personnel who did not respond positively were simply unaware of the name of the protocol.

Category II: Determination of Appropriate Action

Ten specific questions are addressed in the survey questionnaire related to the second general category of Response strategies: *Category II: Determination of Appropriate Action*. The specific questions are found in *Appendix B: Survey Questionnaire*. The percentages of responses to these questions are depicted in *Table 4.2 Responses to Category II: Determination of Appropriate Action*.

Table 4.2 Responses to Category II: Determination of Appropriate Action. This table indicates the percentage of affirmative and negative responses to the specific Response strategies and pertinent information of Category II.

Q#	% YES	% NO	% UNSURE	% N/A	n
23	85.66	14.34	-----	-----	551
24	89.27	10.73	-----	-----	550
25	88.77	11.23	-----	-----	552
26	91.07	8.93	-----	-----	549
27	91.79	8.21	-----	-----	548
28	96.89	3.11	-----	-----	546
29	90.49	9.51	-----	-----	547
30	96.17	3.83	-----	-----	548
31	70.86	29.14	-----	-----	549
32	96.71	3.29	-----	-----	547

None of the average affirmative responses to the questions in this category fell below the 68.38% threshold. The lowest score for percent of affirmative responses in this category, which still exceeds the threshold of 68.38%, was attributed to Question #31, “*Are you aware that if all other personal survival responses, such as evacuation or lockdown, are no longer an option in an ASI, you should use active resistance against the*

assailant?”, with a score of 70.86%. This an interesting finding since the addition of the Active Resistance strategy is fairly new and still somewhat controversial among some experts in the field. The USDE added the Active Resistance strategy to their *Guide for Developing High-Quality School Emergency Operations Plans* released in June 2013. Their previous guidance, *Practical Information on Crisis Planning: A Guide for Schools and Communities*, from 2007, which has been superseded by the 2013 guide, did not identify Active Resistance as an option (USDE 2007, 2013).

Category III: Run (Evacuate)

Category III: Run (Evacuate) has 18 specific questions that fall under this general category of Response strategies. The specific questions are outlined in *Appendix B: Survey Questionnaire*. The *Table 4.3 Responses to Category III: Run Evacuate* depicts the percentages of responses to each of the closed-ended response choices.

Table 4.3 Responses to Category III: Run (Evacuate). This table indicates the percentage of affirmative and negative responses to the specific Response strategies and pertinent information of Category III. The responses coded in yellow indicate the affirmative responses that fall below 68.38%.

Q#	% YES	% NO	% UNSURE	% N/A	n
33	82.44	17.56	-----	-----	501
34	70.40	29.60	-----	-----	500
35	86.23	13.77	-----	-----	501
36	76.10	23.90	-----	-----	502
37	91.20	8.80	-----	-----	500
38	96.21	3.79	-----	-----	501
39	96.80	3.20	-----	-----	500
40	82.83	17.17	-----	-----	501
41	98.38	1.62	-----	-----	495
42	62.07	37.93	-----	-----	493
43	90.62	4.59	-----	4.79	501
44	95.19	4.81	-----	-----	499
45	81.65	18.35	-----	-----	496
46	48.90	51.10	-----	-----	499
47	96.37	3.63	-----	-----	496
48	51.40	48.60	-----	-----	500
49	93.80	6.20	-----	-----	500
50	86.32	13.68	-----	-----	497

The average percentage of affirmative responses to three of the questions in Category III, which are coded in yellow in *Table 4.3*, fell below the 68.38% threshold. Question #42, “*Are you aware that if evacuation is necessary, you should not stay behind if others will not go with you?*”, Question #46, “*Did you know that you should not*

attempt to move wounded people during an evacuation?”, and Question #48, *“Did you know that as you are evacuating, you should keep your hands visible at all times and hold your hands on your head or above your head?”*, returned affirmative response rates of 62.07%, 48.90%, and 51.40%, respectively. These responses suggest that school personnel, at a time when evacuation is appropriate, may demonstrate protective behavior and attempt to aid uncooperative or wounded persons instead of evacuating themselves and others who are willing and able to evacuate. Furthermore, they may place themselves in danger by not making it as apparent as possible to responding law enforcement that they are unarmed. These findings indicate some possible areas that may need enhanced training.

Category IV: Hide (Lockdown)

Category IV: Hide (Lockdown) is comprised of 32 specific questions related to this general category of Response strategies. The specific questions are outlined in *Appendix B: Survey Questionnaire*. The *Table 4.4 Responses to Category IV: Hide (Lockdown)* illustrates the percentages of responses to each of the closed-ended response choices for this category.

Table 4.4 Responses to Category IV: Hide (Lockdown). This table indicates the percentage of affirmative and negative responses to the specific Response strategies and pertinent information of Category IV. The responses coded in yellow indicate the affirmative responses that fall below 68.38%.

Q#	% YES	% NO	% UNSURE	% N/A	n
51	95.68	4.32	-----	-----	463
52	98.48	1.52	-----	-----	462
53	85.13	14.87	-----	-----	464
54	90.63	9.37	-----	-----	459
55	83.55	16.45	-----	-----	462
56	96.08	3.92	-----	-----	459
57	98.04	1.96	-----	-----	460
58	75.43	24.57	-----	-----	460
59	66.74	33.26	-----	-----	460
60	79.57	20.43	-----	-----	460
61	71.86	28.14	-----	-----	462
62	68.40	31.60	-----	-----	462
63	65.50	34.50	-----	-----	458
64	80.83	19.17	-----	-----	459
65	89.54	10.46	-----	-----	459
66	74.57	25.43	-----	-----	460
67	88.48	11.52	-----	-----	460
68	89.78	10.22	-----	-----	460
69	72.11	27.89	-----	-----	459
70	98.06	1.94	-----	-----	463
71	97.59	2.41	-----	-----	456
72	98.03	1.97	-----	-----	457

<i>Table 4.4, continued</i>					
73	97.37	2.63	-----	-----	456
74	84.31	15.69	-----	-----	459
75	94.54	5.46	-----	-----	458
76	73.54	26.46	-----	-----	461
77	96.94	3.06	-----	-----	458
78	97.82	2.18	-----	-----	458
79	98.03	1.97	-----	-----	456
80	78.38	21.62	-----	-----	458
81	82.00	18.00	-----	-----	461
82	91.47	8.53	-----	-----	457

Only two of the questions in this category had average response percentages that fell below the 68.38% threshold for affirmative responses. They are coded in yellow in *Table 4.4*. However, the percentages were close to the 68.38% threshold. Question #59, “Are you aware that if the door has no lock and opens inward, you could use a heavy wedge to secure it, even improvising with folded magazines or newspapers to place between the door and floor or frame?” and Question #63, “Did you know that if the door has no lock, you could use a rope, belt, or tactical cinch to tie the door handle to something else?” returned affirmative response percentages of 66.74% and 65.50%, respectively. This Category IV contains five strategies for securing a door during an active shooter incident. The door security strategies as a group scored an overall average of affirmative responses of 71.25%. All other lockdown strategies in this category scored 89.65% for an overall group average. The data indicate that school personnel may need

additional training on how to secure their room during an active shooter incident, especially in instances where the room does not have a locking door.

