

QUALITATIVE COLLECTIVE CASE STUDY OF TARGETED VIOLENCE  
PREPAREDNESS AT INSTITUTIONS OF HIGHER EDUCATION

by

Timothy Alexander Gunter

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

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## ABSTRACT

An increase in targeted violence incidents (TVIs), primarily active shooter events, at institutions of higher education (IHEs) has exposed gaps in campus security plan preparation and exercises. The purpose of this qualitative collective case study was to discover barriers to and best practices of universities and colleges conducting security preparedness activities for TVIs. The theory that guided this study was vested interest theory which predicts how attitudes will influence behavior in a commitment to preparedness fundamentals. The setting for this study was two institutions of higher education along the East Coast of the United States. Data collection techniques included site documentation review, observation, and interviews of campus administrators, faculty, emergency managers, and senior campus police officials. The three data types were triangulated and summarized for each of the five research questions (a-e). I identified four themes from the interview data: hindrances, recommendations, best practices, and vested interests. The major barriers to security preparedness were lack of resource funding for dedicated preparedness staff and activities; apathy regarding campus security preparedness by administrators, staff faculty and students; multiple federal security preparedness guides; and the lack of requirements for robust security planning and exercises. Major recommendations identified from this study include increased funding for campus security preparedness, IHE senior leadership must model the way for campus security preparedness, IHEs acquire campus security accreditation, and the transfer of IHE campus security preparedness oversight from the Department of Education (DOE) to Federal Emergency Management Agency (FEMA).

*Keywords:* preparedness, plans, security, exercises, colleges, universities, targeted violence incident (TVI), active shooter

### **Dedication**

I dedicate this research to those that have lost their lives to senseless acts of violence on our campuses and to those that strive to make campuses safer. Hoping things work out is not a strategy for success. We owe our students, faculty, and staff the due diligence to ensure IHEs can respond successfully.

### **Acknowledgments**

This research would not have been possible without the help of my Committee Chair, Dr. Ellen Black, and my other committee members, Dr. Terry Spohn and Dr. Matthew Snyder. Dr. Russ Yocum, an outstanding research consultant, provided me with a versatile toolkit to be successful as a qualitative researcher. Thanks as well to the faculty and staff of the two participating institutions who generously gave of their time to provide the data for this study. Their willingness to participate in my study and quality of the data collected far exceeded my expectations.

Thank you to my wife, Elaine, for always believing in me. Thanks to my children, Callie and Alex, who gave up a lot of daddy time over a five year period so that I could complete all the doctoral coursework and this dissertation. My mother and father were also extremely supportive. Dr. Randy Gunter, Dr. Glenda Gunter, and Dr. Jennifer Reeves also served as tremendous family support networks and mentors during this journey. Thanks for pushing me to get this done!

Lastly, my decision to transfer from George Washington University to Liberty in 2013, to finish my doctoral journey was a great blessing. I have been impressed across the board with Liberty University's faculty, academic advisors, support staff, and students throughout the campus. A Christian worldview was evident every day and greatly enhanced my doctoral journey.

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### **List of Abbreviations**

Advanced Law Enforcement Rapid Response Training (ALERRT)

Commission on Accreditation for Law Enforcement Agencies (CALEA)

Department of Education (DOE)

Department of Homeland Security (DHS)

Federal Bureau of Investigation (FBI)

Federal Emergency Management Agency (FEMA)

Higher Education Opportunity Act (HEOA)

Homeland Security Academic Advisory Council (HSAAC)

Hybrid Targeted Violence (HTV)

Incident Command System (ICS)

Institution of Higher Education (IHE)

International Association of Campus Law Enforcement Administrators (IACLEA)

National Incident Management System (NIMS)

Table Top Exercise (TTX)

Targeted Violence Incident (TVI)

## **CHAPTER ONE: INTRODUCTION**

### **Overview**

An increase in targeted violence incidents (TVIs) in institutions of higher education (IHEs) has highlighted the need for more focus on security planning and campus security exercises. While campus security preparedness has improved greatly over the last 50 years, the lack of federal or state requirements to engage in preparedness activities for TVIs has led to inadequate security plans and exercises. There is a gap in the literature regarding best practices to build vested interest in security preparedness. This qualitative collective case study helps to bridge that gap and contribute recommendations to improve campus security preparedness. The research audience includes legislative representatives, federal agencies, campus security personnel, and higher education administrators with influence over college and university practices. In this chapter I first provide a background of the topic, followed by a description of how this topic applies to myself. Next are the problem and purpose statements, which are followed by the significance that this study may have on the research literature and the world at large. Finally, the research questions designed to address these problems are listed.

### **Background**

As of 2015 there were 4,627 IHEs (public, private, 4-year, 2-year) that serve over 15 million students and several million faculty, staff, and visitors annually (International Association of Campus Law Enforcement Administrators, 2015; U.S. Department of Education, National Center for Education Statistics, 2015). Over the last 25 years, there has been a steady rise in TVIs on college and university campuses in the U.S. (Kaminski, Koons-Witt, Thompson, & Weiss, 2010). These acts may originate from planned terror attacks, revenge-motivated attacks, and/or random events, the number of which has increased in the United States and

around the world (Federal Emergency Management Agency, 2013b). In his February 11, 2003, testimony before the Select Committee on Intelligence of the United States, FBI Director Robert Mueller, reported:

Our investigations suggest that al-Qaeda has developed a support infrastructure inside the U.S. that would allow the network to mount another terrorist attack on U.S. soil.

Multiple small scale attacks against soft targets-such as banks, shopping malls, supermarkets, apartment buildings, schools and universities, churches, and places of recreation and entertainment-would be easier to execute. (U.S. Department of Justice, 2005, p. 62)

The type of assailants and weapons that result in a TVI may vary along with the severity of the event (Federal Emergency Management Agency, 2013b). The most commonly used weapon is a gun, but knives, bombs, gases, and fire may be used as well. Types of assailants may vary from terrorists, unstable mentally ill individuals, gangs, disgruntled IHE community members, and individual criminals. Types of active violence incidents include armed assault, armed attack, intrusion, deadly force incident, active shooter, targeted act of violence, and other similar attacks (Federal Emergency Management Agency, 2013b).

Active shooter incidents constitute a large majority of the type of TVIs that have been perpetrated at colleges and universities over the last 40 years. “An active shooter is an individual actively engaged in killing or attempting to kill people in a confined space or other populated area, most often using firearms and following no pattern or method in the selection of victims” (Federal Emergency Management Agency, 2013b, p.2).

Following the attacks on Columbine in 1999, the U.S. Secret Service and the U.S. Department of Education teamed up to create the *Safe School Initiative* (Vossekuil, Fein, Reddy,

Borum, & Modzeleski, 2004). According to this study, the term *targeted violence* stems from the Secret Service's *Exceptional Case Study Project (ECSP)* to study individuals who have or have attempted to harm a prominent public official in the U.S. since 1949. In the ECSP, the Secret Service defined targeted violence as "any incident of violence where a known or knowable attacker selects a particular target prior to their violent act" (Vossekuil et al., 2004, p. 4). FEMA expands this definition to include the location as a target as well as a person(s). FEMA does not include incidents that "just happened to occur" at that location (e.g., the result of gang or drug activity; Federal Emergency Management Agency, 2013b).

Recent research has focused on looking beyond active shooter events to include hybrid targeted violence (HTV). Hybrid Targeted Violence (HTV) is another type of attack methodology in which there is an "intentional use of force to cause physical injury or death to a specifically identified population using multifaceted conventional weapons and tactics" (Frazzano & Snyder, 2014, p. 1). HTV incidents can involve multiple scenarios, including one or more active shooters, and the use of fire, improvised explosive devices (IEDs), and/or chemicals as weapons (Frazzano & Snyder, 2014). The Federal Bureau of Investigation (FBI) and the U.S. Secret Service are the two primary federal agencies focused on HTV research (Frazzano & Snyder, 2014).

For the purposes of this discussion and unless otherwise specified, I will use the term targeted violence or targeted violence incident (TVI) to refer generally to acts of violence for which IHEs must prepare. Whether it is an active shooter or a bombing, IHEs must strive to be ready for anything.

Combining the data in Blair and Schweit (2014), Kaminski, Koons-Witt, Thompson, and Weiss (2010), Lenn (2014), and McIntire and Wexler (2015), the following is a list of active



shooter events at U.S. IHEs between the years 1966 and 2015 with two or more fatalities or injuries: In August, 1966, 16 killed and 32 wounded at the University of Texas; July, 1976, seven killed at California State University at Fullerton; November, 1991, five killed and one wounded at the University of Iowa (IA); April, 1992, two killed at Indiana University (IN); December, 1992, two killed and four wounded at Simon's Rock College (MA); August, 1996, three killed at San Diego State University (CA); September, 1996, one killed and 41 wounded at Pennsylvania State University (PA); in 1998, one killed and three injured at South Texas Community College (TX); January, 2002, three killed and three wounded at the Appalachian School of Law (VA); October, 2002, three killed, at the University of Arizona Nursing College (AZ); 2003, one killed and two injured at Case Western Reserve University (OH); 2006, two killed at Shepherd University (WV); April, 2007, 32 killed and 17 wounded at Virginia Tech (VA); February, 2008, two killed at Louisiana Technical College (LA); February, 2008, six killed and 18 wounded at North Illinois University, (IL); 2008, two killed and one injured at University of Central Arkansas; 2010, three killed and three injured at University of Alabama (AL); 2012, one killed and seven injured at University of Pittsburgh Medical Center; April, 2012, seven killed and three injured at Oikos University in Oakland, CA (Lenn, 2014); and in October, 2015, nine killed and nine injured at the Umpqua Community College (OR) (McIntire & Wexler, 2015).

These incidents have raised awareness to prevent deaths from TVIs overall, with a focus on active shooters on campus (Schafer, Heiple, Giblin, & Burruss, 2010). King (2014) reported that following the active shooter incidents at Virginia Tech and North Illinois University, the number of IHEs with armed sworn officers nationwide showed small increases. This flurry of activity and interest immediately following campus violence quickly gives way to a sense of

complacency leaving IHEs vulnerable to a myriad of potential threats (Goodman, 2009).

Research by Seo, Torabi, Sa, and Blair (2012) indicated that even though most colleges have emergency plans in place, only 25% of campuses believed their students understood or were prepared to respond to a TVI.

The general problem that I address is that we know little about how campuses respond to violence and even less about how different constituents groups on campus respond to a potentially violent incident. Knowing the information would help us devise better plans for reacting to this type of problem as well as add to the literature on violence in educational settings. (Creswell, 2013, pp. 270-271)

Even though many colleges and universities have a division of the institution focused on emergency preparedness, many recommendations made from federal agencies to increase preparedness have not been adopted (Thompson & Schlehofer, 2014). According to federal agency data, only 52% of IHEs had drills for emergency response plans (Federal Emergency Management Agency, 2013b). Additionally, the respondents indicated that most of those plans were multipurpose and lacked significant depth for security incidents. The core document to prepare and respond to a TVI is a security plan. Even though awareness has grown since the TVIs at Virginia Tech and North Illinois University, the lack of overall crisis management plans is a major problem that impacts institutional operations, technology, and infrastructure (Wang & Hutchins, 2010).

While there are limited federal legislative requirements for emergency response and evacuation procedures at IHEs, there are no specific legislative requirements for IHEs to have campus security plans or conduct exercises for TVIs (U.S. Department of Education, 2010). Overall federal guidance on exercises rests with the U.S. Department of Homeland Security's

Federal Emergency Management Agency, which administers the Homeland Security Exercise and Evaluation Program (HSEEP). While campus preparedness resource investments have increased over the last 20 years, only 31% of colleges and universities have increased funding for campus safety since 2007 (Schafer et al., 2010). The Jeanne Clery Act requires the reporting of annual criminal statistics at IHEs to the U.S. Department of Education, but lacks comprehensive requirements for security plans and exercises at IHEs (Sokol, 2010). The only requirement under the Clery Act that are mandated in the Code of Federal Regulations (34 CFR 668.46) is to disclose emergency response and evacuation procedures. The U.S. Department of Education, Office of Postsecondary Education (2011) interprets the Code of Federal Regulations (34 CFR 668.46) as follows:

This requirement is intended to ensure that an IHE has sufficiently prepared for an emergency situation on campus, has tested those procedures to identify and improve on weaknesses, and has considered how it will inform the campus community and other individuals, such as parents and guardians. The Clery Act provides flexibility to IHEs in designing their tests and does not prescribe a particular type that must be used. (p. 49-50)

A sample procedures statement is provided in the U.S. Department of Education, Office of Postsecondary Education Handbook (2011), which links many other federal agency planning guidelines, but does not include them in the minimum requirements:

The University's Incident Manual includes information about Incident Teams, University operating status parameters; incident priorities and performance expectations; shelter-in place and evacuation guidelines; and local contingency and continuity planning requirements. University Departments are responsible for developing contingency plans and continuity of operations plans for their staff and areas of responsibility. The

University conducts numerous emergency response exercises each year, such as table top exercises, field exercises, and tests of the emergency notification systems on campus. (p. 104)

These numerous federal guidance documents for security preparedness are confusing and lack accountability of institutional performance. As a result, IHEs have limited vested interest in adopting federal agency recommendations.

### **Situation to Self**

My primary motivation and worldview to conduct this study is the current vulnerability of IHEs to effectively respond to TVIs on a college or university campus. My primary career path in the U.S. Coast Guard has been in contingency planning for security incidents and natural disasters. In 2007, I was selected for advanced education in the U.S. Coast Guard and received Port Security Industry Training (PSIT). PSIT is a unique opportunity for U.S. Coast Guard personnel to expand their knowledge of commercial port safety and security issues such as facility safety compliance, containerized or explosive handling operations, maritime transportation system recovery, and novel industrial processes. My PSIT was completed at the North Carolina State Port Authority where I focused on gaining insight into senior management problem solving relative to federal regulations and external influences. Additionally, I was assigned for several weeks at the U.S. Customs and Border Protection Agency field office in Wilmington, North Carolina regarding government agency screening of foreign vessels to increase professional knowledge to regulate the maritime industry.

I have served as the International Oil Spill Coordination Division Chief at the U.S. Coast Guard Headquarters in the Office of Marine Environmental Response (MER) Policy where I developed the exercise frameworks for the 2015-2016 Arctic Council's Agreement on

Cooperation in Pollution Preparedness and Response under U.S. Chairmanship. As the MER Oil & Hazardous Substance Division Response Branch Chief from 2011-2013 following Deepwater Horizon, I revitalized the MER Program's Response Resource Inventory, establishing the National Strike Force Center of Expertise, and completing a 10 year update of the guidelines for the U.S. Coast Guard Oil Spill Removal Organization Classification Program. Other assignments in the U.S. Coast Guard include Chief, Contingency Planning Division, Sector North Carolina; Assistant Branch Chief, Marine Casualty and Analysis Branch, District Eight, New Orleans; and Chief, Port Safety and Security Branch, Marine Safety Office, Mobile. I graduated from the U.S. Coast Guard Academy in 1997 with a Bachelor of Science in Civil Engineering.

Currently, in addition to my role as Director of the U.S. Coast Guard's District 5 North Region, I serve on the LANTAREA Incident Management and Assist Team (IMAT) as a Planning Section Chief (PSC). The IMAT features alternating duty teams of approximately 25 members each, trained in specific incident command roles who are available to deploy on approximately 12 hours' notice. The IMAT is a command control resource which can provide expert watch relief for extended command post operations and can further train and mentor personnel on the Incident Command System (ICS).

The three major incidents I have responded to or created national policy for in my 19 year career include 9/11 in 2001, Hurricane Katrina in 2005, and the Deepwater Horizon oil spill in 2010. Each of these disasters could have had improved response efforts with more focus on contingency plans and exercises to increase preparedness beforehand.

Finally, I am a father of two children who will attend college in the future. Given my professional background and the apparent weaknesses among many campuses, I want my children to be safe at the institution of their choice.

The philosophical assumption that led to my choice of research was epistemological (Creswell, 2013). This assumption is focused on getting information from participants, such as institution security planners, security exercise participants, and institution administrative leaders who have a role in emergency preparedness. Axiological assumption may play a role with potential bias from research subjects regarding the level of security preparedness at IHEs. The expectation from the parents and the public in general is that the executive and legislative branches of government will create sufficient federal legislation and regulatory requirements to maintain the safety of students, faculty, and staff at IHEs. The federal government has the responsibility of oversight of regulatory requirements in the Code of Federal Regulation (CFR) so that IHEs consistently meet the minimum federal requirements for student safety, whether the IHE is public or private, small or large. However, bias should not impact the study to a large extent. The methodological assumption should not be significant since a standardized system is in place from multiple federal agencies for guidance on campus security plans and exercises.

### **Problem Statement**

There is a lack of research regarding best practices for TVI security preparedness as well as how IHEs incorporate the varied and confusing federal agency guidance (e.g., Department of Education, Department of Homeland Security, Department of Justice, and Secret Service). According to the U.S. Department of Justice (2005), “There is little qualitative research on the response of college and university campuses to the threat of terrorist activity and no single entity serves as a clearinghouse for research, policy development, and information exchange” (p. 23).