Category V: Fight (Active Resistance)

Category V: Fight (Active Resistance) has 15 specific questions that fall under this general category of Response strategies. The specific questions are outlined in *Appendix B: Survey Questionnaire*. The *Table 4.5 Responses to Category V: Fight (Active Resistance)* shows the percentages of responses to each of the closed-ended response choices.

Table 4.5 Responses to Category V: Fight (Active Resistance). This table indicates the percentage of affirmative and negative responses to the specific Response strategies and pertinent information of Category V. The responses coded in yellow indicate the affirmative responses that fall below 68.38%.

Q#	% YES	% NO	% UNSURE	% N/A	n
83	95.90	4.10	-----	-----	439
84	86.50	13.50	-----	-----	437
85	55.58	44.42	-----	-----	439
86	53.46	46.54	-----	-----	434
87	68.95	31.05	-----	-----	438
88	88.33	11.67	-----	-----	437
89	94.28	5.72	-----	-----	437
90	91.55	8.45	-----	-----	438
91	91.47	8.53	-----	-----	434
92	75.00	25.00	-----	-----	436
93	62.53	37.47	-----	-----	435
94	96.75	3.25	-----	-----	431
95	87.41	12.59	-----	-----	437
96	65.29	34.71	-----	-----	435
97	85.35	14.65	-----	-----	437

Four of the questions in Category V had average response percentages that fell below the 68.38% threshold for affirmative responses. These responses are coded yellow in Table 4.5. Question #85, “*Are you aware that freezing or attempting to play dead usually does not avert the assailant from attacking you?*” recorded only a 55.58% awareness of this strategy. Question #86, “*Did you know that if the assailant enters the room, people should not huddle together because that allows for a bigger and easier target for the assailant?*” scored even lower at 53.46%. Question #93, “*Are you aware*

that you should consider swarming or ambushing the assailant as soon as the assailant enters the room?” and Question #96, *“Did you know that to enhance your ability to ambush the assailant, individuals should be positioned along the wall common to the door, on the hinged side of the door, so the assailant must fully enter the room before seeing anyone?”* scored affirmative responses of 62.53% and 65.29%, respectively. This category of “Fight” strategies is particularly important, as it involves what to do and what not to do when the armed assailant enters the room. Previously known strategies of playing dead or huddling together have been replaced with action. The data indicate that active shooter response training may need to be reinforced with the new aggressive strategies of Active Resistance that are replacing the passive strategies of ‘Hide and Hope’ from the past.

Category VI: Response to Law Enforcement

Category VI: Response to Law Enforcement is comprised of 13 specific questions related to this general category of Response strategies. The specific questions are outlined in *Appendix B: Survey Questionnaire*. The *Table 4.6 Responses to Category VI: Response to Law Enforcement* illustrates the percentages of responses to each of the closed-ended response choices for this category.

Table 4.6 Responses to Category VI: Response to Law Enforcement. This table indicates the percentage of affirmative and negative responses to the specific Response strategies and pertinent information of Category VI. The response coded in yellow indicates the affirmative response that fell below 68.38%.

Q#	% YES	% NO	% UNSURE	% N/A	n
98	97.16	2.84	-----	-----	422
99	85.99	14.01	-----	-----	421
100	81.99	18.01	-----	-----	422
101	93.16	6.84	-----	-----	424
102	78.91	21.09	-----	-----	422
103	80.42	19.58	-----	-----	424
104	92.38	7.62	-----	-----	420
105	82.42	17.58	-----	-----	421
106	85.82	14.18	-----	-----	423
107	70.55	29.45	-----	-----	421
108	64.03	35.97	-----	-----	417
109	76.36	23.64	-----	-----	423
110	81.09	18.91	-----	-----	423

Only one question in this category had an average response percentage that fell below the 68.38% threshold for affirmative responses. The response is coded in yellow in Table 4.6. Question, #108, *“Did you know that when officers arrive, you should immediately raise your hands and spread your fingers or place your hands on your head?”* only scored 64.03%. While the data indicate that school personnel appear to be adequately trained in strategies regarding interaction with law enforcement responders, there is a lack of knowledge concerning the need to display open hands. This gap in the awareness of the “open palms” strategy, that could potentially place victims at risk of

being mistaken for the shooter, was also identified in Category III: Run (Evacuate), with an affirmative response percentage of 51.40%.

Additional Questions

In addition to the questions regarding knowledge of response strategies and pertinent information relative to active shooter incidents, seven additional questions were asked to gauge if school personnel had tools at their disposal to increase the effectiveness of their ability to respond to an active shooter incident. *Table 4.7 Responses to Additional Questions* illustrates the findings.

Table 4.7 Responses to Additional Questions. This table indicates the percentage of responses to each question relative to the respondents' school.

Q#	% YES	% NO	% UNSURE	% N/A	n
111	73.22	4.74	22.04	-----	422
112	98.34	0.95	0.71	-----	421
113	56.84	40.57	2.12	0.47	424
114	69.10	28.30	1.89	0.71	424
115	15.76	84.24	-----	-----	425
116	72.04	24.17	3.79	-----	422
117	1.88	84.04	14.08	-----	426

Question #111 asked the respondents, “*Are you allowed to use independent judgment for determining a response to an ASI?*” The overall response was positive, with 73.22% indicating “yes” and only 4.74% responding “no.” Those who were unsure were 22.04% of the respondents. However, when the affirmative responses were tied to position type, the data illustrated in *Figure 4.5 Autonomy to Make Decisions During an ASI* indicate that teachers and aides (paraprofessionals) have the least amount of

autonomy compared to the other position types that were identified. Since the first 30 seconds are critical during an active shooter incident and these events can occur anywhere at any time, it is recommended that school officials examine their policies and provide staff-initiated decision-making training for all school personnel in terms of responding to active shooter incidents.

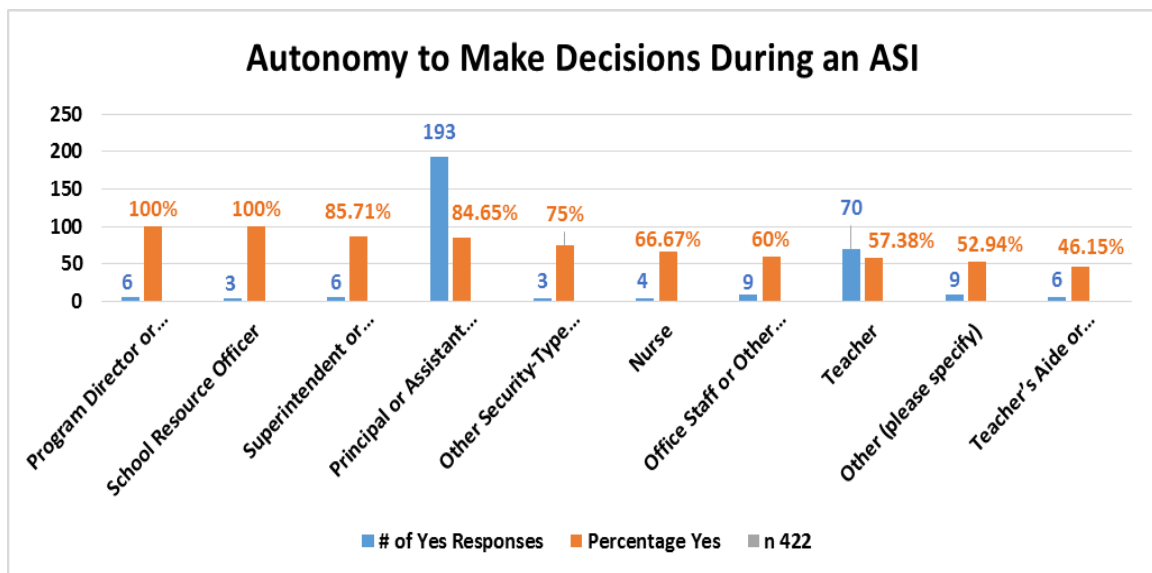


Figure 4.5 Autonomy to Make Decisions During an ASI. This chart illustrates the percentages by position type of respondents who indicated they were allowed to use independent judgment for determining a response to an active shooter incident.

Question #112 asked, “*Is your room equipped with a locking door?*” The affirmative responses were 98.34%. However, when asked in Question #113, “*If your door has a lock, can the door be locked from the inside of the room?*” only 56.84% responded in the affirmative. This percentage is troublesome since it places individuals in harms’ way to go into the hallway to lock their door. They could encounter the gunman when they attempt to lock their door. Responses to Question #114, “*If your door has a lock, does it require a key to lock the door?*” indicated a key was needed to lock the

doors of 69.10% of the respondents who had locking doors. This can be problematic in two ways. First, as described by Blair et al. (2013), the body's response to the adrenaline rush during the highly stressful event will make it difficult for the individual to place the key into the lock since fine motor activity will be impaired. Also, if the key is kept in the desk or in a purse, the individual may not be able to access it as rapidly as needed for a quick response time. The gunman could already be entering the room as the individual is searching frantically for the key.

Question #115, "*Are you provided with a mobile alarm panic button?*", Question #116, "*Is your room equipped with two-way communication technology?*" and Question #117, "*Is your room equipped with bullet-proof whiteboards?*" yielded results in the affirmative of 15.76%, 72.04%, and 1.88%, respectively. School officials may want to consider the purchase of mobile alarm panic buttons and bullet-proof whiteboards to provide greater chances of survival for school personnel and students. While it is encouraging that 72.04% of the respondents have the technological capability of two-way communication, further research would be beneficial to determine what type of communication technology is available and how susceptible it is to failure during an emergency.

Chapter Summary

This chapter provides the results of the survey questionnaire used to assess the extent to which school personnel are aware of response strategies and pertinent information related to active shooter incidents. The findings revealed that 68.38% of the respondents indicated they had received active shooter response training. That finding provided a baseline for which to assess the percentage of awareness of the individual

response strategies identified in the *Ideal Model for Responding to Active Shooter Incidents in Schools* that was developed through literature review. The overall percentages of awareness of the strategies in each of the general Response categories are illustrated in *Table 4.8 Overall Awareness by Response Category Type*. None of the overall percentages of awareness of Response strategies by category type fell below the baseline of 68.38%. However, as depicted in the individual tables for each general category, certain specific Response strategies or pertinent information fell below the 68.38% baseline.

Table 4.8 Overall Awareness by Response Category Type. This table illustrates the overall awareness of Response strategies by category.

CATEGORY	% YES	n
I. Initial Response Decisions and Actions	75.95%	620
II. Determination of Appropriate Action	89.77%	549
III. Run (Evacuate)	82.61%	499
IV. Hide (Lockdown)	86.20%	460
V. Fight (Active Resistance)	79.89%	436
VI. Arrival of Law Enforcement	82.33%	422

These findings suggest that school personnel on average are aware of a large percentage of the response strategies and pertinent information relative to responding to an active shooter incident. However, it is recommended that school officials review the strategies that fell below the baseline to determine if the gaps in training should be addressed at their schools. The following chapter summarizes the research and discusses the limitations of the study and recommendations for further research.

CHAPTER FIVE: CONCLUSION

Chapter Purpose

The final chapter provides a summary of the research findings and how they are attributable to the research purpose. Limitations of the research and recommendations for future research are also identified.

Discussion

The purpose of this research is two-fold. First, the study develops an ideal model of strategies for school personnel to respond to an active shooter incident. The *Ideal Model for Responding to Active Shooter Incidents in Schools* was developed through a literature review on crisis management and active shooter situations. Based on the extant literature, the ideal model is comprised of six key categories of Response strategies. Each category contains a list of specific Response strategies and pertinent information for that particular category. The researcher asserts that the Response strategies contained in the model are generally considered necessary for the most optimal chances of survival during an active shooter incident. Unfortunately, a crisis such as an active shooter incident can occur anywhere at any time. Awareness of and training on active shooter response strategies can help mitigate the potential casualties and increase the likelihood that school personnel will be able to respond more effectively during a crisis. The strategies offered in this model are not intended to be prescriptive, because every scenario will be different and every school will have their own unique challenges and resources. However, awareness and training on the response strategies outlined in the ideal model will be beneficial in ensuring that individuals are aware of response options and can react more quickly in selecting a course of action when faced with an active shooter situation.

The second purpose of this study is to assess the extent to which public school personnel in Texas are aware of the Response strategies and therefore prepared to respond properly to an active shooter incident. The findings show that 68.38% of respondents indicated they had received active shooter response training. While the overall percentage of affirmative responses for being aware of the strategies and pertinent information identified in the ideal model was about 82.79%, some of the respondents' responses to their awareness of certain strategies and information fell below the baseline percentage of 68.38%. This suggests that additional training may be needed in certain areas. The greatest areas in which there appear to be gaps in awareness and training are: (a) the first critical 30 seconds of an active shooter incident, especially how to overcome the natural tendency of the brain to deny a disaster is occurring and how to counteract the physiological effects of adrenaline rush; (b) how to secure the door, especially if it does not have a lock; (c) avoiding a response action of freezing and playing dead or huddling together; and (d) displaying open palms when evacuating and upon the arrival of law enforcement. The data also indicated that the majority of personnel who received response to active shooter training were principals and assistant principals. School officials should ensure that all personnel, regardless of position type, should be trained in how to respond to an active shooter incident.

Limitations and Recommendations for Future Research

The demographics on the respondents' campus type was skewed disproportionately toward elementary schools, which accounted for 44.86% of the respondents. Whereas active shooter response training should be administered equally across campus types,

future research should focus on each campus type individually and then test for generalizability across campus types.