Even if a security plan is in place, the literature suggests that most IHEs do not conduct exercises regularly or update their plans from exercise lessons learned. Overall IHE compliance with nationally published federal agency guidelines in emergency preparedness with regard to having an institutional emergency plan has been reported at 96%, however, less than 10% of those routinely exercise the plan (Cheung, Basiaga, & Olympia, 2014). A recent study indicated that even though most colleges have emergency plans in place, only 25% of campuses believed their students understood or were prepared to respond to a crisis (Seo et al., 2012).

Without significant legislative changes by Congress to require implementation of security planning recommendations and the HSEEP, motivating all IHEs to incorporate all federal recommendations to improve preparedness is a Sisyphean task. How and why are some IHEs independently vested to focus on preparedness? Barring new legislative requirements, how can other IHEs with lesser standards and practices be compelled to improve their preparedness actions?

### **Purpose Statement**

The purpose of this qualitative collective case study is to discover barriers to IHEs' implementation and maintenance of security preparedness for TVIs and to determine the most successful tactics to incorporate preparedness throughout all IHEs. The theory guiding this study is vested interest theory which predicts that self-interested attitudes will influence behavior towards a commitment towards preparedness fundamentals (Miller, Adame, & Moore, 2013). The more a behavior or attitude is perceived to benefit ones' self, the more a person will regard the behavior or attitude. Vested interest theory is a centerpiece of current IHE security preparedness given the lack of federal or state requirements for security plans and exercises. Campus security preparedness is based on how invested IHE leadership, campus administrators,

and other personnel are in exercise security plans and ensuring they are properly updated. Given the overall rarity of incidents of TVIs on IHEs, and the direct and indirect costs of preparedness as compared to other events and needs, some IHEs have a low vested interest in improving security preparedness.

The setting of this research study was two IHEs on the East Coast of the U.S. Data collection techniques included document analysis of institutional security plan documentation, observation of exercises or preparedness activities, and conducting field interviews of faculty, department chairs, and other campus representatives. Research questions were developed to gain insight into the challenges and potential recommendations for increasing higher education preparedness to respond to a TVI.

The primary theoretical framework used in this qualitative collective case study is vested interest theory. This theory is described by Miller, Adame, and Moore (2013):

Essentially, vested theory concerns the hedonic relevance of a particular attitude-object in its capacity to have meaningful personal consequences for an attitude holder. Hence, if an attitude object is hedonically relevant, that attitude will be highly invested, and act as a powerful predicator of outcome-relevant behavior. (p. 6)

The more that campus administrators, senior faculty, and other critical response personnel become vested in overall preparedness, the more likely that security plans, robust exercise schedules, and other risk reduction measures will be implemented. According to Snyder and Holder (2015), “Many students and professional educators would be surprised to find that investments and policies can be influenced by a desire to do ‘something’ rather than an ability to do the ‘right thing’” (p. 57). Research has also shown that vested theory is an important factor in



how individuals can motivate each other and improve attitudes and behaviors (Johnson, Siegel, & Crano, 2014).

### **Significance of the Study**

The significance of this study is that it could provide IHEs with a set of practical planning and exercise recommendations for TVIs by improving compliance with the HSEEP recommendations, the Higher Education Act (HEA) of 1965, and Title IV requirements. The research is clear that TVIs occur on IHE campuses with increasing frequency. When large scale TVIs occur on campus, as in Virginia Tech and North Illinois University in 2007 and 2008, appropriate and swift actions in accordance with the campus security plan by administrators, campus security, faculty, staff, and students can save lives. The numerous individual institutional task force and committee reports on security preparedness must be dusted off, reviewed, and updated annually. The goal of this qualitative collective case study is to increase preparedness, identify best practices, and ultimately to save lives during TVIs at IHEs.

### **Research Questions**

Security preparedness guidance for IHEs from disparate federal agencies is extensive; however, the limited research indicates that security guidance is not consistently implemented across the country. As a result, the theme of the following research questions is to discover which federal agency recommendations have been implemented and reasons why others have not.

From this research, it may then be possible to develop recommendations to increase overall campus preparedness (U.S. Department of Education, 2010). The following research questions helped develop interview questions to get a story from research participants: (a) How do institutions integrate federal agency multiyear exercise guidance of various types of

exercises (workshop/seminar, tabletop, functional, and full scale) for the campus security plan?

(b) How are exercises of the campus security plan measured for overall preparedness to respond to a large-scale active shooter incident with multiple student injuries and loss of life? (c) How are previous TVI exercise lessons used in follow-on exercises or updates to a campus security plan? (d) How can the attitudes and behaviors of faculty, staff, and administrators consistently be focused on investing in active shooter overall campus preparedness? (e) Would new legislation that centralized federal agency IHE security oversight, established across the board requirements for campus security plans and exercises, and targeted resource support improve campus preparedness?

### **Definitions**

1. *After Action Report* (AAR) – “The AAR summarizes key exercise-related evaluation information, including the exercise overview and analysis of objectives and core capabilities” (U.S. Department of Homeland Security, 2013c, glossary-1).
2. *Active Shooter* – An active shooter is “an individual actively engaged in killing or attempting to kill people in a confined space or other populated area, most often using firearms and following no pattern or method in the selection of victims” (Federal Emergency Management Agency, 2013b, p. 2).
3. *Best Practices* – “Best practices are peer-validated techniques, procedures, and solutions that prove successful and are solidly grounded in actual experience in operations, training, and exercises” (U.S. Department of Homeland Security, 2013c, glossary-1).
4. *Drill* – “A drill is a coordinated, supervised activity usually employed to validate a specific operation or function in a single agency or organization. Drills are commonly used to provide training on new equipment, develop or validate new policies or

procedures, or practice and maintain current skills” (U.S. Department of Homeland Security, 2013c, glossary-3).

5. *Exercise* – “An exercise is an instrument to train for, assess, practice, and improve performance in prevention, protection, mitigation, response, and recovery capabilities in a risk-free environment. Exercises can be used for testing and validating policies, plans, procedures, training, equipment, and interagency agreements; clarifying and training personnel in roles and responsibilities; improving interagency coordination and communications; improving individual performance; identifying gaps in resources; and identifying opportunities for improvement” (U.S. Department of Homeland Security, 2013c, glossary-3).
6. *Exercise Planning Team* – “The exercise planning team is responsible for the successful execution of all aspects of an individual exercise. The planning team determines exercise objectives and core capabilities, creates a realistic scenario to achieve the exercise objectives, and develops documents to guide exercise conduct and evaluation. The planning team’s organization and management principles should include clearly defined roles and responsibilities and a manageable span of control” (U.S. Department of Homeland Security, 2013c, glossary-4).
7. *Exercise Program Management* – “Exercise program management is the process of overseeing a variety of individual exercises and supporting activities sustained over time. An effective exercise program helps whole community stakeholders maximize efficiency, resources, time, and funding by ensuring that individual exercises are part of a coordinated, integrated approach to building, sustaining, and delivering core capabilities” (U.S. Department of Homeland Security, 2013c, glossary-4).

8. *Full Scale Exercise* (FSE) – “FSEs are typically the most complex and resource-intensive type of exercise. They involve multiple agencies, organizations, and jurisdictions and validate many facets of preparedness. FSEs often include many players operating under cooperative systems such as the Incident Command System or Unified Command” (U.S. Department of Homeland Security, 2013c, glossary-5).
9. *Functional Exercise* (FE) – “Functional exercises are designed to validate and evaluate capabilities, multiple functions and/or sub-functions, or interdependent groups of functions. FEs are typically focused on exercising plans, policies, procedures, and staff members involved in management, direction, command, and control functions. In FEs, events are projected through an exercise scenario with event updates that drive activity at the management level. An FE is conducted in a realistic, real-time environment; however, movement of personnel and equipment is usually simulated” (U.S. Department of Homeland Security, 2013c, glossary-5).
10. *Homeland Security Academic Advisory Council (HSAAC)* – was established to provide the U.S. Department of Homeland Security with advice and recommendations “on matters related to homeland security and the academic community, including: academic research and faculty exchange; homeland security academic programs; campus resilience; international students; student and recent graduate recruitment; and cybersecurity” (U.S. Department of Homeland Security, 2015, p. 6)
11. *Homeland Security Exercise and Evaluation Program (HSEEP)* – “HSEEP is a program that provides a set of guiding principles for exercise programs, as well as a common approach to exercise program management, design and development, conduct,

evaluation, and improvement planning” (U.S. Department of Homeland Security, 2013c, glossary-5).

12. *Hybrid Targeted Violence (HTV)* – “intentional use of force to cause physical injury or death to a specifically identified population using multifaceted conventional weapons and tactics” (Frazzano & Snyder, 2014, p. 1)
13. *Incident Command System (ICS) Protocol* – “A system adopted by the federal government for all hazards planning to identifying response roles of government and private emergency responders” (U.S. Department of Education, 2010, p. 9).
14. *National Incident Management System (NIMS)* – “The NIMS standard was designed to enhance the ability of the United States to manage domestic incidents by establishing a single, comprehensive system for incident management. It is a system mandated by Homeland Security Presidential Directive 5 (HSPD-5) that provides a consistent, nationwide approach for Federal, State, local, tribal, and territorial governments; the private sector; and nongovernmental organizations to work effectively and efficiently together to prepare for, respond to, and recover from domestic incidents, regardless of cause, size, or complexity” (U.S. Department of Homeland Security, 2013c, glossary-7).
15. *Non-Sworn Officer* – “A campus law enforcement or security department employee who acts as a first responder and whose principal responsibility is campus security and public safety” (International Association of Campus Law Enforcement Administrators, 2015, p. 81)
16. *Seminar* – “Seminars generally orient participants to, or provide an overview of, authorities, strategies, plans, policies, procedures, protocols, resources, concepts, and ideas. As a discussion-based exercise, seminars can be valuable for entities that are

developing or making major changes to existing plans or procedures. Seminars can be similarly helpful when attempting to gain awareness of, or assess, the capabilities of interagency or inter-jurisdictional operations” (U.S. Department of Homeland Security, 2013c, glossary-10).

17. *Sworn Campus Officer* – “An agency employee conferred with general police powers in furtherance of his/her employment with the agency, including the ability to make a full-custody arrest” (International Association of Campus Law Enforcement Administrators, 2015, p. 83)

18. *Table Top Exercise (TTX)* – “A TTX is typically held in an informal setting intended to generate discussion of various issues regarding a hypothetical, simulated emergency. TTXs can be used to enhance general awareness, validate plans and procedures, rehearse concepts, and/or assess the types of systems needed to guide the prevention of, protection from, mitigation of, response to, and recovery from a defined incident. Generally, TTXs are aimed at facilitating conceptual understanding, identifying strengths and areas for improvement, and/or achieving changes in attitudes” (U.S. Department of Homeland Security, 2013c, glossary-11).

19. *Targeted violence*- “Targeted violence refers to any incident of violence where the location was deliberately selected and not simply a random site of opportunity and where the perpetrator selected a target before the incident. For example, incidents where the attack ‘just happened to occur’ at that location, such as consequences of gang or drug activity, would not be included” (Federal Emergency Management Agency, 2013b, p. 2).

20. *Training and Exercise Plan (TEP)* – “The TEP is the foundation document guiding a successful exercise program. The TEP articulates overall exercise program priorities and

outlines a schedule of training and exercise activities designed to meet those priorities” (U.S. Department of Homeland Security, 2013c, glossary-11).

21. *Training and Exercise Planning Workshop (TEPW)* – “A TEPW is usually conducted to create a Multi-year TEP. At a TEPW, stakeholders work together in a collaborative workshop environment to identify and set exercise program priorities based on core capabilities. Based on these program priorities, TEPW stakeholders develop a multiyear schedule of specific training and exercises” (U.S. Department of Homeland Security, 2013c, glossary-11).

### **Summary**

This qualitative collective case study was necessary to fill a gap in the literature and to reduce the risks of future incidents of TVIs at IHEs. The collective case study approach was chosen due to the analysis of a real life situation of unusual interest. The key element that was explored was what can be done to improve IHEs’ consistent vested interest in implementing federal agency guidance on security preparedness given that there are virtually no legal mandates to do so. My professional experiences in the U.S. Coast Guard have shown me the results of gaps in response plans and effective exercise programs as in 9/11, Hurricane Katrina, and Deepwater Horizon. I have also experienced the immense benefits of effective planning and exercise programs that supported actual incident solid decision making, effective communications, and responsible use of resources. I used my expertise in security contingency planning and exercises to conduct this research study and to develop recommendations to improve safety and security for all IHEs.

## **CHAPTER TWO: LITERATURE REVIEW**

### **Overview**

An increase in TVIs at IHEs has highlighted the lack of preparation to prevent and respond to such acts of violence on college campuses. Furthermore, the research literature regarding the readiness of IHEs to effectively respond to TVIs is significantly lacking. IHE plans and exercises follow federal government planning and exercise guidance, however, they need more focus and actual implementation. This chapter contains the theoretical framework which guides this study. This is followed by an extensive review of the literature including the history, demographics, legislation, federal and state guidance for security preparedness, security planning and exercises, IHE security accreditation, and challenges and supplements to security preparedness.

### **Theoretical Framework**

The primary theoretical framework used in this qualitative collective case study is vested interest theory. Miller et al. (2013) stated, “Vested theory concerns the hedonic relevance of a particular attitude-object in its capacity to have meaningful personal consequences for an attitude holder” (p. 6). The more invested campus administrators, faculty, and other critical response personnel become in overall preparedness, the more likely that robust security plans and exercises will be implemented regularly.

### **Related Literature**

#### **History of Targeted Violence Incidents at IHEs**

Significant active shooter events have occurred on college campuses with multiple deaths and injuries to students, faculty, and staff. Table 1 compiles data for the active shooter events at IHEs since 1966 in which the number of fatalities or injured was two or greater. Figure 1



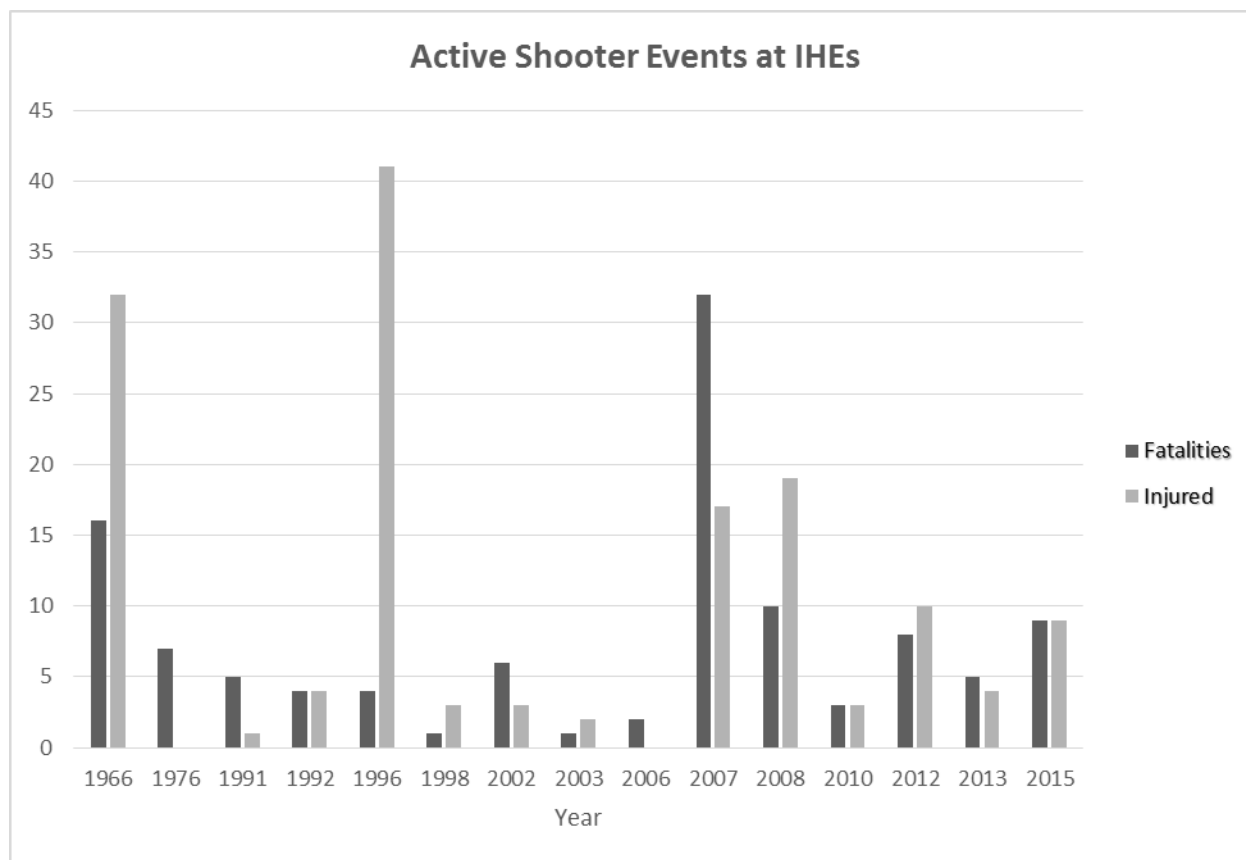
illustrates the gradual increase in numbers of fatalities and injured, particularly in the last 10 years. Blair and Schweit (2014) noted that the locations with the higher casualty counts tend to be educational facilities (e.g., Virginia Tech, Sandy Hook Elementary, Northern Illinois University). Note, Umpqua Community College had only one unarmed security guard (i.e., a non-sworn officer) or the entire campus (McIntire & Wexler, 2015).

Table 1

*Active Shooter Events at IHEs from 1966 to 2015*

Year	Location	Fatalities	Injured
1966	University of Texas (TX)	16	32
1976	Cal State at Fullerton (CA)	7	0
1991	University of Iowa (IA)	5	1
1992	Indiana University (IN)	2	0
1992	Simon's Rock College (MA)	2	4
1996	San Diego State University (CA)	3	0
1996	Penn State (PA)	1	41
1998	South Texas Community College (TX)	1	3
2002	Appalachian School of Law (VA)	3	3
2002	University of Arizona School of Nursing (AZ)	3	0
2003	Case Western Reserve University (OH)	1	2
2006	Shepherd University (WV)	2	0
2007	Virginia Tech (VA)	32	17
2008	Louisiana Technical College (LA)	2	0
2008	Northern Illinois University (IL)	6	18
2008	University of Central Arkansas (AR)	2	1
2010	University of Alabama (AL)	3	3
2012	University of Pittsburgh Medical Center (PA)	1	7
2012	Oikos University (CA)	7	3
2013	Santa Monica College (CA)	5	4
2015	Umpqua Community College (OR)	9	9

*Note.* Includes only shootings on campus with two or more killed or injured (Blair & Schweit, 2014; Frosch, Kumar, & Lazo, 2015; Kaminski, Koons-Witt, Thompson, Weiss, 2010; McIntire & Wexler, 2015).



*Figure 1.* Active Shooter Events at IHEs from 1966 to 2015.

HTV attacks are less common in U.S. schools than strict active shooter events, but still occur. The Bath Township Michigan School Massacre in 1927 involved firearms, bombs, and fire as weapons, as did the attack at the Olean New York High School in 1974. Frazzano and Snyder (2014) refer to the two most horrific events at primary and secondary schools in the U.S. as examples of HTV attacks. In 1999, two students from Columbine High School used guns, IEDs, and fire to kill 12 students and one teacher and injure 23 (Kohn, 2001). In 2012, the 20 year old son of a kindergarten teacher at Sandy Hook Elementary School first killed his mother in their home, then went to the school using ambush and breaching tactics to kill 20 children and six adults with an assault rifle and two pistols (Vogel, Horwitz, & Fahrenthold, 2012). In 2006, a former graduate student at the University of North Carolina Wilmington ran his SUV into a

lunchtime crowd injuring nine people (North Carolina Department of Justice, 2008). Federal law enforcement officials indicated the student was motivated to conduct the act of violence as retribution for the treatment of Muslims (North Carolina Department of Justice, 2008).

Active shooter events or HTV attacks at schools are not just an American problem, it is a worldwide problem. One of the most violent attacks took place in Beslan, Russia on September 3, 2004. This small community of 40,000 was the location where 49 terrorists entered a school at roughly 9:00 am local time and took 1,181 hostages (Blair, Nichols, Burns, & Curnutt, 2013). Minimal to no contingency plans were in place for this type of hostage situation. In the end, 330 hostages were killed and 770 injured (Blair et al., 2013). This horrible incident remains one of the deadliest attacks at a K-12 school in the world.

The events of September 11, 2001 changed Americans' perspectives regarding their vulnerability to targeted violence from terrorism or criminal activity. It seems that the threats from within, by students on our own campuses, are ones we are still struggling to manage. Since the 2007 Virginia Tech and 2008 North Illinois University shootings, numerous changes and investments in campus security have occurred (Violino, 2010). These incidents have raised awareness and motivated a call to action to prevent student deaths from shootings on campus (Schafer et al., 2010); however, historically a sense of complacency has returned, leaving a campus population vulnerable to a myriad of potential security violations, internal and external (Goodman, 2009). According to Snyder and Holder (2015),

Accurate predictions of when and where the next shooter event will occur are virtually impossible. However, predictions can be made with absolute certainty that active shooter and hybrid targeted violence events will continue to occur in schools, workplaces, shopping centers, and other public gathering places due to their 'soft target' status. (p. 58)

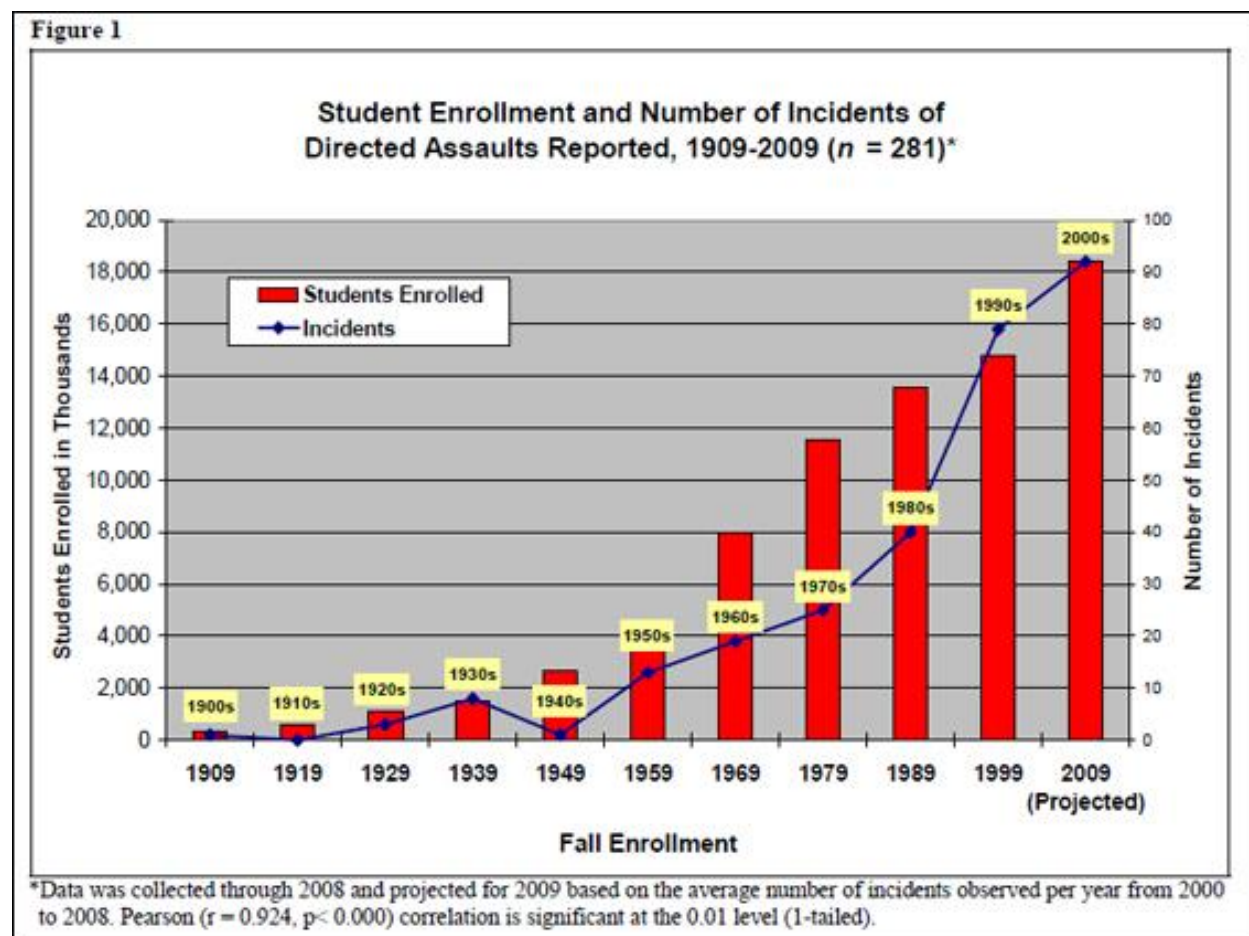
While these latest campus shooting incidents changed the landscape of safety and security in higher education, the question remains, is it enough? Are IHEs prepared to prevent and respond to the next incident? With sufficient planning and preparation, students, faculty, and staff should feel safe without being alarmed on a daily basis.

### **Demographics of Targeted Violence Incidents at IHEs**

The demographics of IHEs are very different based on size of the student population, location to local emergency management resources, education programs, geographic location, and layout of individual campuses (including satellite campuses). IHEs represent a broad range of student activities beyond the traditional academic buildings, including student housing, recreational buildings, student athletic complexes, and many more entities specific to each institution (U.S. Department of Education, 2010). According to the U.S. Department of Education (2010), “These structural and environmental characteristics pose challenges for access control, monitoring movements, defining boundaries for facilities and grounds, standardizing procedures, decision making processes, and prioritizing resource allocation” (p.1). IHEs are among a compelling list of soft targets for potential targeted violence by an active shooter, bombing, or other HTV modality (Snyder & Holder, 2015). Despite this, one estimate by United Educators Insurance indicates that less than 30% of IHEs had a threat assessment prior to the Virginia Tech shootings in 2007 (Hoover, 2008).

Security risks on campuses continue to rise. The figure below from Drysdale, Modzeleski, and Simons (2010) illustrates that while the IHE student population far exceeded the number of violent incidents on campus from the 1960s to 1980s, the number of incidents has since equaled or exceeded the number of students. Hughes and White (2008) reported that over 71,621 acts of criminal behavior, including 15 murders, occurred on college and university

campuses in 2004. While Sattler, Larpenteur, and Shipley (2011) reported that 104 murders occurred between 2005 and 2007 on public and/or private 4-year campuses.



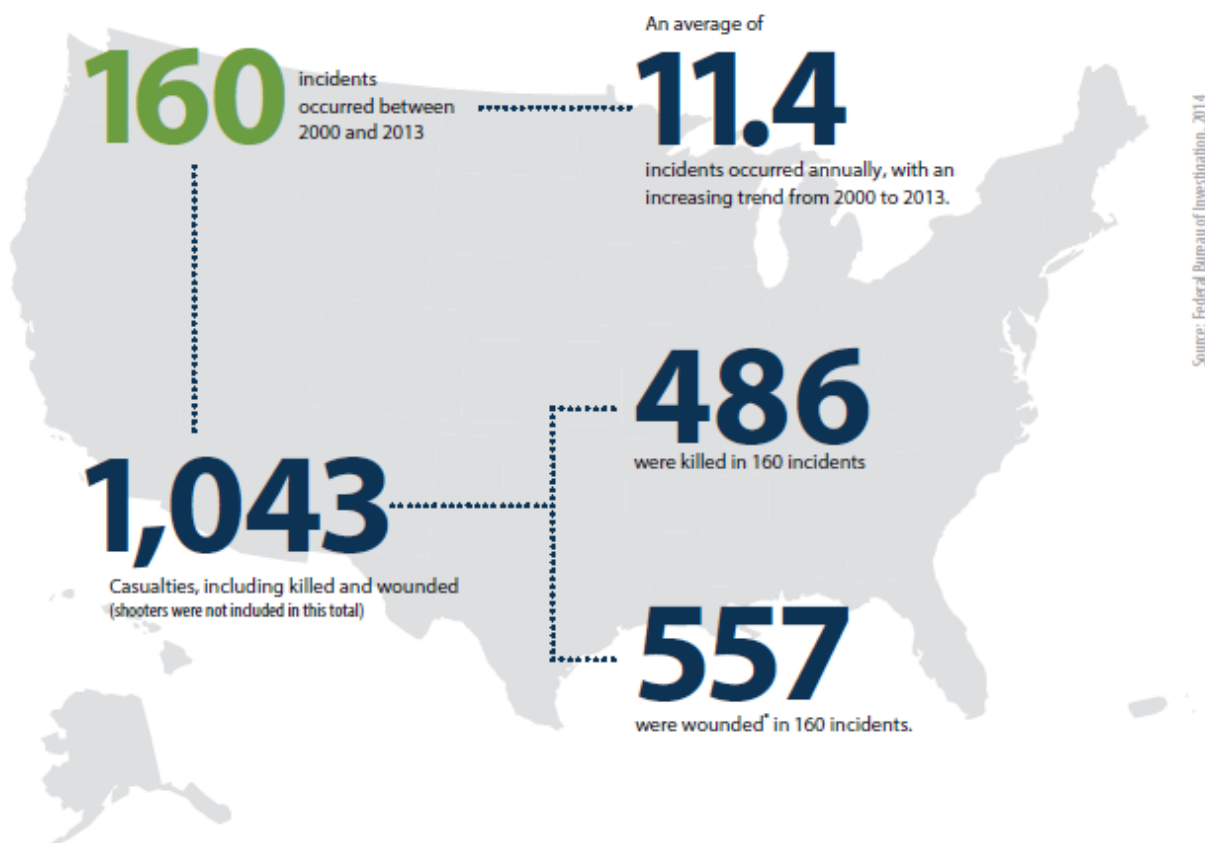
*Figure 2. Increased Violence at Universities and Colleges.* Adapted from “Campus attacks: TVIs affecting institutions of higher education,” by D. A. Drysdale, W. Modzeleski, and A. B. Simons, 2010, U. S. Secret Service, U.S. Department of Homeland Security, Office of Safe and Drug-Free Schools, U.S. Department of Education, and Federal Bureau of Investigation, U.S. Department of Justice, Washington D.C.

The Federal Bureau of Investigation, in conjunction with Texas State University, compiled data on active shooter incidents between 2000 and 2013 (Blair & Schweit, 2014). Note, that for the purposes of their study, Blair and Schweit (2014) did not include shootings

related to gang or drug violence or other shootings in which the public was not in danger. Figure 2 depicts the number of active shooter incidents, without regard to location, between 2000 and 2013 (Blair & Schweit, 2014). Figure 3 below depicts percentages of active shooter events in different location types between 2000 and 2013 (Blair & Schweit, 2014). Motivations for active shooter incidents are extremely varied ranging from personal problems, such as disputes with employers or spouses/significant others, to varied levels of mental illness, perceived injustices, or a deadly mixture of any or all of these issues (Blair et al., 2013). Commercial areas are by far the most common sites for active shooter incidents, with 46%, but education settings are the second most common at 24% (Blair & Schweit, 2014).

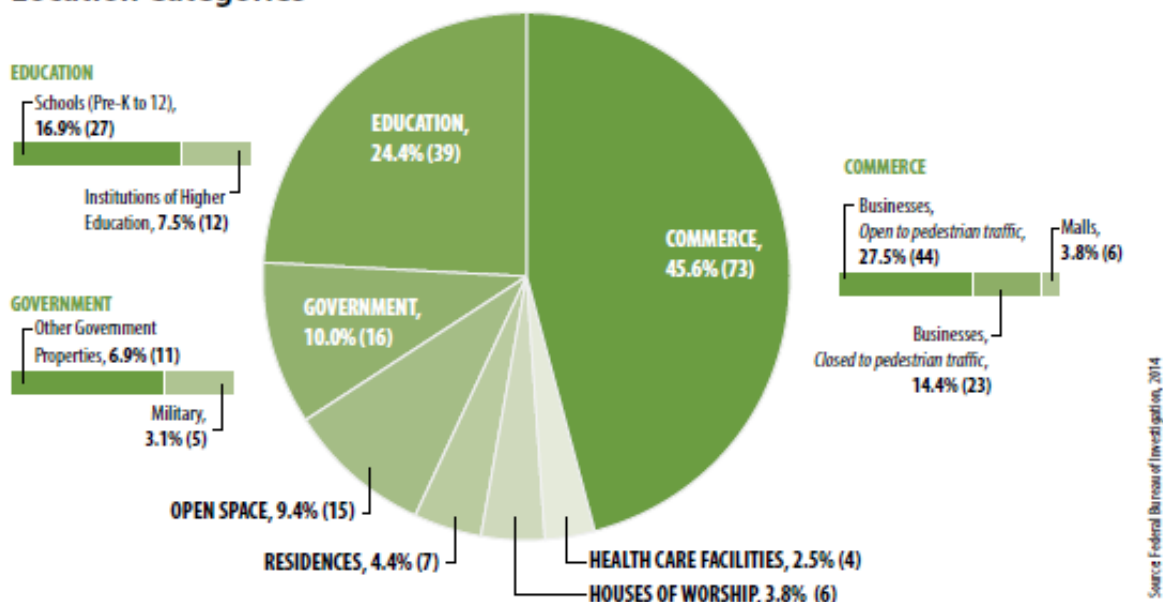
## Snapshot

The following characteristics of the 160 active shooter incidents identified between 2000 and 2013 are noted:



*Figure 3.* Characteristics of active shooter incidents between 2000 and 2013. Adapted from “A study of active shooter incidents, 2000 – 2013,” by J. P. Blair and K. W. Schweit, 2014, Copyright 2014 by Texas State University and Federal Bureau of Investigation, U. S. Department of Justice, Washington D.C.