The survey questionnaire did not collect demographic data on school size; location, e.g., urban or rural; or type, e.g., independent school district or open-enrollment charter school. Future research should investigate if school type, size, or location affects the level of knowledge concerning response strategies to active shooter incidents.

Another recommendation for future research is to replicate the assessment of the extent of awareness of response strategies among school personnel in other states to determine if there are geographical differences, or to compare private schools to public schools.

This study was also limited in its scope of type of active shooter by not distinguishing between whether the active shooter is a student or an outsider. The study did not delve into the warning signs of a student who may initiate a school shooting. While a significant amount of literature addresses the topic, future research should investigate the level of awareness that school personnel have on detecting the early warning signs and developing proactive responses. Another limitation to this study was that it did not delve deeply into strategies for responses to active shooter incidents when the event occurs at the most inopportune times, such as during recess, lunch time, or intervals between classes when the hallways are full of children.

Future research to delve more deeply into the other phases of crisis management – Mitigation-Prevention, Preparedness, and Recovery relative to active shooter incidents could be beneficial. Of particular value would be studies on target hardening to determine ways of making the classrooms, offices, and facilities more secure. For example, an interesting finding from the Virginia Tech Review Panel (2007) identified several

deficiencies in the classroom design – doors not lockable from the inside, lack of heavy furniture or other items to use to barricade the door or provide some type of cover and concealment, inadequate messaging system for receiving or sending alarms, and no technology for two-way communication in the classrooms.

Conclusion

The goal of this study is to contribute to the changing educational landscape by extending the academic literature on the topic of how to respond to active shooter incidents in schools. The *Ideal Model for Responding to Active Shooter Incidents in Schools* was developed in an effort to provide school officials and personnel with current, effective strategies relative to active shooter incidents, thereby increasing their ability to respond quickly and effectively to the crisis until the arrival of law enforcement. The assessment of the extent to which school personnel in Texas are aware of the Response strategies was performed to identify strategies that the majority of the respondents may be unaware of. The findings serve to identify training needs and assist school officials in taking proactive measures to ensure all school personnel are as prepared as possible to effectively respond to an active shooter incident and to increase the chances of survival for themselves and the children under their care.

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APPENDIX A: AN IDEAL MODEL FOR RESPONDING TO ACTIVE SHOOTER INCIDENTS IN SCHOOLS

IDEAL MODEL FOR RESPONDING TO ACTIVE SHOOTER INCIDENTS IN SCHOOLS	
I.	Implement initial response decisions and actions within thirty seconds of an Active Shooter Incident (ASI).
The first 30 seconds of an Active Shooter Incident (ASI) are critical because most ASIs last less than ten minutes.	
Active Shooter Incidents (ASIs) evolve quickly, are unpredictable, and typically there is no pattern in the selection of victims.	
Expect to be surprised and confused during an ASI.	
You may be placed in the role of first responder during an Active Shooter Incident (ASI) because the incident could be over before the arrival of law enforcement.	
At the first indication of an ASI, select the first response option that appears to work (satisficing) rather than waste time trying to determine the best response (optimizing).	
Use individual judgment rather than chain-of-command protocol to decide whether to evacuate or lockdown when confronted with an ASI since the first few seconds are critical.	
Waiting for a formal alert from administration to initiate a response to an ASI could result in potential injury or loss of life.	
The first notification to activate a response to an ASI may be the sound of gunshots or screams.	
Your brain will attempt to normalize sounds of gunfire and cause you to deny the likelihood of an ASI.	
Quickly overcome the initial denial that an ASI is occurring and force yourself to take immediate action.	

If you hear anything that sounds like firecrackers or gunfire, respond immediately as if it is gunfire.
Do not waste time confirming with others that shots were fired.
It is better to over-react than under-react to a potential ASI. Assume the worst, and respond accordingly.
A cautious response could potentially lead to death or injury.
During an ASI, due to the effects of adrenaline rush and the body's response to stress, you will probably experience reduced efficiency of fine motor skills, reduced visual and auditory acuity, distorted sense of time, impaired ability to think clearly and logically, and loss of bladder and bowel control.
Counteract the effects of adrenaline rush by breathing slowly and deeply, stretching muscles, and forcing yourself to perform any type of action.
Counteract the effects of adrenaline rush by shifting your feelings of panic and fear to feelings of anger at the offender.
Do not assume the ASI can be handled in-house without assistance from law enforcement. Call 911 as soon as possible.
Use the Window of Life protocol for the sequence of responses during the first critical seconds of an ASI: <ol style="list-style-type: none"> 1) Protect self in order to protect others; 2) Protect those in the immediate area who are in immediate danger; 3) Protect the building or broader campus, alerting those who may be affected by the crisis but may have more time to react; and 4) Call 911.
Use a mobile panic alarm, if available, to immediately and inconspicuously alert law enforcement and school officials of the situation.
Alert others that an ASI is occurring, using any available means, such as the public address system or other communication system.
Do not use code words when alerting others to an ASI; instead, use simple language that all persons (even substitutes and visitors) can understand.

<p>Provide as much information as possible about the shooter when alerting emergency responders, such as the location of the shooter, number of shooter(s), description of the shooter(s), number and type of weapon(s), and the number of potential victims.</p>
<p>Project a calm, confident, and serious attitude to assure others of the seriousness of the situation and the need to take action.</p>
<p>II. Determine whether to Run (Evacuate), Hide (Lockdown), or Fight (Active Resistance) during an Active Shooter Incident (ASI).</p>
<p>Immediately discern the type of crisis and appropriate response for providing the greatest chance of survival: run, hide, or fight.</p>
<p>Do not limit your determination of a response to an ASI by a one-response-fits-all-situations policy. Instead, be flexible and base the response on the specific situation.</p>
<p>Be cognizant that in some cases, you will need to use more than one response option as the situation develops and changes.</p>
<p>If both you and the assailant are inside, either evacuate or lockdown, whichever option is safest.</p>
<p>If the assailant is inside and you are outside, flee to the closest area providing cover (ballistic-stopping capability) and concealment (hiding).</p>
<p>If both you and the assailant are outside, seek shelter in the closest building, secure the exterior door, and engage in lockdown procedures.</p>
<p>If both you and the assailant are outside and you can't enter a building, move in the opposite direction of the assailant and look for anything that will provide cover (ballistic-stopping capability) and concealment (hiding).</p>
<p>If the assailant is outside and you are inside, secure all exterior and interior doors and windows.</p>
<p>Consider lockdown as an initial response strategy. A secondary response of evacuation or active resistance may be required.</p>

Whether inside or outside, seek cover, if possible, by using items in the environment with ballistic-stopping capabilities.
Whether inside or outside, if left without cover (ballistic-stopping capability), move to concealment (hiding).
If all personal survival responses, such as evacuation or lockdown, are no longer an option in an ASI, use active resistance against the assailant.
In all ASI responses, shield students from disturbing scenes as much as possible.
III. Run (Evacuate) if there is an accessible escape path and it is safe to evacuate during an Active Shooter Incident (ASI).
Evacuate if conditions outside are safer than inside.
Be mindful during evacuation that the assailant may have blocked or booby trapped the exit.
Be mindful during evacuation that the assailant may be waiting outside to shoot at victims as they flee.
Be mindful that the assailant may have activated the fire alarm to generate targets.
Evacuate only if it is safe to flee and there is an accessible escape path.
Take the closest and safest way out when evacuating.
Use a secondary route or exit if the primary route or exit is blocked or hazardous.
During evacuation, consider using windows or uncommon doors, such as loading dock exits, for egress.
Help others escape. Assist those needing special assistance.
If evacuation is necessary, do not stay behind if others will not go with you.