### A Study of 160 Active Shooter Incidents in the United States Between 2000 - 2013: Location Categories



*Figure 4.* Location categories of active shooter incidents between 2000 and 2013. Adapted from “A study of active shooter incidents, 2000 – 2013,” by J. P. Blair and K. W. Schweit, 2014, Copyright 2014 by Texas State University and Federal Bureau of Investigation, U. S. Department of Justice, Washington D.C.

In the New York Police Department’s analysis of active shooter incidents, Kelly (2012) further limits the DHS definition of active shooter to “include only those cases that spill beyond any intended victim to others” (p. 1). Less than 2% of active shooter incidents were carried out by more than one person, less than 3% were carried out by women, and 36% involved more than one weapon (Kelly, 2012). The United States has the highest level of active shooter incidents with 271 between 1966 and 2012. Internationally, the next highest number of active shooter incidents during the same time period was in Canada with eight, while only five other countries witnessed no more than two incidents each (Kelly, 2012).

Despite the long list of horrifying incidents listed above, research into targeted violence is limited due to their low frequency of occurrence at IHEs in this country. The demographic data



of actual incidents is important to recognize. While this is a small percentage of the population, the number of people killed or wounded could have been prevented or lessened with better security preparedness. Another report completed by the Secret Service, U.S. Department of Education, and Federal Bureau of Investigation (Drysdale et al., 2010) provided additional insights into TVIs at IHEs from 1990-2008:

Incidents were identified in 42 states and the District of Columbia, with 57 % (n=155) of the incidents affecting IHEs located in only ten states, eight of which are among the 10 states with the most IHEs. The majority of incidents affected IHEs designated as 4-year institutions (84 %, n=228), followed by 2-year institutions (14 %, n=38), postsecondary vocational/technical schools (1 %, n=4), and those identified as post-graduate only (1 %, n=2). In all, incidents affected 218 distinct campuses. (p. 11)

The report described lethality of the assault was based on the use of deadly force with a weapon. These statistics demonstrate that the states with the highest numbers of students in four-year IHEs have the highest percentages for violence. Overall active shooter incidents from 2000-2010 data have seen a steady increase from one in 2000 to 21 in 2010 (Blair et al., 2013). A total of 29 events occurred at schools over the 10 year period and 14 at a public venue (Blair et al., 2013). This research clearly shows the increased vulnerability of schools for targeted violence. The statistics are staggering in the aggregate and the need for more emphasis on campus security at colleges and universities is evident in order to prevent, respond, and mitigate the damage of these events.

### **Transformation of Security Preparedness in Middle and High Schools**

Public education in K-12 grade levels for security preparedness has increased over the last 40 years, while the overall higher education system has not made significant increases to security preparedness. For example, in the 1970s the number of full time police officers in schools was less than 100, but now has increased to over 17,000 (Madfis, 2014). One study showed that over 60% of teachers at suburban middle and high schools reported having armed police officers in the schools (Madfis, 2014). Another major change in public education has been the significant increase in security cameras in middle and high schools (Madfis, 2014). Less than 20% of high schools had security cameras prior to 1990 while over 55% reported having cameras in 2005 (Madfis, 2014).

A significant investment in police officers and security cameras occurred at public high schools. Additionally, many school buildings have been adapted with electronic locks and consolidated entry and exits. According to Madfis (2014), “Typically affluent communities prefer these environmental designs (as well as surveillance through police and cameras) to the daily use of metal detectors and random weapons searches” (p. 13). Schools with high violence conditions have more invasive security preparedness and hands-on checking of students for guns, knives, and other weapons. Public middle and high schools have responded to the threat of TVI incidents through a variety of preparedness activities incorporating drills for active shooters, increased numbers of police officers on campus, and cameras.

### **Legislation Regarding Targeted Violence Incidents at IHEs**

The Higher Education Act of 1965 (HEA) included a framework of ensuring that IHEs meet federal guidelines in order to receive federal funding (U.S. Department of Education,

Office of Postsecondary Education, 2011). The HEA Act of 1965 had limited language on establishing requirements for student safety.

During the Vietnam War Era in the late 1960s and 1970s, protests on college campuses occurred frequently. In May of 1970, a National Guard contingent was dispatched to assist in keeping order at Kent State University (Adamek & Lewis, 1973). The National Guard confrontation with Kent State University protestors resulted in the death of four students and injuries to 10 others (Adamek & Lewis, 1973). Interpretation of the law by state governments provided a relief to IHEs in protecting students prior to the 1980s. Colleges and universities were primarily responsible for the security of property on campus (Lake, 2007). However in 1983, significant changes occurred with the court decision in *Mullins v. Pine Manor College*:

*Mullins v. Pine Manor College* established for the first time that campuses also have duties to use reasonable care to protect not only property but also students and other people from foreseeable danger. The court ruled against Pine Manor, finding that the college owed the student a legal duty to use reasonable care to prevent foreseeable dangers on campus. (Lake, 2007, p. 3)

This decision increased requirements for controlling overall security and crime on higher institutions' properties. *Mullins v. Pine Manor College* had impacts across colleges and universities and started to end the isolated position of many administrators regarding the scope of higher education student security responsibilities (Lake, 2007). General business-liability law application to higher education campuses was a fundamental change to how security of students would have to be addressed by college and university administrators.

Congress amended the HEA of 1965, entitled the Crime Awareness and Campus Security Act of 1990 (Title II of Public Law 101-542), also known as the Clery Act (U.S. Department of

Education, Office of Postsecondary Education, 2011). The Clery Act was named after Jeanne Clery, a student at Lehigh University, who was raped and killed in her dorm in 1986. This Act requires that faculty, students, and other higher education institution employees be notified when an immediate threat to public safety is detected. This legislation linked safety and security requirements for IHEs to student financial assistance at Title IV schools. Title IV institutions are any colleges or universities, private or public, that have signed Program Participation Agreements (PPAs) with the U.S. Department of Education that administer financial assistance on behalf of the agency (U.S. Department of Education, Office of Postsecondary Education, 2011). Types of financial assistance included under this Title IV provision are Pell Grants, Federal Supplemental Educational Opportunity Grants (FSEOGs), Federal Work-Study Programs, Federal Perkins Loans, Direct Loan Programs, and the Leveraging Educational Assistance Partnership (LEAP) Programs. All requirements of the Clery Act must be met in order for the Secretary of Education to approve an institution's PPA, and therefore to receive funding (U.S. Department of Education, Office of Postsecondary Education, 2011). Failure to comply with the Clery Act can lead to the reduction or removal of student financial aid funding and civil penalties (Lenn, 2014). This provision of the Clery Act provides very generic requirements with regards to security preparedness, but with significant ramifications for non-compliance.

The Higher Education Act of 1965, which had been amended to the Crime Awareness and Campus Security Act of 1990 (Title II of Public Law 101-542) or the Clery Act, was reauthorized and expanded by Congress in 2008 and renamed to the Higher Education Opportunity Act (HEOA) of 2008. The HEOA increased campus security requirements, as noted by Kennedy (2011) to, "immediately notify the campus community upon the confirmation of a

significant emergency or dangerous situation involving an immediate threat to the health or safety of students or staff occurring on the campus” (p. 22). The HEOA of 2008, as promulgated in the Code of Federal Regulations (CFR), 34 CFR 668.46 (Cornell Law Library, 2015), requires IHEs to submit an annual security report which must include the following:

1. Annual crime statistics,
2. policies for timely reporting of crimes or emergencies,
3. policies regarding security of and access to campus facilities,
4. policies regarding campus law enforcement,
5. list of programs designed to enhance students’ and employees’ knowledge of campus security procedures,
6. list of programs to inform the campus community about the prevention of crimes,
7. policies regarding criminal activity involving students at off campus facilities,
8. policies regarding alcohol and illegal drugs,
9. description of any substance abuse education programs,
10. policy statement regarding sexual assault programs and procedures to follow after a sex offense occurs,
11. statement regarding location of law enforcement information,
12. policy statement regarding emergency response and evacuation procedures, and
13. policy statement regarding missing student notification procedures.

The requirement most relevant to this study is the policy statement regarding the emergency response and evacuation procedures. Under this requirement, the institution must document the following:

1. List the procedures used to confirm a threat;

2. list the procedures of notification
  - a. List the person(s) or organization(s) responsible for carrying out the notification
  - b. Determine what part of the campus community to notify
  - c. List the procedures regarding the notification of entities outside the campus community;
3. list the procedures to test the emergency response and evacuation procedures;
4. perform a test of the emergency response and evacuation procedures at least once per calendar year; and
5. for each test, document description of the exercise, the date, time, and whether it was announced or unannounced.

While these requirements are minimal at best, the Department of Education has the power to levy fines if not met. IHEs who fail to implement these minimum requirements to test emergency response and notification procedures are subject to civil penalties from the Department of Education of \$27,500 per violation of the HEOA of 2008. One of the largest such fines ever levied against an institution was \$357,000 for violations of the HEOA of 2008 surrounding the death of a student at Midwestern University (National Association of College and University Business Officers, 2008). Numerous violations were noted by the Department of Education including failing to maintain a campus crime log, failure to include adequate policy statements in the annual security report, and failure to disclose campus crime statistics (National Association of College and University Business Officers, 2008).

### **Federal Guidance for IHE Security Preparedness**

Under the HEOA of 2008 and with specific requirements in the Code of Federal Regulations 34 CFR 668.46, the U.S. Department of Education is the primary federal agency

with guidance regarding security preparedness at IHEs (Cornell Law Library, 2015). Higher education campuses have not experienced the massive transformation of security preparedness regulations post 9/11 as seen in airports, ports, and other modes of travel as required by the federal government. For example, the government took over control of airport security from the private sector at the majority of U.S. airports, yet there are only limited federal regulations enforcing safety and security preparedness on IHEs.

Following the attacks on September 11, 2001, FEMA developed a guide for IHEs to bolster their disaster plans (for both natural and man-made), with an emphasis on safety and security (Federal Emergency Management Agency, 2003). FEMA developed these guidelines to develop “disaster-resistant” universities based on the experiences of six universities that collaborated, with the assistance of federal grants, to become more “disaster-resistant.” The participating institutions include Tulane University in New Orleans, University of Alaska Fairbanks, University of California Berkeley, University of Miami, University of North Carolina at Wilmington, and the University of Washington in Seattle (Federal Emergency Management Agency, 2003). According to the Federal Emergency Management Agency (2003):

This document is both a how-to guide and distillation of the experiences of six universities and colleges across the country that have been working over the past several years to become more disaster-resistant. It complements the Federal Emergency Management Agency (FEMA) State and Local Mitigation Planning how-to guides that provide planning guidance for creating and implementing a hazard mitigation planning process . . . This guide provides basic information designed for institutions just getting started as well as concrete ideas, suggestions, and practical experiences for institutions that have already begun to take steps to becoming more disaster-resistant. (p. III)

The guide is an additional supplement to millions of dollars awarded to IHEs from 1993-2003 for disaster response (Federal Emergency Management Agency, 2003). The guide focuses on four phases of becoming a “disaster-resistant” university: (a) organizing resources, (b) hazard identification and risk assessment, (c) developing the mitigation plan, and (d) adoption and implementation (Federal Emergency Management Agency, 2003). This guide is a foundational element for IHE security preparedness and referenced numerous times in the literature.

The U.S. Department of Education sets guidelines for emergency planning for IHEs (U.S. Department of Education, 2007), and in 2010 published the “Action Guide for Emergency Management in Higher Education,” which has three primary purposes: (a) to provide an overview of emergency management, (b) to provide a resource for developing emergency management plans, and (c) to provide an evaluation tool for campus emergency management programs (U.S. Department of Education, 2010). Additionally, this “Action Guide . . .” recommended IHEs utilize two other cornerstone documents for emergency preparedness (U.S. Department of Education, 2010): (a) “Practical Information on Crisis Planning: A Guide for Schools and Communities,” published by the U.S. Department of Education (2007), and (b) “Building a Disaster-Resistant University,” published by the Federal Emergency Management Agency (FEMA; 2003). According to the U.S. Department of Education (2010), “This action guide is not meant to prescribe exactly how emergency management should be practiced; rather, each higher education institution should decide for itself the best way to prepare to meet its own unique set of needs” (p. 3).

In 2013, the U.S. Department of Homeland Security (2013c) published the Homeland Security Exercise and Evaluation Program (HSEEP) that “provides a set of guiding principles for exercise programs, as well as a common approach to exercise program management, design and



development, conduct, evaluation, and improvement planning” (p. 1). HSEEP guidelines were established to improve national preparedness for federal, state, and local emergency responders (U.S. Department of Homeland Security, 2013c). HSEEP uses standard terminology and best practices for a framework of exercise management. The biggest benefit to IHEs for using the HSEEP process is the connectivity to outside federal, state, and local responders to increase response efficiency for TVIs. HSEEP provides specific guidance in exercise design, development, execution, and evaluation, as well as a corrective action program (U.S. Department of Homeland Security, 2013c). The development of a multiyear exercise program for TVIs sets an IHE up for success towards engaging stakeholders in a series of increasingly complex exercises (U.S. Department of Homeland Security, 2013c). The use of more complex exercises, such as full scale exercises, allows for a test of the entire campus security plan. The multiple events occurring simultaneously during a full scale exercise, which normally involve multiple external stakeholders, is the best method to fully analyze the actions of IHE personnel in accordance with the campus security plan (U.S. Department of Homeland Security, 2013c). Unfortunately, HSEEP full scale exercises are rarely planned and executed due to the cost and extensive logistical requirements.

The U.S. Department of Education, in collaboration with the Departments of Health and Human Services, Homeland Security, Justice, Federal Bureau of Investigation, and the Federal Emergency Management Agency, published a 2013 “Guide for Developing High-Quality Emergency Operations Plans for Institutions of Higher Education” (U.S. Department of Education, Office of Elementary and Secondary Education, Office of Safe and Healthy Students, 2013). This preparedness guidance for IHEs is the most comprehensive to date with significant collaboration among federal agencies. However, the 88 page guide is predominated by operation

plan recommendations, instead of specific requirements and accountability mechanisms for TVI planning. This guide concedes that these are unfunded recommendations, not requirements.

According to the U.S. Department of Education, Office of Elementary and Secondary Education, Office of Safe and Healthy Students (2013),

The Departments issuing this guidance are providing examples of good practices and matters to consider for planning and implementation purposes. The guidance does not create any requirements beyond those included in applicable law and regulations, or create any additional rights for any person, entity, or organization. The information presented in this document generally constitutes informal guidance and provides examples that may be helpful. (p. 4)

The guidance is not linked to specific federal requirements. However, an IHE that decides to implement the federal agency recommendation incurs additional burdens on existing or new staff.

The Homeland Security Academic Advisory Council (HSAAC) was created to provide the U.S. Department of Homeland Security with advice and recommendations on topics related to higher education (U.S. Department of Homeland Security, 2015). Some of these topics include graduate recruitment, academic research, faculty exchange, international students, cyber security, and campus resilience (U.S. Department of Homeland Security, 2015). HSAAC explains, “A resilient campus fully addresses the needs of its members during natural or man-made disasters and crises by following the phases of national preparedness: protection, prevention, mitigation, response, and recovery” (U.S. Department of Homeland Security, 2013a, p. 3).

In order to improve campus resilience, HSAAC recommended the creation of a DHS Campus Resilience Pilot Program.

The goals of the program are to promote FEMA's Whole Community philosophy, draw upon existing DHS resources and also those originating from the U.S. Department of Education (ED) and the Department of Justice (DOJ) to help colleges and universities plan for major man-made or natural incidents. (U.S. Department of Homeland Security, 2013a, p. 3)

IHEs were asked to submit proposals to participate, and a total of seven sites were selected:

Drexel University (Philadelphia, Pennsylvania), Eastern Connecticut State University (Willimantic, Connecticut), Green River Community College (Auburn, Washington), Navajo Technical College (Crownpoint, New Mexico), Texas A&M University (College Station, Texas), Tougaloo College (Jackson, Mississippi), and the University of San Francisco (San Francisco, California). According to the U.S. Department of Homeland Security (2013b):

DHS will work with the seven selected colleges and universities to draw on existing resources, collaborate with federal, state and local stakeholders and identify new innovative approaches to promote campus resilience—directly supporting the goals of the President's Plan to Reduce Gun Violence, and making educational institutions safer and more prepared. "This is an important step in our work with the academic community to help campuses prepare for, protect against, respond to, recover from and mitigate crisis and emergency situations," said Secretary Napolitano. Through their work with DHS, these colleges and universities will help us further develop best practices, resources and tools needed to assist campus communities nationwide in their efforts to reduce gun

violence on campuses and bolster resilience and emergency planning processes for all types of hazards. (p. 1)

Major findings of the CRS program were reported in the April 22, 2015 briefing materials: “Based on lessons learned and best practices identified . . . the Department found that college and university presidents and chancellors are the single most important factor in campus resilience and emergency planning” (U.S. Department of Homeland Security, 2015, p. 5). The report noted that DHS needs to engage with higher education institution presidents and chancellors and requested input from the HSACC (U.S. Department of Homeland Security, 2015).

Some of the key outcomes from campus institution leaders noted in the CRS report was that college and university presidents are tasked with creating a “culture of preparedness” (U.S. Department of Homeland Security, 2015, p. 10). Future engagements with HSAAC will be very important to watch with regard to the focus of security preparedness with various levels of support. Additionally, a web-enabled system is being developed as part of an outcome of the CRS pilot called the Campus Resilience Enhancement System which will be further developed in 2015 and beyond (U.S. Department of Homeland Security, 2015).

Without significant requirements from the government for campus security planning and preparedness, institution leadership vested theory is critical towards supporting action guide implementation. According to Snyder and Holder (2015), “Administrators and public safety officials in higher education are empowered to set policy, direct resources, and facilitate conditions that develop resilient learning communities” (p. 60). The quality of the programs supported are directly related to the vested interest of executive administrators, faculty, staff, and students.

Given my background in port security for the U.S. Coast Guard, I am familiar with post 9/11 changes in federal guidance regarding the maritime industry. These changes may serve as a model for the IHEs in the future. The 9/11 attacks spurred the creation of an entirely new federal department (Department of Homeland Security), the reorganization of several agencies within DHS (e.g., the U.S. Coast Guard), and the creation of a new agency (the Transportation Security Administration). Furthermore, the events of 9/11 prompted legislative action in a variety of modes of transportation, not just air travel, significantly increasing security requirements, and federal funding. For instance, the U.S. Maritime Transportation Security Act of 2002 (MTSA) was created by Congress to enhance security regulations in conjunction with and/or under the auspices of the newly formed U.S. Department of Homeland Security (Carey, 2004). The MTSA encompasses specific requirements for security plans and exercises with regard to the maritime industry and requires all federal, regional, and local agencies to work together with a multitude of state and private port partners (U.S. Coast Guard, 2013). A key element of the MTSA was the creation of Area Maritime Security Committees (AMSC) which coordinate federal, state, local, and industry partnerships (U.S. Coast Guard, 2013). Per 33 CFR 103, AMSCs must report to the U.S. Coast Guard on their activities, which may include the following: port security planners at the local, regional and national level; port security exercise federal funding; and utilization of the Maritime Security Risk Analysis Model (MSRAM) data to prioritize funding projects under the Port Security Grant Program (PSGP; U.S. Coast Guard, 2013). It has been over 10 years since the new security requirements for the MTSA were created. The MTSA and its AMSCs represent a success story regarding maritime security preparedness. According to the U.S. Coast Guard (2013), AMSCs' Challenges, Accomplishments, and Best Practices Annual Report (which is publically available) states:

Area Maritime [Security] Committees are the foundation of our nation's maritime security efforts. The cooperative effort between the private-sector, and the federal, tribal, state and local agencies is a widely recognized model of successful public-private partnership, and has built a strong, mature, and comprehensive security regime. Port areas on the Atlantic, Gulf, and Pacific Coasts, the Western Rivers, and the Great Lakes are more secure resilient, and prosperous because of the cooperation, communication, and the work of Area Maritime Security Committees. (p. 1)

Despite the numerous lives lost and damaged from TVIs on U.S. campuses, there are still no specific federal regulatory requirements for security preparedness and exercises at IHEs. Publications from numerous federal agencies provide guidance, yet no legislation exists to mandate and track security preparedness activities related to TVIs. These recommendations are strictly voluntary and are not bound to any type of federal requirement or institutional accreditation. Perhaps the regulations developed for the maritime industry may serve as a model for IHEs to increase security preparedness and create a funding mechanism to support oversight and IHE security improvements.

### **State Guidance for IHE Security Preparedness**

The requirements that states have imposed upon IHEs vary from state to state. The Pennsylvania State System of Higher Education created a requirement in 2006 that all schools, public and private, have some type of armed security (King, 2014). Other recent examples of increased state requirements for armed officers include Iowa and Massachusetts (King, 2014). Without specific state or local legislative requirements, the decision whether to arm campus security personnel is different depending on whether the IHE is public or private (King, 2014).

Another important difference in IHE security planning response resources is the decision-making authority over arming campus and university security forces. Public institutions' decision-making authority rests with the State Board of Education or the president of the university (King, 2014). At private institutions, the president of the IHE or the Board of Trustees is the decision-making authority. Additionally, research in the state of North Carolina found that sworn police officers have better training and equipment than security guards (North Carolina Department of Justice, 2008).

Three months after the incident at Virginia Tech, a report was sent to the President of the United States, from the Secretary of Health and Human Services, Michael Leavitt; Secretary of the U.S. Department of Education, Margaret Spellings; and Attorney General, U.S. Department of Justice, Alberto Gonzales (Leavitt, Spellings, & Gonzales, 2007). One of the major recommendations was that "Where we know what to do, we have to be better at doing it" (Leavitt et al., 2007, p. 16). It was noted that while some states had taken advantage of grant funding from the U.S. Department of Homeland Security and U.S. Department of Justice after the attacks of September 11, 2001 to improve IHE security preparedness, other IHEs had not transitioned planning efforts from terrorist incidents and natural disasters to active shooter and other significant contingency incidents on campus (Leavitt et al., 2007).

The report made major recommendations for state and local officials regarding active shooter preparedness. According to Leavitt et al. (2007), the following actions should be taken: "Integrate comprehensive all-hazards emergency management for schools into overall local and state emergency planning. Institute regular practice of emergency management response plans and revise them as issues arise and circumstances change" (p. 17). As much as planning was stressed in the report, and some investment has been made in communication improvements at

IHEs, consistent maintenance funding for these systems has been problematic (Leavitt et al., 2007). According to Leavitt et al. (2007), two major federal recommendations were made:

The U.S. Department of Education should review its information regarding emergency management planning to ensure it addresses the needs of institutions of higher education and then disseminate widely. The U.S. Departments of Homeland Security and Justice, jointly and separated, and in collaboration with the U.S. Department of Education, should consider allowing existing grant programs to be used to facilitate joint training exercises for state, local, and campus law enforcement. (p. 18)

Also prompted by the shooting at Virginia Tech, the State of North Carolina formed a Task Force at the direction of its Attorney General. According to North Carolina Department of Justice (2008), Attorney General Roy Cooper stated,

Our goal is to learn from this horrible event and to use those lessons learned to better protect our North Carolina campuses. We owe it to the parents, students, faculty, and staff at our colleges and universities to be ready if a similar tragedy ever happened here. (p. iii)

One of the findings of the North Carolina Task Force was the need for more TVI training of faculty, staff, and students at IHEs. The Task Force investigation revealed a clear lack of understanding of security protocols at Virginia Tech based on two significant events that worsened the situation. First, the shooter left a note warning of a bomb. The note was found by a faculty member who took it to the Dean, instead of calling campus police according to university protocols. Clearly the faculty member was not aware of the response plan, which delayed the campus security response. Additionally, the perpetrator had chained several of the doors to the buildings closed to prevent evacuation. Before the rampage began, a student found one of these



doors chained. Instead of calling campus security to alert them that something was amiss (i.e., “see something, say something”), she crawled through a window out of the building (North Carolina Department of Justice, 2008).

These two instances at Virginia Tech led the North Carolina Task Force to recommend more faculty, staff, and student training in IHE emergency response plans (North Carolina Department of Justice, 2008). The North Carolina Task Force conducted quantitative research analysis in a survey in 2007 with 110 public universities, community colleges, and private institutions with a 95% response rate (North Carolina Department of Justice, 2008). Research by the Task Force found inconsistencies in the expectations of state emergency management officials for IHEs and what was actually happening. According to the research, roughly half of the IHEs studied participated in county or regional preparedness training and 14% of IHEs did not hold any type of training or exercises (North Carolina Department of Justice, 2008). However, according to a Director of County Emergency Management, “Campuses must exercise the plan, fix the gaps in the plan, and review the plan again. Testing of the emergency response plan ensures that everyone speaks the same language and knows their respective role” (North Carolina Department of Justice, 2008, p.12). The North Carolina Task Force urged IHEs to make it standard practice to update emergency plans. It points to FEMA’s guidance on the challenges of doing long term disaster preparedness (North Carolina Department of Justice, 2008).

In July 2016, the Governor of the State of Michigan signed into law an active shooter alert bill (Gray, 2016). According to this bill, law enforcement can send texts to citizens in the vicinity of an active shooter warning them of the danger. The technology is similar to the Amber

alerts system used to notify people of missing children. The bill was prompted after an active shooter killed six people in Kalamazoo, MI in February, 2016 (Brenzing & Cunningham, 2016).

As outlined above, TVIs are an unfortunate reality on campuses, specifically at IHEs. That raises the question, what can be done to stop this or at the very least mitigate the damage? This question elicits a variety of responses including, but not limited to, developing better methods to identify a potential attacker prior to the act, increased mental health screening, enacting tougher gun control laws, restricting access to campuses, allowing concealed weapons on campus, and improving security planning and preparedness. While these all are important avenues to pursue with regard to campus safety, I will focus solely on methods to improve security planning and preparedness for the purposes of this study. If we cannot prevent the violence from occurring, we can and must at the very least prepare IHE communities to respond more effectively. The following sections will cover the established methods, as well as several innovative ones, to enhance overall campus security.

### **IHE Security Planning and Preparedness**

Security planning and preparedness for an active shooter incident (or incident of targeted violence) is a fundamental element of mitigating the risks to students, staff, and faculty and to ensure an optimal response to an incident. According to Snyder and Holder (2015), “Building resilience among at-risk student populations, the faculty that educates them, and the staffs that support them is a moral imperative in a world in which evildoers will continue to prey on those who appear unprepared to react.” (p. 57).

The core document to prepare and respond to a TVI is a security plan. Even though awareness has grown since the Virginia Tech, Illinois, and Oregon mass shootings, the lack of overall crisis management plans is a major problem that impacts institutional operations,

technology, and infrastructure (Wang & Hutchins, 2010). According to Snyder and Holder (2015), “The importance of coordinated public safety responses to incidents of targeted violence that may involve the use of firearms, edged weapons, improvised explosive devices, barricading tactics, ambush tactics, and fire as a weapon, requires new levels of cooperation” (p. 58). This cooperation is the centerpiece of security preparedness across higher education with regard to their partnerships internally and externally. Faculty members, staff, and students should be considered important stakeholders in IHE security preparedness efforts.

Preparedness activities for active shooter scenarios involve a wide range of actions. Some of the key activities that ensure implementation of the National Incident Management System (NIMS) for emergency response include developing security procedures from federal, state, and local emergency management partners; establishing mutual aid agreements for resources; identifying prearranged contacts to support active shooter responses; identifying strategies for lock down procedures; establishing emergency notifications; synchronizing IHE and local law enforcement to ensure resources are not duplicated; establishing marketing plans for staff, faculty, and students for active shooter plan review and training; and the assignment of campus personnel to the Incident Command System (ICS) functions (U.S. Department of Education, 2010). Note that these are only recommendations from the U.S. Department of Education and are not required or tracked by any federal government agency.

According to a report from the Federal Emergency Management Agency (2003) on building a disaster-resistant university, “Campuses vary in their definition of acceptable losses and interruption because these decisions depend on the community, the nature of the hazard, and the available resources” (p. 5). Security preparedness is very dependent on the vested interest of individual institution leaders. The acceptance of the need for security preparedness must start

with the top officials of higher education institutions. According to Burch and Bratton (2009), “University administration has key role during emergencies, therefore it is vital to get their input during the development of the plan. The administration has a different focus than law enforcement and will assist in developing a more comprehensive plan” (p. 29). Vested interest in preparing for critical incidents involving violence on campus has many benefits. Effective updates of security plans and a robust exercise program can lessen the negative impacts of a crisis event (Jenkins & Goodman, 2015).

Wang and Hutchins (2010) surveyed 350 major college and university provosts who felt prepared for normal day to day incidents on campus, but not crisis events. The study revealed gaps in the exercise of higher education security plans and implementation of after action reports from those exercises that have occurred on campus. Many colleges and universities do not view the security plan as a dynamic document that should be routinely updated (Cheung et al., 2014). Security plans must be updated as information and variables change. For example, key IHE stakeholders may change jobs, new strategies to security responses emerge, and lessons learned from internal exercises and from other institutions may yield new information (U.S. Department of Homeland Security, 2013c).

Seo et al. (2012) found that even though most colleges have emergency plans in place, only 25% of campuses believed their students understood or were prepared to respond to a crisis. Even though many colleges and universities have a segment of the institution focused on emergency preparedness, many recommendations and guidance provided by federal government agencies to increase preparedness have not been adopted (Thompson & Schlehofer, 2014). Only 62% of police administrators indicated they had any type of plan to react to a security event

(Davis & Walker, 2005). Additionally, the respondents indicated that most of those plans were multipurpose and lacked significant depth for security incidents.

Following the 2007 mass shootings at Virginia Tech, the Commonwealth of Virginia and federal governments called for investigative reports. The “Report of the Review Panel” presented to the Governor of the Commonwealth of Virginia included information from a myriad of experts with significant work experience in the Federal Bureau of Investigations, State Council of Higher Education for Virginia, and most notably The Honorable Tom Ridge, the former Governor of Pennsylvania and first Secretary of Homeland Security (Virginia Tech Review Panel, 2007). According to the findings of the “Report the of the Review Panel” the emergency response plan was deficient in several areas including no specific plans for an active shooter response, it did not provide police much of a voice in terms of decision making and the planning process, and the names of many authorities in the plan were out of date and incorrect (Virginia Tech Review Panel, 2007). According to the Virginia Tech Review Panel (2007), “Shootings at universities are rare events, an average of about 16 a year across 4,000 institutions. Bombings are rarer but still possible . . . A risk analysis needs to be performed and decisions made as to what risks to protect against” (p. 18). A review of Virginia Tech’s response planning before the incident shows that an informal risks analysis was performed by campus administration in which it determined not to invest in active shooter training, response planning, and exercises (Virginia Tech Review Panel, 2007).

The Virginia Tech shooting was followed by extensive litigation from family members over negligence by the institution. For example, the families of Erin Peterson and Julia Pryde sued Virginia Tech for negligence by not issuing timely warnings of the initial shooting incident. The families were awarded four million dollars (Lenn, 2014). Additionally, Virginia Tech was

fined \$55,000 by the U.S. Department of Education, which later was reversed on appeal (Lenn, 2014).

While Virginia Tech was an example of poor preparation and lack of vested interest, the University of Massachusetts Dartmouth represents an example of proper planning, preparedness, and vested interest. In 2013, the Boston Marathon Bombing resulted in the deaths of three individuals and injuries to at least 264. One of the bombers was enrolled at the nearby University of Massachusetts Dartmouth. During the bombings and the days following, while this attacker was on the loose, the University had to prepare for multiple scenarios of targeted violence including an active shooter situation, bombing, or hybrid target violence incident (Jenkins & Goodman, 2015). Prior exercises had revealed gaps in the institution's crisis plans which allowed for plan improvements prior to the incident in 2013 (University of Massachusetts Dartmouth, 2013). According to Jenkins and Goodman (2015), "The UMass Dartmouth experience strongly suggests that testing and refining a crisis plan is an effective strategy to avoid a descent into ad hoc decision making during an emergent crisis situation" (p. 204). Not only did the emergency responders have a thorough understanding of the crisis plan, but senior campus officials who had read and exercised the plan also understood the plan which lead to expedient and informed decisions in response to the incident. Actions by federal and state agencies during this event averted a potential TVI at an IHE.

Incorporating local emergency management is a critical component of the security preparedness plan (Burch & Bratton, 2009). It was also noted that access to the emergency response plan was critical for successful implementation. The U.S. Department of Justice guidelines recommended that campus law enforcement officials should not just inform students and faculty about emergency response plans, but also include residents living around IHEs and

community groups (Burch & Bratton, 2009). However, less than 60% of schools provided a copy of the campus emergency plan to local law enforcement agencies who might have to support IHEs in a TVI (Cheung et al., 2014). The lack of higher education security planning engagement with local responders is not just a problem in the U.S., it is an international problem. Studies abroad also show gaps in emergency and disaster preparedness. One study of 21 Italian universities found that very little interaction occurred between higher education personnel and local civil protection, fire, police, or emergency (Cheung et al., 2014).

On July 22, 2016, Public Law No: 114-199 went into effect that allows public safety agencies to use federal grant money to pay for active shooter response programs (U.S. Government Publishing Office, 2016). Known as the POLICE (Protecting Our Lives by Initiating COPS Expansion) Act of 2016, the measure does not authorize new spending, but instead expands funding for the Community Oriented Policing Services (COPS) to pay for active shooter training not just for law enforcement officers, but also EMS and fire crews (Wilson, 2016). Having first responders trained in uniform and consistent tactics for active shooter events, such as the training provided by ALERRT (Advanced Law Enforcement Rapid Response Training), can improve success when responding to such a crisis.