Take the crisis kit and roll book/student roster with you, if it doesn't impede quick evacuation.
Leave personal belongings behind.
Avoid escalators and elevators during an evacuation.
Do not attempt to move seriously wounded people during an evacuation.
During evacuation, prevent others from entering the area where the assailant may be.
As you evacuate, keep your hands visible at all times. Hold your hands on your head or above your head.
During evacuation, move far enough away from the location of the active shooter situation to be safe (the greater the distance, the better).
Proceed to the designated assembly area and take attendance.
Check people for injuries after reaching the designated assembly area.
IV. Hide (Lockdown) to deny the assailant access to persons in the building during an Active Shooter Incident (ASI).
Implement lockdown when evacuation is not safe or possible.
Consider lockdown as a method of denying the shooter access to the occupants of the building.
During a lockdown, clear individuals from the hallway immediately.
Unless you are very close to an exit during an ASI, seek shelter in a room that has not already been secured.
Do not run down a long hallway to get to an exit because you may encounter the assailant.
During an ASI, do not hide in a restroom unless the door can be secured or there are no other options available.

If you are already in a room that can be secured, stay in the room and immediately lock the door.
During a lockdown, assist those needing special assistance.
During a lockdown, close and lock all windows and doors immediately, including doors interconnecting to adjacent rooms.
You may encounter difficulty inserting the key into the door lock because fine motor activity may be impaired during an ASI.
If the door does not have a lock and opens inward, use a heavy wedge to secure it. Improvise with folded magazines or newspapers, if necessary, to place between the door and the floor or frame.
If the door does not have a lock, improvise by using a rope, belt, or tactical cinch to tie the door handle to something else.
Barricade the doorway with any available objects, including desks, heavy furniture, and file cabinets.
Add books or other materials to the barricade to increase the ballistic-stopping capability and make the barricade heavier and more difficult for the assailant to move out of the way.
If the door swings outward into the hallway, barricade it for the purpose of impeding or delaying entrance by the assailant.
Cover windows, including windows in doors, unless your law enforcement suggests otherwise.
Be mindful that covering windows will prevent the assailant from seeing into the room but will also impede law enforcement from assessing the situation.
Do not display cards or posters in the window or under the door that signify the status of the individuals in the room. The cards could unintentionally alert the assailant to the location of potential targets.
During lockdown, turn off all lights.

During lockdown, turn off all sources of noise, such as radios, television, and cell phones.
During lockdown, silence both the ringer and vibration mode of cell phones.
During a lockdown, all individuals seeking shelter in the room must remain quiet.
During a lockdown, move everyone to a location in the room where they will least likely be observed through a window or reflection.
During a lockdown, keep individuals away from all doors and windows. Move to interior walls.
During a lockdown, be mindful that the assailant may fire into rooms through the doors, walls, or windows.
During a lockdown, hide behind large items and use items in the environment, such as thick books or bullet-proof whiteboards, to slow down or impede bullets.
During a lockdown, stay low to the ground.
During a lockdown, hide along the wall closest to the exit, but out of view from the hallway, to allow for escape or ambush of the assailant if the door is breached.
Do not position yourself or others directly in front of the door because the assailant might fire through the door.
During a lockdown, do not open the door for anyone other than verified emergency responders or administration.
During a lockdown, be mindful that if you are commanded to open the door, the command may be coming from the assailant.
During lockdown, stay vigilant and never assume you are completely safe.
Consider escaping through a window after first seeking shelter in a room, especially if the door cannot be locked.

Be mindful that if the assailant encounters a locked door, the assailant may appear moments later at the window to attempt entrance.
If lockdown appears to be failing and the assailant may gain entrance to the room, use any available alternative means to safely exit or prepare to defend yourself through active resistance.
V. Fight (Active Resistance) as a last resort when life is in imminent danger during an Active Shooter Incident (ASI).
If the assailant gains access to the room, immediately make a decision on whether to stay still, run, or fight.
If the assailant is not shooting and you choose to stay: obey the assailant's commands, do not move suddenly, and do not do anything to provoke the assailant.
Be mindful that freezing or playing dead usually does not avert the assailant from attacking you.
Be cognizant that a moving target is more difficult to hit than a stationary one.
If the assailant enters the room, do not huddle together with others because huddling allows for a bigger and easier target for the assailant.
If the assailant enters the room and you try to escape, use any available alternative means of egress, including windows.
If the assailant enters the room and you decide to run, run for an exit in a leap frog or zigzag manner and use cover (ballistic-stopping capability) along the way.
If loss of life appears imminent and you decide to fight, be mindful that you are in a deadly force situation and must attack aggressively with the purpose of causing severe injury or death to the assailant.
Be mindful that the assailant probably will not expect to be attacked by unarmed persons.

If you decide to fight, take whatever action is necessary to neutralize, disarm, and incapacitate the assailant and protect life.
Consider swarming or ambushing the assailant as soon as the assailant enters the room.
Do not position anyone directly in front of the door because the assailant might fire through the door.
Do not position anyone directly across the room from the door because the intruder will typically look straight ahead when first entering the room and may shoot in that direction first.
To enhance your ability to ambush the assailant, position the individuals along the wall common to the door, on the hinged side of the door, so the assailant must fully enter the room before seeing anyone.
Assign someone to attempt to get the gun away from the shooter while others swarm the assailant.
Be mindful that when the assailant breaches the door, you will have only seconds to launch a counterattack.
When you fight, act aggressively, including yelling, punching, kicking, pulling hair, biting, gouging, throwing items, and improvising weapons.
If at all possible, attack the assailant's vitals, such as eyes, nose, throat, head, and groin.
If you are shot, but still conscious, keep fighting until the shooter is stopped.
Do not engage in active resistance as a first response, but only as a last resort when all other options have been exhausted.
Do not take a "hide and hope" response approach when confronted with the active shooter. Instead, be an active participant in saving your life and those under your care.

VI. Respond appropriately when law enforcement arrives in order to maximize effective intervention by the police during an Active Shooter Incident (ASI).

Be mindful that law enforcement's immediate purpose upon arrival is to stop the active shooter as soon as possible.

Be mindful that law enforcement will not stop to help the injured or escort people from the building until the assailant has been stopped.