### **IHE Security Exercises**

Response to a critical incident involving a TVI (or all-hazards incident) is a collaborative effort among many entities on campus, including campus law enforcement, emergency management department, student affairs, departmental leaders, faculty, administrative staff, students, and many other support groups on campus. Engaging in preparedness exercises is an excellent and critical method to raise the knowledge level of faculty, staff, and students to respond to a security incident (Eaker & Viars, 2014). Exercising campus security plans can find

weaknesses that need correction, but more importantly relationships can be established. The relationships between key stakeholders (e.g., chancellor, provost, head of emergency management services, campus police chief, and numerous local first responders) is critical to making good decisions in a short timeframe required in a low-frequency high-risk critical incident (Jenkins & Goodman, 2015).

Exercises can range from workshops, drills, table top exercises, functional exercises, and finally full scale exercises. Workshops bring a group of individuals together to build components of a security plan. Drills help identify issues that need to be addressed in the plan, as well as plans for communication and response. A drill involves one or only a few community partners (e.g., law enforcement, fire) and relevant campus staff who use the actual campus grounds and buildings to practice how to respond to a scenario (U.S. Department of Homeland Security, 2013c). According to research by Han, Ada, Sharman, and Rao (2015),

Students in focus groups told us that because drills are held to educate students regarding the actions they need to take in case of building-related incidents, they are likely to immediately comply with notifications related to these events – they did not perceive any need to verify the messages content in such an event. (p. 925)

This research supports that exercises and drills can help students in preparing for TVIs and complying with directives from campus or law enforcement authorities during these incidents.

In a table top exercise, participants, usually emergency responders, discuss an imagined scenario and how the campus or a department will prepare for, respond to, or recover from an emergency (U.S. Department of Education, 2007; 2010). Tabletop exercises are recommended for all critical campus staff that have a function in carrying out the security plan. Training before and after exercises can also be beneficial for all stakeholders. A functional exercise is similar to



a drill, but includes more community stakeholders and campus participants. Participants react to realistic simulated events (e.g., a bomb in a residence hall and an intruder with a gun in a classroom) and implement the plan and procedures using the ICS protocol (U.S. Department of Homeland Security, 2013c). Finally, a full scale exercise is the most resource intensive activity in the exercise continuum. A full scale exercise is generally a multi-agency, multi-jurisdictional effort in which all resources are deployed as they would be for an actual critical incident (U.S. Department of Education, Office of Elementary and Secondary Education, Office of Safe and Healthy Students, 2013).

Following an exercise, an after action report is completed. This report details lessons learned from an exercise and recommended corrective actions to be placed in the contingency plan. After action reporting and corrective action guidance is provided by FEMA's Homeland Security Exercise and Evaluation Program (HSEEP). Four specific overall performance requirements are part of the HSEEP process. According to the U.S. Department of Education (2010), the HSEEP requirements are:

Conducting an annual training and exercise plan workshop and developing and maintaining a Multi-Year Training and Exercise Plan. Planning and conducting exercises in accordance with the guidelines set for in HSEEP, vols. I-III. Planning and conducting exercises in accordance with the guidelines set forth in HSEEP, vols. I-III. Developing and submitting a properly formatted After-Action Report/Improvement Plan (ARR/IP). The format for the AAR/IP is found in HSEEP, vol. III. Tracking and implement corrective actions identified on the AAR/IP. (p. 56)

This is a systematic approach that federal and state governments are required to follow for exercise programs for all contingencies.

Federal, state, and local exercises follow NIMS, which is utilized at many colleges and university campuses (Fazzini, 2009). NIMS is the national framework set up to respond to real world incidents and routine incident management in the United States. HSEEP guidelines for exercises validate the use of NIMS for planning activities. The greatest incentive for complying with HSEEP is that the federal government will do a partial cost recovery after a major incident (Fazzini, 2009). Five steps towards gaining HSEEP exercise compliance include: (a) having a governing board or institution leadership council initiate the NIMS structure, (b) personnel must be trained appropriately, (c) all hazard emergency plans must be established, (d) those plans must be tested, and (e) a continual review process must be established (Fazzini, 2009).

Testing security plans through exercises should be completed with functional to full scale exercises that can range from a few hours to multiple days. Preparation is critical to effectively responding to security incidents. According to Frazzano and Snyder (2014),

It is commonly accepted that under stress, most responders will revert to what they have been trained to do. While it is easy to criticize the choices made during an event, making instantaneous decisions is a difficult task in which instincts, prior training, and knowledge come into play. (pp. 4-5)

Many IHEs do not conduct full scale exercises where the entire campus is impacted in an evacuation or lockdown. Some institutions cite the disruption for conducting exercises on students as the reason for not doing more to thoroughly test emergency plans (Boynton, 2003). The International Association of Campus Law Enforcement Administrators (IACLEA) conducted a survey to evaluate college and university preparedness to respond to a terrorist incident (Davis & Walker, 2005). The study showed that only 53.2% of the respondents had

participated in a mock security exercise. The literature demonstrates a lack of overall focus on security exercises by IHEs.

In a collaboration between the U.S. Department of Justice, Bureau of Justice Assistance and the Major Cities Chiefs Association, Burch and Bratton (2009) published “Campus Security Guidelines.” These guidelines called for increased frequency of emergency response exercises. According to the 2009 report, “It is imperative the emergency response plan is drilled at least once a semester with all relevant parties participating. Campus public safety should seek assistance of local law enforcement and other outside agencies to plan and conduct these exercises” (p. 31). These guidelines also noted that some university administrators lack the understanding of the ICS protocol. A 2007 study pointed out that a majority of senior IHE officials rarely participated in an exercise for a terrorist incident or mass shooting (Wang & Hutchins, 2010). Local law enforcement was strongly urged to reach out to campus administrators, encouraging them to sign up and complete ICS courses and participate in campus exercises (Burch & Bratton, 2009).

Language in the U.S. Department of Education’s (2010) “Action Guide for Emergency Management at Institutions of Higher Education” puts the importance of exercises at institutional discretion based on resource availability. Furthermore, it stresses how resource-intensive full-scale exercises can be versus tabletop exercises.

Before making a decision about which type of exercise to facilitate, a higher education institution should consider varying factors, including the amount of time and resources and collaborative support required to execute the activity balanced against the outcome of the experience. For example, while a tabletop exercise may be cheaper and less time-consuming to run, a full scale exercise provides a more realistic context for the simulated

response to an emergency situation, thus providing more constructive feedback to implement into plans. (U.S. Department of Education, 2010, p. 52)

The benefits are described, but could be enhanced if risk reduction factors were included in preventing and responding to TVIs to help justify institution commitment to a robust security exercise program.

Additional research has shown that many active shooter exercises and drills at IHEs primarily involve campus police and other local law enforcement agencies (Snyder & Holder, 2015). Students, faculty, and staff are rarely involved in various types of exercises or active training, yet these are the individuals typically in the front lines of active shooter incidents and have a high percentage of thwarting attackers (Snyder & Holder, 2015). In Blair and Schweit's (2014) analysis of active shooters between 2000 and 2013, they found that 69% (44 of 64) of incidents, for which the time is known, were concluded in less than five minutes and 23 of those were completed in less than 2 minutes. In a crisis situation, faculty, students, and staff cannot simply wait around for law enforcement to arrive.

Marketing is one of the main recommendations to increase interest and enthusiasm across the spectrum of IHEs to adopt the HSEEP process. Guidance from the U.S. Department of Education (2010) recommends, "As with all planning and implementation initiatives, there is a danger that enthusiasm will wane as time passes. An annual review and update process is a way to combat this problem and renew enthusiasm for a vigorous emergency management program" (p. 56). The U.S. Department of Education acknowledges a gap in support planning and exercises. No law, regulation, or accreditation board currently exists to hold IHEs accountable for active shooter planning and exercises (U.S. Department of Education, 2010). As a result,

exercise programs are haphazard and rely on marketing of infrastructure improvements or other media driven outreach from the institution that stresses security preparedness and exercises.

The guidance in the literature for public primary and secondary schools takes a different approach regarding crisis planning. According to the U.S. Department of Education (2007):

Despite everyone's best efforts at crisis prevention, it is a certainty that crisis will occur in schools. Good planning will facilitate a rapid, coordinated, effective response when a crisis occurs. Being well prepared involves an investment of time and resources-but the potential to reduce injury and save lives is well worth the effort. Every school needs a crisis plan that is tailored to its unique characteristics. Within a school district, however, it is necessary for all plans to have certain commonalities. (p. 3-1)

The language used here is much stronger regarding the need for consistency and competency in planning and training. In contrast, the recommendations for IHEs issued by the U.S. Department of Education (2010) are much more open ended.

Another important aspect of campus preparedness is the level of commitment to training. Campus personnel must train with the same commitment as if they were in an actual emergency. Blair et al. (2013) describe the "One Warrior's Creed" written by a military and law enforcement officer, Steven Randy Watt: "If you seek to do battle with me this day you will receive the best that I am capable of giving . . . I have trained, drilled, and rehearsed my actions so that I might have the best chance of defeating you" (p. 77). Exercises should be performed as if your life and/or the lives of those around you depended on it and not just a box to check off to demonstrate a task was completed. Exercise planners must maintain proficiency and maintain the strongest commitment to exercise objectives followed by drafting excellent lessons learned reports.

## **IHE Security Accreditation**

IHE safety and security accreditation may be obtained through two nonprofit law enforcement organizations to help provide independent standards and verification of campus security preparedness. The first of these is the Commission on Accreditation for Law Enforcement Agencies (CALEA) and the second is the International Association of Campus Law Enforcement Administrators (IACLEA). The CALEA standards are specific to law enforcement agencies in general. While CALEA also has developed IHE specific accreditation certification guidelines, IACLEA is solely focused on campus law enforcement administrators and campus security plans and exercises. IACLEA accreditation provides a higher standard above the HEOA of 2008 requirements.

The U.S. Department of Justice (2005) addressed the lack of accreditation in campus safety and security, “While campus police departments may pursue CALEA accreditation, certain characteristics and functions unique to campus operations are not addressed in the broader police standards” (p. 45). As a result, the U.S. Department of Justice (2005) recommended nationally recognized standards for campus safety and security during the National Summit on Campus Public Safety in December of 2004. The summit was coordinated by the U.S. Department of Justice, Office of Community Oriented Policing Services (COPS). COPS selected delegates based on their extensive expertise in campus safety and security and other delegates were selected from key areas across the campus including student services, administrators, and student organizations. The summit produced an extensive list of strategies for colleges and universities in a homeland security environment. One of the key recommendations produced by this summit is that, “National standards, similar to those of the Commission on Accreditation for Law Enforcement Agencies, Inc. (CALEA), should be

developed and implemented to guide campus police and security operations and enhance the profession” (U.S. Department of Justice, 2005, p. 55). The COPS office awarded a grant to the IACLEA to help develop standards applicable to IHEs nationwide (U.S. Department of Justice, 2005).

IACLEA developed 210 standards in collaboration with numerous state law enforcement accreditation agencies, including The Georgia Law Enforcement Accreditation and the Texas Police Chiefs Association Foundation (International Association of Campus Law Enforcement Administrators, 2015). The benefits of accreditation as described by the International Association of Campus Law Enforcement Administrators (2015), are as follows:

Accreditation does not purport that one agency provides better services to its campus than a non-accredited agency. What it does signify is that the accredited agency was carefully measured against an established set of standards and has met or exceeded accepted practices in campus public safety. (p. iii)

IACLEA Accreditation Commission oversees accreditation standards. It is comprised of 12 voluntary members from a diverse representative of campus communities across the nation, and from public and private IHEs, as well as sworn and non-sworn agencies (International Association of Campus Law Enforcement Administrators, 2015). Additionally, membership within the Accreditation Commission includes representatives from other higher education associations, including American Council of Education, the National Association of Student Personnel Administrators, and the National Association of College and University Business Officers (International Association of Campus Law Enforcement Administrators, 2015). These additional members ensure a broad spectrum of campus safety professionals with input and connectivity to the accreditation process.

Upon receipt of accreditation, IHEs must adhere to annual reporting requirements and reapply for accreditation every four years (International Association of Campus Law Enforcement Administrators, 2015). IACLEA accreditation standards cover a broad spectrum of campus safety issues, ranging from traffic and parking to critical incident management. Critical incident management is the focus of analysis in this review as it relates to TVIs. IACLEA's accreditation requirements regarding critical incident management are consistent with the requirements of the HEOA of 2008 (J. Leonard, personal communication, January, 16, 2016). Furthermore, these requirements include more specific planning beyond the basic requirements of the HEOA of 2008 regarding testing emergency response and evacuation procedures. According to IACLEA's accreditation standards, "The plan should also identify responsibilities of all command and general staff positions in a critical incident as they relate to the command, operations, planning and logistics and finance/administration sections" (International Association of Campus Law Enforcement Administrators, 2015, p. 72). These requirements follow the NIMS and the ICS protocol consistent with national federal agency guidance. Section 17.1.3 of the accreditation standards requires an annual review of all hazards that should be integrated with specific institutional response plans for various TVIs (International Association of Campus Law Enforcement Administrators, 2015).

As of January 2015, only 43 institutions of the 1,200 IACLEA members had obtained IACLEA accreditation per an IACLEA representative (J. Leonard, personal communication, January, 16, 2016). Why have so few members of IACLEA, let alone non-members, sought accreditation? The accreditation process is less than 10 years old, it is time consuming for campus law enforcement and emergency management representatives, and it comes at a cost (J. Leonard, personal communication, January, 16, 2016). The cost of accreditation depends on the



size of the IHE. For those IHEs with less than 10,000 students, the cost of accreditation is \$3,000 the first year and \$2,500 every year thereafter (International Association of Campus Law Enforcement Administrators, 2015). IHEs with 10,000 or more students, the cost is \$3,000 per year for the accreditation and the annual review process (International Association of Campus Law Enforcement Administrators, 2015).

In the interest of proactively and effectively protecting the entire campus community, as well as protecting the institution itself from liability issues, IHEs should be invested in obtaining accreditation to improve campus response and planning to TVIs. Jenkins and Goodman (2015) comment on the role of IHEs and campus safety, illustrating the importance of vested interest in security preparedness:

Parents and guardians send their children to college with the understanding that these institutions are committed to the safety and welfare of their children, and indeed, case law has recognized this responsibility . . . The loss of credibility that stems from an ineffective crisis response may lead to devastating consequences to the institution. (pp. 208-209)

### **Challenges and Supplements to Security Preparedness**

While campus preparedness resource investments have increased somewhat over the last 20 years, the focus has been on improving mass communications with limited support given to other preparedness activities (Schafer et al., 2010). Email and text messaging have become a cornerstone of communications at IHEs. Most campus security preparedness after the Virginia Tech incident focused on implementing communications. For example, Holyoke Community College (HCC) increased security spending from \$400,000 in 2001 to \$700,000 in 2010 (Violino, 2010). HCC instituted new programs on campus including an emergency phone

internet protocol system for messaging throughout the college. Ivy Tech Community College made numerous security improvements including installing a closed circuit TV system, notification technology, emergency call stations, and enhanced police presence 24/7 on campus (Violino, 2010). Research has shown that at Southern Ontario University, 95.6% of students indicated they would be in favor of instituting a mass notification system. Data regarding technology use during the study showed that 61.4% of students and 82.8% of faculty members check email routinely during the day and over 80% have their university emails forwarded to them if personal email is primarily used (Butler & Lafreniere, 2010). Additionally, it was reported that over 80% of students owned a cell phone.

Research in Florida and North Carolina showed similarly positive responses to the use of warning messages through text messages and emails (Sattler et al., 2011). Students also made a cultural shift by participating in voluntary security notification programs after the Virginia Tech incident. For example, Princeton University instituted an emergency notification program in 2006, utilizing texts and phone calls during emergencies, but the student participation rate was very low (Selingo, 2008). However, after the Virginia Tech shootings in 2007, over 90% of the incoming freshmen signed up for Princeton's emergency notification program (Selingo, 2008). Despite the positive reception of the use of mass communication for emergencies on campus, limited research has been done on the effectiveness of these systems to date (Sattler et al., 2011).

Significant gaps still exist in resource support to train faculty and staff in campus security preparedness (Eaker & Viars, 2014). The investments in campus security that have been made since the Virginia Tech incident have not been integrated in security planning and exercises at many institutions. According to Snyder and Holder (2015), "Investments in TVI related training, technology, and policies consume considerable resources and have increased for many

universities following the 2007 Virginia Tech massacre” (p. 57). Simply purchasing technology without adequate planning can be problematic (McIntire & Wexler, 2015). For instance, do the nearby cell towers have the capacity to handle thousands of mass notifications via text messaging in the event of an incident? Campus security investments are mostly subject to cost-benefit analysis (Rasmussen & Johnson, 2008). According to a survey in 2008 after the Virginia Tech incident, less than 10% of respondents noted that their institution had received some level of outside funding to help cover the cost of safety and security related efforts, initiatives, and purchases. Security investment benefits can be difficult to analyze for an institution that has never had a TVI.

Despite the enormous safety and liability issues, numerous state legislatures have debated the potential of allowing guns on campus (Lipka, 2008a). As of January 2015, the following states are reviewing proposed legislation to overturn policies banning students, faculty, and staff from carrying licensed, concealed handguns on campus: Alabama, Georgia, Indiana, Louisiana, Oklahoma, South Carolina, South Dakota, Texas, and Washington (Bouffard, Nobles, Wells, & Cavanaugh, 2012). The State of Ohio passed a law allowing guns on the state’s higher education campuses, but required guns to be stored in storage facilities and or locked in parked cars on campus (Lipka, 2008b). Many IHEs have used the Supreme Court rulings to justify the ban on concealed weapons. The Supreme Court has upheld that a school is not a student’s home as he or she does not rent space there, and therefore, cannot carry a concealed weapon (Cramer, 2014).

Virginia Tech had prohibited anyone from carrying firearms on campus, regardless of special permits to carry a concealed weapon (Cramer, 2014). Following the Virginia Tech incident the campus organization, Students for Concealed Carry (SCC) was formed. The primary mission of the SCC was to change attitudes regarding carrying a concealed weapon on

campus (Cramer, 2014). The members of the SCC believed that the absence of firearms on campus, in the hands of licensed and permitted individuals, increased the vulnerability and risk from the growing number of active shooter incidents on IHEs (Cramer, 2014). As in Virginia, many IHEs in Oregon were supportive of gun bans and gun free zones on campus, including Umpqua Community College. Only one unarmed security guard was present at Umpqua Community College during the shootings in 2015 (McIntire & Wexler, 2015).

### **Summary**

A gap in the literature exists regarding the readiness of IHEs' implementation and maintenance of strong security preparedness for future TVIs. The available scholarly research and federal agency security preparedness guidance to colleges and universities has been presented in the literature review. Numerous studies before the large scale shooting incidents at Virginia Tech and North Illinois University demonstrated the infrequency of campus security exercises. There has been no appreciable increase in security exercise frequency even afterwards based on a review of the literature. While a large percentage of IHEs have a security plan, the implementation of the plan is not regulated or supported with direct federal funding and is therefore haphazard and independent of each IHEs' priorities and missions. As resources continue to dwindle at many IHEs, best practices that minimize cost and maximize preparedness in TVI planning, exercise development and execution, and incorporation of exercise lessons learned must be a top priority. My goal throughout this research study was to identify barriers to and best practices of campus security planning and exercises that will allow IHEs to better prepare and respond to TVIs.

## **CHAPTER THREE: METHODS**

### **Overview**

The purpose of this qualitative collective case study was to determine themes, including barriers to and best practices for planning and exercises regarding TVI security preparedness at IHEs. Assembling detailed and thorough information through established case study data collection strategies ensured the maximum results through the data analysis process. The sections that follow describe the design of the study, as well as research questions, participants, procedures, data collection, and data analysis.

### **Design**

Five commonly used qualitative research designs include narrative study, phenomenology, grounded theory, ethnography, and case study (Creswell, 2013). A narrative approach is more appropriate for an analysis of an individual's life story, dealing in oral and/or written forms of communication. Phenomenology pertains to the "essence" of an experience by examining people who have shared the experience through interviews. Grounded theory generates an explanation for an action as described by a large number of individuals who have experienced the action. Ethnography is an approach centered on understanding the culture of a group. A case study approach allows for an in-depth analysis of a particular topic using interviews, observations, and documentation as forms of data collection (Creswell, 2013). I have chosen the case study approach for this research study as it allows for an in depth focus on one or more cases of a topic, in this case, security preparedness for TVIs at IHEs. A case study design allowed me to utilize a variety of data sources, rather than being limited to the perspectives of selected interviewees.

Qualitative case study research can be completed using three different methods, which include single case study, collective case study, and intrinsic case study. Single case study research looks only at one issue and selects the best bounded case available (Creswell, 2013). A collective case study also only looks at one issue, but chooses two bounded cases to research the issue (Creswell, 2013). Lastly, with an intrinsic case study there is an evaluation of a bounded case itself without choosing a specific issue (Creswell, 2013). In order to optimize the results of this study, I chose a collective case study, as opposed to a single case study. With just one bounded case (i.e., institution) in the study, there is a greater potential to miss out on best practices or to discover barriers to security preparedness (Yin, 2014).

I researched potential IHEs to participate in this study based on their demonstrated vested interest in TVI preparedness to determine nationwide best practices. The collective approach was completed at two institutions that granted me access to their site documentation, allowed me to observe their exercises, and agreed to conduct interviews with key institutional stakeholders. Creswell (2013) provides three key benchmark questions for the case study approach: “Does the report have a conceptual structure (i.e., themes or issues)? Were sufficient raw data presented? Do observations and interpretations appear to have been triangulated” (p. 264)? I employed these collective case study benchmarks to ensure thorough data collection at each institution. Furthermore, I utilized several of the six data collection procedures recommended by Yin (2014).

### **Research Questions**

The following are the research questions I developed to help form interview questions:

- (a) How do institutions integrate federal agency multiyear exercise guidance of various types of exercises (workshop/seminar, tabletop, functional, and full scale) for the campus security plan?
- (b) How are exercises of the campus security plan measured for overall preparedness to respond

to large-scale acts of violence with multiple student injuries and loss of life? (c) How are previous TVI exercise lessons used in follow-on exercises or updates to a campus security plan? (d) How can the attitudes and behaviors of faculty, staff, and administrators consistently remain focused on investing in active shooter overall campus preparedness? (e) Would new legislation that regulated IHE security plans and exercises increase the level of overall IHE security preparedness? By synthesizing participants' answers to these questions, I developed recommendations to increase campus preparedness.

### **Setting**

For the purposes of this study, I chose to include only four year private and public IHEs to maintain consistency among settings. The setting of this collective case study was at two IHEs located along the East Coast of the United States. To maintain anonymity, I use the pseudonym designation of Alpha for the first IHE and Bravo for the second.

Alpha Institution is located in a city with a population of 104,870. Undergraduate and graduate enrollments, as of the Fall 2014 semester, were 12,993 and 1,618, respectively. The average age of undergraduate students was 22 years, with only 14% aged 25 and older. The student body is comprised of 62.4% females and 37.6% males. According to the demographics from the Fall 2014 semester, ethnicity of enrolled students was broken down as follows: American Indian/Alaskan Native <1%, Asian 2%, African American/Black 5%, Hispanic 7%, Native Hawaiian or Other Pacific Islander <1%, White 79%, two or more races 3%, international 1%, race/ethnicity not reported 3%. Students from out of state comprised 17.9% of the student body, while in-state students comprised 82.1%. The institution has a staff of 1,250, with 612 full-time faculty and 273 part-time faculty. It offers a total of 49 majors at the bachelor level and 42 majors at the master level.

Bravo Institution is located in a large metropolitan city with a population of 1.55 million. The institution enrolls a total of 26,359 students, of which 16,896 are undergraduates, 9,463 are graduate students, and 5,284 are online students. The average age of students is 23 years. Females comprise 46.7% of the student body, while males comprise 53.3%. As of the Fall 2014 semester, reported ethnicity of students from the U.S. is as follows: American Indian/ Alaskan Native 0.2%, Asian 15.1%, African-American/Black 7.5%, Hispanic/Latino 6.8%, multi-race (not Hispanic/Latino) 3.3%, Native Hawaiian/ Pacific Islander 0.7%, White 63.8%, unknown 2.6%. The student body also contains 12.8% international students from 121 countries. Bravo Institution offers 200 degree programs within its 15 colleges.

### **Participants**

Purposeful sampling was the method I used to locate two institutions with a high level of engagement in security preparedness as determined via available documentation researched online. Using purposeful sampling is the most efficient sampling, where the best institutions could be selected that will inform the study (Creswell, 2013). I established contact with both the Alpha and Bravo Schools regarding their desire to participate in this study and received an overwhelming level of enthusiasm from each. Campus personnel that I intended to interview included faculty, the Dean or Assistant Dean of Student Affairs, other representative of Student Affairs, senior representative of the Safety and Security Department, and a senior representative of the police or security personnel.

### **Procedures**

The procedures for the study followed a systematic process. First, I completed the research prospectus at the beginning of EDUC 989 in the spring semester of 2016. The prospectus included application documentation for IRB approval. Once IRB approval was



granted for the research plan, and both the dissertation chair and other committee members have given approval, I began the collection of data recruitment and informed consent, according to the dissertation timeline (see Appendix A). Initially, I conducted research via publicly accessible websites to gain information on the participating IHEs' background information on emergency response information, and detailed information regarding the best stakeholders to interview. After the two institutions provided written consent to participate in the research study, I began data collection in the spring of 2016. Data collection strategies I used include site documentation review, participant observations, and interviews. This data collection strategy maximized the collection of potential security preparedness best practices. Identified best practices for increasing vested theory in campus security preparedness was discussed with key institution stakeholders during the interview phase of data collection. Participating individuals from each IHE were given pseudonyms. After completion of the data collection process, I began analysis as described in the research plan.

### **The Researcher's Role**

As a member of the U.S. Coast Guard for the past 18 years, I have developed an expertise in contingency planning, exercise planning, and execution for all types of hazards. Members of the U.S. Coast Guard are required to meet exacting standards and rigor in contingency planning. However, I am well aware that the rest of society does not always follow these strict guidelines. My professional background in mandated port security planning and exercises should not be a bias because the overall federal guidelines recommended for IHEs are very similar. My faith guides me as an individual, husband, father to my two children, professional, and doctoral student conducting this qualitative study.

### **Data Collection**

I used the triangulation method in the analysis of site documentation (i.e., security plans, preparedness training activities, and review of after action reports), observations, and interviews of different groups of campus stakeholders. The convergence of multiple data sources (i.e., triangulation of several sources of data) is in accordance with Yin's (2014) description of case study design. I chose the following sequence of data collection to maximize baseline information on each institution's security planning and exercise process, which in turn allowed for the most effective information exchange during interviews with IHE participants:

Step 1: I contacted prospective participant universities via email and provided them with a copy of the Liberty University IRB template with specific request for institution participation (see Appendix E). Agreements to participate from the institutions are required via signed letter on institutional letterhead or via email response to me.

Step 2: I requested the security plans (focused on active shooter response) of each institution for review at either the IHE or remotely. Upon access to the information, I conducted a thorough review of the IHE security plan.

Step 3: Documentation of previous TVI exercises (with emphasis on active shooter response), including lessons learned, was requested for my review either at the IHE or remotely.

Step 4: I conducted observations of security exercises and planning meetings completed in the timeframe of research data collection.

Step 5: I conducted field interviews using interview questions geared toward specific types of participants (refer to Appendix B).

## **Site Documentation Review**

Site documentation is a qualitative data collection strategy of reviewing reports, administrative documents, evaluations, and numerous other external and internal IHE information (Yin, 2014). Site documentation is important in this study to corroborate information from many different sources regarding IHE security preparedness activities and determined overall best practices (Yin, 2014). I began with a thorough review of site documentation, including security plans, in accordance with federally recommended guidelines from FEMA, DOE, and other federal agencies. I surveyed the data for themes and issues across both cases to determine the similarities, differences, and major gaps in each plan (Creswell, 2013). The federal Homeland Security Exercise and Evaluation Plan (HSEEP) was developed to implement standardization in developing and executing exercises in a broad range of contingencies, from hurricane response to campus TVI events (Altizer, 2008). Exercise after action reports were analyzed by me to determine if they follow the HSEEP protocols. I reviewed each participating IHEs' publicly available documentation pertaining to active shooter plan development, exercise frequency, and outreach to the public.

Site documentation data collected helped determine how vested each of the two institutions are in the HSEEP program. For instance, do they have periodic TVI active shooter exercises? If institutions have TVI active shooter exercises, then lessons learned can be reviewed, and best practices collected. The collection of exercise data is critical to analyzing which best practices increase IHE vested theory in security preparedness.

## **Participant Observations**

Participant observations are another collective case study method to collect evidence on a real-world topic (Yin, 2014). Observations are very important in qualitative research as a key

data collection technique (Creswell, 2013). Activities utilized in data collection can include observations about a specific setting, individual participants, activities, interactions, and conversations (Creswell, 2013). Participant observations could be formal or informal based on the availability of IHE security preparedness activities over the data collection period. Security preparedness activities that I targeted for observation include security plan review, active shooter exercise development, exercise planning meetings, student active shooter training, or other associated activities. I wanted to observe these preparedness activities to determine the institution's campus security plan knowledge, actions to be taken during an active shooter incident, understanding of Incident Command System (ICS), and other preparedness activities as recommended by the U.S. Department of Education, Federal Emergency Management Agency, and other federal agencies. I took notes during the security preparedness activities. I recorded relevant information on the Observation Protocol Form (see Appendix D; Creswell, 2013). The main point of contact at each participating IHE introduced me to the participants during the preparedness activity (Creswell, 2013).

## **Interviews**

Interviews are one of the most important elements of qualitative case study research and include structured questions according to approved protocols that are proposed in an unbiased manner (Yin, 2014). I used the purposeful sampling technique to find key participants to interview, including campus security staff and administrators in a guided conversation or open-ended question format (Yin, 2014). Noor (2008) comments on the semi-structured interview: "As the interview was the primary data gathering instrument for the research a semi-structured interview was chosen where questions were carefully designed to provide adequate coverage for the purpose of the research" (p. 1603). The use of semi-structured and open-ended questions

helped me solicit a narrative response and develop a story about security preparedness at each institution (Creswell, 2013).

To begin, I obtained interview consent from each interviewee. The interview protocol followed a specific format (see Appendix C), as I developed different interview questions for the various stakeholders (see Appendix B) as recommended in Creswell (2013). I followed Yin's (2014) protocol for short case study interviews and did not exceed an hour in duration. I conducted interviews with the participants in person. The primary interview technique was in person on the respective campuses at a site of the subject's choosing. I documented the interviews with the use of a digital audio recorder device. Additionally, I kept hand-written researcher notes of each interview. Finally, I personally transcribed the interviews into Word documents and saved these to my secured password protected home computer (Creswell, 2013). Research questions (a-e) were addressed by the interview questions (refer to Appendix B) via this data collection strategy.

### **Data Analysis**

Data analysis was completed using a variety of established case study method strategies in a sequenced order of completion as listed below.

Step 1: A primary data analysis tool in qualitative research is memoing, which I used in this study for plan and exercise review, site observations, and interviews. Memoing includes writing notes (key phrases and ideas) in the margins of interview transcripts (Creswell, 2013). After reading each interview transcript, I completed the memoing process for all participants at the two institutions. Initial categories were created, not exceeding 10 (Creswell, 2013).

Step 2: Coding of data includes reviewing the transcript text for specific key codes that can be developed from memoing (Creswell, 2013). Using Ethnograph, a qualitative data analysis

software, I coded the data to search for key words, count the number of times these words were used, and conducted Boolean searches to match information (Yin, 2014).

Step 3: Using theoretical prepositions that are a cornerstone of qualitative data inquiry (Yin, 2014), I executed the data analysis strategy. The theoretical preposition used in this case study was vested theory. The objective of my study design was to determine how IHEs could become more vested with security preparedness activities.

Step 4: The analytical technique for qualitative case studies that I chose, the cross case synthesis, is one of five techniques described by Yin (2014). A primary method of analysis between two cases is the use of word tables to display information and compare cases (Yin, 2014). Similarities and contrasts can be determined by using word tables (Yin, 2014). My plan was to develop recommendations for IHEs that maximize security preparedness and are attractive for adoption by IHEs. These recommendations must incorporate methods to change attitudes and behaviors at IHEs to make security preparedness for an active shooter event firmly rooted into the campus culture.

Step 5: Quality control of data analysis was completed by several different methods. First, all observations, site documentation, and transcripts were fully reviewed (Yin, 2014). I completely reviewed all critical evidence twice during the analysis process (Yin, 2014). Next, it is important in case study research to look at the rival interpretation (Yin, 2014). As a result, I considered the philosophy of not conducting security preparedness activities due to high resource investment as a rival position. Third, the most important part of case study research analysis is to stay focused on key ideas and not get distracted by less important information (Yin, 2014). I remained focused on the most significant aspects of the case by ensuring the research questions were completely addressed in the data analysis process. Lastly, according to Yin (2014), “You

should use your own *prior, expert knowledge* in your case study” (p.168). I utilized my expertise in contingency planning and exercises in collecting and analyzing the case study.

### **Trustworthiness**

The accuracy of the findings of this qualitative study were improved by using several strategies that build trustworthiness (Creswell, 2013). These strategies include credibility, dependability, transferability, and confirmability (Creswell, 2013). Trustworthiness of research is critical for new and experienced researchers. Additionally, having a member of the dissertation committee who is an expert in hybrid target violence helped the overall trustworthiness of the research study.

### **Credibility**

Credibility inspires belief in a research study. Building credibility in a study is an important tool to ensure overall trustworthiness in a study. Prolonged engagement with subjects and persistent observations are methods to build credibility (Creswell, 2013). This was accomplished by prolonged engagement with the two institutions involved in the case study and providing researcher availability to short-fused scheduled activities in campus security preparedness.