Do not point, scream, or yell at the officers upon their arrival.

Do not try to hold on to the officers for safety upon their arrival.

When evacuating, don't ask the officers for help or directions. Just proceed in the direction from which the officers are entering the premises.

Be mindful that you may fit the profile of the assailant. Expect to be treated like a suspect until the officers can assess the situation.

Avoid acting in a way that could cause you to be mistaken for the assailant.

When law enforcement arrives, do not move. If you must move, move slowly and deliberately.

When law enforcement arrives, avoid making quick movements toward the officers.

When law enforcement arrives, slowly put down any items in your hands, such as bags or jackets.

When law enforcement arrives, immediately raise your hands and spread your fingers or place your hands on your head.

When law enforcement arrives, keep your hands visible at all times.

If you were successful in subduing and disarming the assailant, do not hold the firearm in a way that might cause officers to mistake you for the shooter.

When law enforcement arrives, comply immediately with any commands they give. Do not argue with the officers.

APPENDIX B: SURVEY QUESTIONNAIRE

Response to Active Shooter Incidents Survey

Introduction to Survey:

Thank you for agreeing to take part in this important survey.

The purpose of this survey is to gauge the extent of school personnel's knowledge of how to respond to Active Shooter Incidents (ASIs).

The information you provide will be valuable in developing a universal guide for school officials to use for customized response procedures for their schools.

The survey is voluntary, anonymous, and confidential. You will not be asked to provide any information that would identify you or your school.

The survey is expected to take approximately 15 minutes to complete.

Please complete this survey by October 31, 2013.

Thank you for taking time out of your busy day to support this important research topic!

1. Have you been trained on how to respond to an Active Shooter Incident in your school?
 - a. Yes
 - b. No

Category I: Initial Response Decisions and Actions

Initial response decisions and actions should be implemented within 30 seconds of an Active Shooter Incident (ASI).

Please indicate if you are aware of the following information or strategies relative to initial response decisions or actions during an Active Shooter Incident (ASI).

Your responses should not indicate whether you feel this is an appropriate strategy, but rather if you are aware of this strategy or information.

2. Are you aware that the first 30 seconds of an Active Shooter Incident (ASI) are critical because most ASIs last less than ten minutes?
 - a. Yes
 - b. No

3. Are you aware that Active Shooter Incidents (ASIs) evolve quickly, are unpredictable, and typically there is no pattern in the selection of victims?
 - a. Yes
 - b. No
4. Are you aware that you may be placed in the role of first responder during an Active Shooter Incident (ASI) because the incident could be over before the arrival of law enforcement?
 - a. Yes
 - b. No
5. Are you aware that at the first indication of an ASI, you should select the first response option that appears to work (satisficing) rather than waste time trying to determine the best response (optimizing)?
 - a. Yes
 - b. No
6. Are you aware that you need to use individual judgment rather than chain-of-command protocol to decide whether to evacuate or lockdown when confronted with an ASI since the first few seconds are critical?
 - a. Yes
 - b. No
7. Are you aware that waiting for a formal alert from administration to initiate a response to an ASI could result in potential injury or loss of life?
 - a. Yes
 - b. No
8. Are you aware that the first notification to activate a response to an ASI may be the sound of gunshots or screams?
 - a. Yes
 - b. No
9. Did you know that your brain will attempt to normalize sounds of gunfire and cause you to deny the likelihood of an ASI?
 - a. Yes
 - b. No
10. Are you aware that you will need to overcome the initial denial that an ASI is occurring and force yourself to take immediate action?
 - a. Yes
 - b. No
11. Did you know that if you hear anything that sounds like firecrackers or gunfire, you should respond immediately as if it is gunfire?
 - a. Yes
 - b. No
12. Did you know that you should not waste time confirming with others that shots were fired?
 - a. Yes
 - b. No

13. Are you aware that it is better to over-react than under-react to a potential ASI?
 - a. Yes
 - b. No
14. Are you aware that a cautious response could potentially lead to death or injury?
 - a. Yes
 - b. No
15. Did you know that you should not assume the ASI can be handled in-house without assistance from law enforcement and you should call 911 as soon as possible?
 - a. Yes
 - b. No
16. Are you aware of the 'Window of Life' protocol for the sequence of initial responsibilities in response to an ASI?
 - a. Yes
 - b. No
 - c. Unsure
17. Are you aware that, if possible, you should alert others that an ASI is occurring, using any available means, such as the public address system or other communication system?
 - a. Yes
 - b. No
18. Are you aware that you should not use code words when alerting others to an ASI, but should instead use simple language that all persons can understand?
 - a. Yes
 - b. No
19. Are you aware that you should expect to be surprised and confused during an ASI?
 - a. Yes
 - b. No
20. Are you aware that during an ASI, you will probably experience reduced efficiency of fine motor skills, visual and auditory acuity, sense of time, and ability to think clearly and logically, due to the effects of adrenaline rush?
 - a. Yes
 - b. No
21. Did you know that you can counteract the effects of adrenaline rush by breathing slowly and deeply, stretching muscles, and forcing yourself to perform any type of action?
 - a. Yes
 - b. No
22. Did you know that you may be able to counteract the effects of adrenaline rush by shifting your feelings of panic and fear to feelings of anger at the offender?
 - a. Yes
 - b. No

Category II: Determination of Appropriate Action

Determine whether to run (evacuate), hide (lockdown), or fight (active resistance) during an Active Shooter Incident (ASI).

Please indicate if you are aware of the following information or strategies relative to the determination of the type of action to be taken during an Active Shooter Incident (ASI).

Your responses should not indicate whether you feel this is an appropriate strategy, but rather if you are aware of this strategy or information.

23. Did you know that the determination of your response to an ASI should not be limited by a one-response-fits-all-situations policy but you should be allowed flexibility to base the response on the specific situation?
 - a. Yes
 - b. No
24. Did you know that if both you and the assailant are inside, you should either evacuate or lockdown, whichever is safest?
 - a. Yes
 - b. No
25. Did you know that if the assailant is inside and you are outside, you should flee to the closest area providing cover (ballistic-stopping capability) and concealment (hiding)?
 - a. Yes
 - b. No
26. Did you know that if both you and the assailant are outside, you should seek shelter in the closest building, secure the exterior door, and engage in lockdown procedures?
 - a. Yes
 - b. No
27. Did you know that if both you and assailant are outside and you can't enter a building, you should move in the opposite direction of the assailant and look for anything that will provide cover (ballistic-stopping capability) and concealment (hiding)?
 - a. Yes
 - b. No
28. Did you know that if the assailant is outside and you are inside, you should secure all exterior and interior doors and windows?
 - a. Yes
 - b. No
29. Are you aware that lockdown should be considered an initial response strategy and that a secondary response of evacuation or active resistance may be required?
 - a. Yes
 - b. No

30. Did you know that whether inside or outside, if left without cover (ballistic-stopping capability), you should move to concealment (hiding)?
- a. Yes
 - b. No
31. Are you aware that if all other personal survival responses, such as evacuation or lockdown, are no longer an option in an ASI, you should use active resistance against the assailant?
- a. Yes
 - b. No
32. Did you know that in all ASI responses, you should shield students from disturbing scenes, as much as possible?
- a. Yes
 - b. No

Category III: Run (Evacuate)

Run (Evacuate) if there is an accessible path and it is safe to evacuate during an Active Shooter Incident (ASI).

Please indicate if you are aware of the following information or strategies relative to evacuation during an Active Shooter Incident (ASI).

Your responses should not indicate whether you feel this is an appropriate strategy, but rather if you are aware of this strategy or information.

33. Are you aware that you should evacuate if conditions outside are safer than inside?
- a. Yes
 - b. No
34. Did you know that during evacuation you should be mindful that the assailant may have blocked or booby trapped the exit?
- a. Yes
 - b. No
35. Did you know that during evacuation you should be mindful that the assailant may be waiting outside to shoot at victims as they flee?
- a. Yes
 - b. No
36. Are you aware that it is possible the assailant may have activated the fire alarm to generate targets?
- a. Yes
 - b. No
37. Are you aware that you should evacuate only if it is safe to flee and there is an accessible escape path?
- a. Yes
 - b. No

38. Are you aware that you should take the closest and safest way out?
- a. Yes
 - b. No
39. Are you aware that you should use a secondary route or exit if the primary route or exit is blocked or hazardous?
- a. Yes
 - b. No
40. Did you know that during evacuation, you should consider using windows or uncommon doors, such as loading dock exits?
- a. Yes
 - b. No
41. Are you aware that you should help others escape and assist those needing special assistance?
- a. Yes
 - b. No
42. Are you aware that if evacuation is necessary, you should not stay behind if others will not go with you?
- a. Yes
 - b. No
43. Are you aware that the crisis kit and roll book/student roster should be taken with you, if it doesn't impede quick evacuation?
- a. Yes
 - b. No
 - c. Not Applicable
44. Did you know that you should leave personal belongings behind?
- a. Yes
 - b. No
45. Did you know that you should avoid escalators and elevators during an evacuation?
- a. Yes
 - b. No
46. Did you know that you should not attempt to move wounded people during an evacuation?
- a. Yes
 - b. No
47. Are you aware that during evacuation, you should prevent others from entering the area where the assailant may be?
- a. Yes
 - b. No
48. Did you know that as you are evacuating, you should keep your hands visible at all times and hold your hands on your head or above your head?
- a. Yes
 - b. No

49. Are you aware that after evacuating, you should go to the designated assembly area and take attendance?
- a. Yes
 - b. No
50. Do you know to check people for injuries after the evacuation?
- a. Yes
 - b. No

Category IV: Hide (Lockdown)

Hide (Lockdown) to deny the assailant access to individuals in the building during an Active Shooter Incident (ASI).

Please indicate if you are aware of the following information or strategies relative to lockdown during an Active Shooter Incident (ASI).

Your responses should not indicate whether you feel this is an appropriate strategy, but rather if you are aware of this strategy or information.

51. Did you know that you should implement lockdown when evacuation is not safe or possible?
- a. Yes
 - b. No
52. Did you know that during a lockdown, individuals should be cleared from the hallway immediately?
- a. Yes
 - b. No
53. Did you know that you should not run down a long hallway to get to an exit because you may encounter the assailant?
- a. Yes
 - b. No
54. Are you aware that unless you are very close to an exit during an ASI, you should seek shelter in a room that is not already secured?
- a. Yes
 - b. No
55. Are you aware that during an ASI, you should not hide in a restroom unless the door can be secured or there are no other options available?
- a. Yes
 - b. No
56. Are you aware that during a lockdown you should assist those needing special assistance?
- a. Yes
 - b. No

57. Are you aware that during a lockdown, all windows and doors should be closed and locked, including doors interconnecting to adjacent rooms?
- a. Yes
 - b. No
58. Are you aware that fine motor activity will be impaired during an ASI and you may encounter difficulty inserting the key into the door lock?
- a. Yes
 - b. No
59. Are you aware that if the door has no lock and opens inward, you could use a heavy wedge to secure it, even improvising with folded magazines or newspapers to place between the door and floor or frame?
- a. Yes
 - b. No
60. Did you know that you should barricade the doorway with any available objects, including desks, heavy furniture, and file cabinets?
- a. Yes
 - b. No
61. Did you know that you could add books or other materials to the barricade to increase the ballistic-stopping capability and to make the barricade heavier and more difficult for the assailant to move out of the way?
- a. Yes
 - b. No
62. Are you aware that even if the door swings outward into the hallway, you should barricade the doorway to impede and delay entrance by the assailant?
- a. Yes
 - b. No
63. Did you know that if the door has no lock, you could use a rope, belt, or tactical cinch to tie the door handle to something else?
- a. Yes
 - b. No
64. Did you know that windows, including windows in doors, should be covered unless your law enforcement suggests otherwise?
- a. Yes
 - b. No
65. Did you know that, although covering windows will prevent the assailant from seeing into the room, it will also impede law enforcement from assessing the situation?
- a. Yes
 - b. No
66. Did you know that you should not display cards in the window or under the door that signify the status of the individuals in the room because the cards could unintentionally alert the assailant to the location of potential targets?
- a. Yes
 - b. No

67. Are you aware that during lockdown all lights should be turned off?
- a. Yes
 - b. No
68. Are you aware that during a lockdown, you should turn off all sources of noise, such as radios, television, and cell phones?
- a. Yes
 - b. No
69. Are you aware that during a lockdown, both the ringer and vibration modes of cell phones must be silenced?
- a. Yes
 - b. No
70. Are you aware that during a lockdown, all individuals seeking shelter in the room must remain quiet?
- a. Yes
 - b. No
71. Did you know that you should move everyone to a location in the room where they will least likely be observed through a window or reflection?
- a. Yes
 - b. No
72. Are you aware that during a lockdown, individuals in the room should stay away from all doors and windows and move to interior walls?
- a. Yes
 - b. No
73. Did you know that during a lockdown, you should be mindful that the assailant may fire into rooms through the doors, walls, or windows?
- a. Yes
 - b. No
74. Did you know that during a lockdown, people should hide behind large items and use items in the environment, such as thick books, to slow down or impede bullets?
- a. Yes
 - b. No
75. Did you know that during a lockdown, individuals should stay low to the ground?
- a. Yes
 - b. No
76. Are you aware that during a lockdown, people should hide along the wall closest to the exit, but out of view from the hallway, to allow for escape or ambush of the assailant if the door is breached?
- a. Yes
 - b. No
77. Are you aware that during a lockdown, the door should not be opened for anyone other than verified emergency responders or administration?
- a. Yes
 - b. No

78. Are you aware that if you are commanded to open the door, the command may be coming from the assailant?
- a. Yes
 - b. No
79. Are you aware that heightened vigilance is necessary during a lockdown and that you can never assume you are completely safe?
- a. Yes
 - b. No
80. Did you know you should consider escaping through a window after first seeking shelter in a room, especially if the door can't be locked?
- a. Yes
 - b. No
81. Are you aware that if the assailant encounters a locked door, the assailant may appear moments later at the window to attempt entrance?
- a. Yes
 - b. No
82. Did you know that if lockdown appears to be failing and the assailant may gain entrance to the room, you should use any available alternative means to safely exit?
- a. Yes
 - b. No

Category V: Fight (Active Resistance)

Fight (Active Resistance) as a last resort when life is in imminent danger during an Active Shooter Incident (ASI).

Please indicate if you are aware of the following information or strategies relative to active resistance during an Active Shooter Incident (ASI).

Your responses should not indicate whether you feel this is an appropriate strategy, but rather if you are aware of this strategy or information.

83. Are you aware that if the assailant gains access to the room, you will have to make a decision on whether to stay still, run, or fight?
- a. Yes
 - b. No
84. Did you know that if the assailant is not shooting and you choose to stay, you should obey the assailant's commands, should not move suddenly, and should not do anything to provoke the assailant?
- a. Yes
 - b. No

85. Are you aware that freezing or attempting to play dead usually does not avert the assailant from attacking you?
- a. Yes
 - b. No
86. Did you know that if the assailant enters the room, people should not huddle together because that allows for a bigger and easier target for the assailant?
- a. Yes
 - b. No
87. Did you know that if you decide to run, you should run for an exit in a leap frog or zigzag manner and use cover (ballistic-stopping capability) along the way?
- a. Yes
 - b. No
88. Are you aware that if loss of life appears imminent and you decide to fight, you are in a deadly force situation and must attack aggressively with the purpose to cause injury or death to the assailant?
- a. Yes
 - b. No
89. Are you aware that if you decide to fight, you must do anything necessary to neutralize and disarm the assailant and protect life?
- a. Yes
 - b. No
90. Are you aware that if you fight, you must act aggressively, including yelling, punching, kicking, pulling hair, biting, gouging, throwing items, and improvising weapons?
- a. Yes
 - b. No
91. Did you know that, if at all possible, you should attack the assailant's vitals, such as eyes, nose, throat, head, and groin?
- a. Yes
 - b. No
92. Are you aware that the assailant probably will not expect to be attacked by unarmed persons?
- a. Yes
 - b. No
93. Are you aware that you should consider swarming or ambushing the assailant as soon as the assailant enters the room?
- a. Yes
 - b. No
94. Are you aware that individuals should not be positioned directly in front of the door because the assailant might fire through the door?
- a. Yes
 - b. No

95. Are you aware that people should not be positioned directly across from the door because the intruder will typically look straight ahead when first entering the room?
- a. Yes
 - b. No
96. Did you know that to enhance your ability to ambush the assailant, individuals should be positioned along the wall common to the door, on the hinged side of the door, so the assailant must fully enter the room before seeing anyone?
- a. Yes
 - b. No
97. Are you aware that you should not engage in active resistance as a first response, but only as a last resort when all other options have been exhausted?
- a. Yes
 - b. No

Category VI: Response to Law Enforcement

Respond appropriately when law enforcement arrives during an Active Shooter Incident (ASI).

Please indicate if you are aware of the following information or strategies relative to the arrival of law enforcement during an Active Shooter Incident (ASI).

Your responses should not indicate whether you feel this is an appropriate strategy, but rather if you are aware of this strategy or information.

98. Did you know that law enforcement's immediate purpose upon arrival is to stop the active shooter as soon as possible?
- a. Yes
 - b. No
99. Are you aware that law enforcement will not stop to help the injured or escort people from the building until the assailant has been stopped?
- a. Yes
 - b. No
100. Are you aware that you should not point, scream, or yell at the officers upon their arrival?
- a. Yes
 - b. No
101. Are you aware that you should not try to hold on to the officers for safety upon their arrival?
- a. Yes
 - b. No

102. Did you know that when evacuating, you should not ask the officers for help or directions, but should just proceed in the direction from which the officers are entering the premises?
- a. Yes
 - b. No
103. Are you aware that you may fit the profile of the assailant and should expect to be treated like a suspect until the officers can assess the situation?
- a. Yes
 - b. No
104. Are you aware that you should avoid acting in a way that could cause you to be mistaken for the assailant?
- a. Yes
 - b. No
105. Are you aware that when officers arrive, you should not move; but if you must move, you should move slowly and deliberately?
- a. Yes
 - b. No
106. Are you aware that you should avoid making quick movements toward the officers upon their arrival?
- a. Yes
 - b. No
107. Did you know that when officers arrive, you should slowly put down any items in your hands, such as bags or jackets?
- a. Yes
 - b. No
108. Did you know that when officers arrive, you should immediately raise your hands and spread your fingers or place your hands on your head?
- a. Yes
 - b. No
109. Did you know that when officers arrive, you should keep your hands visible at all times?
- a. Yes
 - b. No
110. Are you aware that if you were successful in subduing and disarming the assailant, you should not hold the firearm in a way that officers might mistake you for the shooter?
- a. Yes
 - b. No

VII: Additional Questions

Please respond to the following seven questions relative to your school.

- 111. Are you allowed to use independent judgment for determining a response to an ASI?
 - a. Yes
 - b. No
 - c. Unsure
- 112. Is your room equipped with a locking door?
 - a. Yes
 - b. No
 - c. Unsure
- 113. If your door has a lock, can the door be locked from the inside of the room?
 - a. Yes
 - b. No
 - c. Unsure
 - d. Not Applicable
- 114. If your door has a lock, does it require a key to lock the door?
 - a. Yes
 - b. No
 - c. Unsure
 - d. Not Applicable
- 115. Are you provided with a mobile alarm panic button?
 - a. Yes
 - b. No
- 116. Is your room equipped with two-way communication technology?
 - a. Yes
 - b. No
 - c. Unsure
- 117. Is your room equipped with bullet-proof whiteboards?
 - a. Yes
 - b. No
 - c. Unsure

APPENDIX C: IRB EXEMPTION

From: AVPR IRB [ospirb@txstate.edu]
Sent: Wednesday, September 04, 2013 8:18 AM
To: Dusek, Denise L
Subject: Exemption Request EXP2013R478369C - Approval

DO NOT REPLY TO THIS MESSAGE. This email message is generated by the IRB online application program.

Based on the information in IRB Exemption Request EXP2013R478369C which you submitted on 08/29/13 21:58:14, your project is exempt from full or expedited review by the Texas State Institutional Review Board.

If you have questions, please submit an IRB Inquiry form:

http://www.txstate.edu/research/irb/irb_inquiry.html

Comments:
No comments.

=====
Institutional Review Board

Office of Research Compliance

Texas State University-San Marcos

(ph) 512/245-2314 / (fax) 512/245-3847 / ospirb@txstate.edu / JCK 489

601 University Drive, San Marcos, TX 78666

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