I used member checks with the participants to ensure I obtained accurate information (Creswell, 2013). The process of member checks was followed as described in Yin (2014). Triangulation of different data sources of data collection was used to determine the most appropriate behaviors to increase focus on active shooter planning and exercises (Creswell, 2013). I gave a clear picture of past experiences in safety and security planning to all participants.

**Dependability**

Dependability is the capability of being depended on. Dependability was enhanced by my detailed note taking during the entire research study and tape recording interviews and observations whenever possible (Creswell, 2013). From this information, I derived key quotations from participants (Creswell, 2013). Additionally, subjects were given the opportunity to review all notes or transcripts developed from interviews. Peer debriefing sessions are an excellent method to ensure that security preparedness methods and motivations are clearly understood (Creswell, 2013).

**Transferability**

Transferability is the ability to take a research method in one study and apply it to another study. Transferability was enhanced by my use of the thick description process during the data analysis phase, which describes the campus participant's position at the institution (Creswell, 2013). Not only does the study include commonplace descriptions, but it also includes descriptions of places, events, and people as described by the subjects, who, according to Stake (1995), "are the most knowledgeable about the case" (p. 102). Thick descriptions used in the study incorporate standard planning and exercise language from the DOE and FEMA in order to allow security preparedness information to be easily transferred to a larger IHE population (Creswell, 2013).

**Confirmability**

I asked an outside consultant, one that was not involved in the study, with a background in hybrid target violence to review the research proposal and results to determine if conclusions are supported by the data collected (Creswell, 2013). The expert review of findings,



interpretations, and conclusions of the study greatly increased the confirmability of this study (Creswell, 2013).

### **Ethical Consideration**

Ethical considerations include my receipt of authorization to access institutional participants. Prior to conducting the study, I obtained the institution's approval in writing. I thoroughly explained the process of the research study and indicated that participation is voluntary. Privacy concerns of study participants is a priority. As a result, all research participants were given pseudonyms and I reviewed the data to ensure easily recognized identifiers that could be applied to research participants or the institutions were removed. Lastly, following the exact procedures detailed in the Liberty University IRB guidelines was crucial in maintaining the integrity of the study. Upon meeting a potential participant, I provided them with an Informed Consent form. Furthermore, I notified each individual that participation in this research study was strictly voluntary and participants had the right to withdraw at any time. Research data were backed up to portable thumb drives which were stored in a lock box in my home (Creswell, 2013). Lastly, the digital audio recorder with interviews and information were also kept in a lock box in my home.

### **Summary**

In conclusion, the methodology of this study is a qualitative collective case study design. Triangulation of data was completed using site documentation, observations, and field interviews. Participant selection, collection of data, and the analysis of data was completed in accordance with Liberty University IRB guidelines. Trustworthiness was a top priority of my research study and I made every attempt to avoid any potential ethical issues.

## **CHAPTER FOUR: FINDINGS**

### **Overview**

The purpose of this chapter is to present the results of this study. Data were collected from two institutions and include information gathered from campus security plans (including a review of after action reports) and observations of preparedness training activities. Memoing was completed on each campus security plan, exercise after action report, and observation notes. Additional data were gathered from field interviews of different campus stakeholders. Purposeful sampling techniques were used to target key participants to interview, including administrators, faculty, emergency managers, and campus security staff. The interviews were held in a guided conversation or open-ended question format (Yin, 2014). Data from the interviews were organized into two categories of interviewees: administrators/faculty and emergency managers/police for each institution case study.

The purpose of this qualitative collective case study was to discover barriers to campus security preparedness for TVIs and determine the most successful tactics to incorporate preparedness throughout all IHEs. The most relevant themes developed from analysis of the data include hindrances, recommendations, best practices, and vested interest. For the purposes of this study, I define these themes as follows: hindrances are barriers to security preparedness activities; a recommendation is a suggestion by an interviewee to improve conditions at the IHE; best practices are exceptional actions taken at the IHE previously and currently; vested interest are actions that may increase IHE participation in security preparedness.

### **Participants**

Purposeful sampling was the method I used to locate two institutions with a high level of engagement in security preparedness as determined via available documentation researched

online. For the purpose of anonymity, these institutions are referred to throughout this study as Alpha Institution and Bravo Institution. It is very important to emphasize both institutions were selected based on excellent campus security preparedness programs as determined upon my review of the literature. One of the institutions has a campus security certification from the Commission on Accreditation for Law Enforcement Agencies (CALEA). The CALEA campus security certification is described as,

A proven modern management model; once implemented, it presents the Chief Executive Officer (CEO), on a continuing basis, with a blueprint that promotes the efficient use of resources and improves service delivery - regardless of the size, geographic location, or functional responsibilities of the agency. (Commission on Accreditation for Law Enforcement Agencies, 2016)

The other institution has a Disaster Resistant University (DRU) designation assigned by FEMA. The Disaster Resistant University program is a guide developed from the work of six universities and colleges that have addressed their preparedness for any incident to become more “disaster-resistant” (Federal Emergency Management Agency, 2003).

Purposeful sampling was also the method used to acquire subjects for the interview portion of this study. This sampling yielded six interviews at Alpha Institution and four at Bravo Institution, for a total of 10 interviews. I included participants from the faculty, administrators (e.g., Dean or Assistant Dean of Student Affairs, other representative of Student Affairs), senior representatives of the Emergency Management Departments, and a senior representative of the campus police. An interview of each representative from each category was completed, with the exception of a faculty member at Bravo Institution. Several faculty members were contacted and

either never responded to emails or were not available. The interviewees are listed in Table 2 with alphanumeric indicators in place of names.

Table 2

*List of interview participants with respective roles and institutions*

Interviewee Pseudonym	Interviewee's Role	Institution	Date Interviewed
A7	Emergency Manager/Police	Bravo	3/15/2016
A8	Emergency Manager/Police	Alpha	5/16/2016
A9	Administrator/Faculty	Alpha	5/16/2016
A10	Administrator/Faculty	Alpha	5/16/2016
A11	Emergency Manager/Police	Alpha	5/16/2016
A13	Emergency Manager/Police	Alpha	5/17/2016
A14	Administrator/Faculty	Alpha	5/17/2016
A15	Emergency Manager/Police	Bravo	6/14/2016
A16	Emergency Manager/Police	Bravo	6/27/2016
A17	Administrator/Faculty	Bravo	6/28/2016

## Results

The following is a brief summary of each type of data: site documentation review, observations, and interviews. Site documentation review was completed at both institutions with a focus on collecting data to address the research questions. The documentation review was used to corroborate information from many different sources regarding IHE security preparedness activities and determine overall best practices (Yin, 2014). Types of documentation reviewed at both institutions include Campus Security Plan Review, preparedness training activities, and a review of exercise after action reports.

Observation of campus exercises was conducted at Bravo Institution only. I had hoped to schedule an observation at Alpha Institution, however, none were scheduled during the data collection phase of this study. A three hour campus safety exercise was observed at Bravo Institution in April 2016.

A total of 10 interviews were conducted using the interview protocol listed in Appendix C. Interviewees were given one of two sets of similar questions (see Appendix B), but which were worded differently depending on their role within the institution. For instance, administrators and faculty were given a list of questions slightly different from those given to emergency managers and police. Note that in the original design of the Interview Questions in Appendix B, “Dean or Assistant Dean of Student Affairs” was the category for one set of questions and “Campus Emergency Managers and Senior Police Representative” for the other set. During the data collection phase, I included faculty and other administrative staff in the interview process, so the “Dean or Assistant Dean of Student Affairs” group was renamed “Administrators and Faculty.” All interviews were conducted in person with the use of a digital audio recorder device and in accordance with the Liberty University IRB requirements. The data are outlined and triangulated below, organized by research question (a-e). Table 3 illustrates the relationship between the five research questions detailed in Chapter One and the corresponding interview questions (see Appendix B) designed to answer each.

Table 3

*Research Questions with corresponding Interview Questions*

Research Question	Administrator/Faculty Interview Question Number	Emergency Manager/Police Interview Question Number
(a) How do institutions integrate federal agency multiyear exercise guidance of various types of exercises (workshop/seminar, tabletop, functional, and full scale) for the campus security plan?	1	1, 2, 3, 6
(b) How are exercises of the campus security plan measured for overall preparedness to respond to a large-scale active shooter incident with multiple student injuries and loss of life?	2, 3	4, 6
(c) How are previous TVI exercise lessons used in follow-on exercises or updates to a campus security plan?	4, 5, 6	5 (n.b., moved from (a) to (c)), 6
(d) How can the attitudes and behaviors of faculty, staff, and administrators consistently be focused on investing in active shooter overall campus preparedness?	7	7, 8
(e) Would new legislation that regulated IHE security plans and exercises increase the level of overall IHE security preparedness?	8	9

All interviews were transcribed and sent to the interviewee for review and comment.

None of the interviewees replied with comments. Transcriptions of the field interviews were uploaded into the qualitative software data analysis package, Ethnograph, 6.0, by Qualis

Research, for analysis. Code words and/or phrases were identified and aggregated, from which I identified four consistent themes within the data: hindrances, recommendations, best practices,

and vested interest. Table 4 lists the counts of these themes separated by the role of the interviewee.

Table 4

*Counts of themes found in interviews*

Role of Interviewee	Themes			
	Hindrance	Recommendation	Best Practice	Vested Interest
Administrators/ Faculty	14	23	20	9
Emergency Managers/ Police	39	17	48	8

Each research question (a-e) is listed below, followed by the relevant data from the site documentation review, observations, and interviews. Data from the interviews are presented in Tables 5–23 and are organized by the interview questions linked to each research question. These tables list the key phrases or codes derived from an analysis of the interview data along with the corresponding theme and institutional affiliation. A summary of each Research Question follows at the end of each data set.

### **Research Question (a) Results**

**Research Question (a).** How do institutions integrate federal agency multiyear exercise guidance of various types of exercises (workshop/seminar, tabletop, functional, and full scale) for the campus security plan?

**Site documentation review.** Alpha Institution's emergency operations plan is a blend of federal agency planning guidance and connected to local and state partners in emergency support functions. The base Emergency Operation Plan (EOP) complies with the National Incident Management System (NIMS), as required by the Federal Emergency Management Agency (FEMA). Bravo Institution's security plan links individual building playbooks, which are maintained electronically on the institution's website. The building playbooks are developed for all hazard contingencies, reviewed, and approved by the institution's authorities. An exercise is then scheduled which may lead to the creation or major update of a building playbook.

Alpha Institution has a variety of preparedness training activities conducted through both the campus police department and the health and safety department. Many of these training activities are incorporated into exercises using the HSEEP process for campus security plan exercises. Bravo Institution also has a variety of preparedness training activities available from campus police or campus emergency management personnel.

Alpha Institution held several active shooter exercises in 2013 and 2014. The after action reports reflected overall consistent guidance from HSEEP on exercise documentation. As of May 2016, Bravo Institution had conducted one active shooter exercise in the last three years. The after action report reflected overall consistent guidance from HSEEP on exercise documentation and different types of exercises.

**Observations.** A three hour campus safety exercise was observed at Bravo Institution. The campus emergency exercise for a large scale medical scenario appeared to be utilizing federal exercise guidance.

**Interviews.** Tables 5-8 outline the interview questions designed to answer Research Question (a). Following each table is a brief description of the pertinent data themes.



Table 5

*Responses to Administrator/Faculty Interview Question #1: Does your institution have a regular program for conducting campus preparedness exercises in accordance with the federal agency guidance (links to research question [a])?*

Key Phrase/Concept	Themes			
	Hindrance	Recommendation	Best Practice	Vested Interest
University 101 on campus preparedness		Alpha		
Student noncompliance with campus procedures from emergency phone messages	Alpha			
Reinforce faculty obligations in classroom active shooter incident		Alpha		
Chancellor's Council on Safety and Security			Alpha	
Need interest of the department chair in active shooter training				Alpha
Faculty focused on research only	Alpha			
Advanced active shooter training every couple of years for senior administrators			Alpha	
Multi-faceted approach, orientation, individual training		Alpha		
I know they happen	Bravo			

The data from Alpha Institution showed a strong level of knowledge regarding exercise guidance from the campus security plan. Due to the low number of available administrator or faculty interviewees at Bravo Institution, no cross case synthesis was available. Several statements strongly stated the lack of focus on campus security, along with increasing overall

IHE requirements, was a major hindrance. Interviewee A9 commented: “The difficulty becomes that we’re asked to participate in so many trainings, meetings, and committees. Some of these things just get lost in the mass, regardless of their importance” (A9 Interview, May 16, 2016).

Recommendations included federal support for improved security preparedness, as well as having a multifaceted approach to campus preparedness training that includes student and faculty orientation on campus preparedness. A best practice noted was the use of a Chancellor’s Council on Safety and Security which reviews campus TVI after action reports, determines priorities based on risk, and makes recommendations for potential funding to senior administrators. Department Chairs are a critical link to creating vested interest of faculty in campus security preparedness.

Table 6

*Responses to Emergency Manager/Police Interview Question #1: How does your institution conduct faculty and administrative staff training on the security plan (links to research question [a])?*

Key Phrase/Concept	Themes			
	Hindrance	Recommendation	Best Practice	Vested Interest
Faculty and staff orientation			Alpha	
Human Resources Act required basic emergency training employees			Alpha	
Faculty not subject requirements Human Resources Act	Alpha			
Key decision makers Chancellor, Vice Chancellor, one on one training			Alpha	
Administrative building playbooks initiated			Bravo	
Active shooter website use tracker		Bravo		
Significant staff obligations with growing requirements	Bravo			
Infrequent involvement in student orientation	Bravo			
Development of online training new employees		Bravo		

A significant hindrance to security preparedness at IHEs was the growing staff obligations. One recommendation was made to require IHE active shooter training for students as a prerequisite to register for courses. Best practices centered on including campus security preparedness training at faculty and student orientations, and extending the requirements for the Human Resources Act to faculty. No vested interest items were recommended. Data from both

Alpha and Bravo cross case synthesis showed a lack of requirements on faculty and students for security preparedness training was a significant hindrance.

Table 7

*Responses to Emergency Manager/Police Interview Question #2: How does your institution involve multiple partners (local emergency management, local responders) in the security planning process (links to research question [a])?*

Key Phrase/Concept	Themes			
	Hindrance	Recommendation	Best Practice	Vested Interest
Local partners exercise evaluators and controllers			Alpha	
Local partner memorandum of understanding joint training			Alpha	
Local partner Jurisdictional Agreements			Alpha	
Local Partner Mutual Aid Agreements			Alpha	
Strong liaison with local emergency management			Bravo	
Local partner exercise involvement			Bravo	
Local partner mutual aid agreements			Bravo	
Strong relationship local fire department			Bravo	
Joint training local responders			Bravo	
Senior EM leadership quarterly meeting with Homeland Security			Bravo	
Local partners sent exercise information			Bravo	

Hindrances, recommendations, and vested interest themes were not identified for this interview question. However, numerous best practices were noted for integrating exercise plans

which centered on joint training and partnering with local, state, and federal counterparts that work with individual IHEs. Interviewee A7 stated, “All of this includes partners, and our partners are University of [nearby Bravo School], Amtrak, [subway system in large city where Bravo School is located], OEM Office of Emergency Management, and Fire Administration” (A7 Interview, March 15, 2016). A cross case synthesis revealed overall very strong relationships with local partners on many levels was a key best practice at both institutions.

Table 8

*Responses to Emergency Manager/Police Interview Question #3: Does your institution have a regular program for conducting campus preparedness exercises (links to research question [a])?*

Key Phrase/Concept	Themes			
	Hindrance	Recommendation	Best Practice	Vested Interest
Three year exercise plan that follows HSEEP guidance			Alpha	
Exercise types and complexity limited by funds and staff availability	Alpha			
Dedicated emergency response position			Bravo	
Establish short and long range goals for drills and exercises		Bravo		
Teaching active shooter fundamentals: run, hide, fight			Bravo	
Update of building playbook usually is followed by exercise			Bravo	
Train staff to update security plan		Bravo		
Train staff and faculty on plan updates before the exercise occurs			Bravo	
Multiple days and times for training anticipating pushback and conflicts			Bravo	

Funding was the biggest hindrance cited in preventing the development of functional and full scale TVI exercises. The most significant recommendation was to educate administrative representatives and other staff on updates to the campus security plan. Interviewee A16 stated,

One of the things that we've missed in the past, I think is, that I am now really pushing, prior to my turn here, they would develop these plans and just go to the drill. I have a concern that you develop these plans that you've got to train that staff as to what did you change in the drill and you know between the original plan usually and an upgraded plan, in particular, a lot of the people are not the same people. (A16 Interview, June 27, 2016)

Another excellent recommendation from Interviewee A16 was making security preparedness available to fit multiple IHE stakeholder schedules.

I try to say to them "What is so important in your job, if you know two weeks from now that you have to be at training for an hour, can't you figure out some way to get whatever the deadline is for that Monday done Friday or done by 9:00 Monday so you can be at training and we'll only keep you for an hour." We're trying to really work with people and work with their schedules, but there's always that resistance. (A16 Interview, June 27, 2016)

No significant cross synthesis was noted between the two institutions.

**Research Question (a) summary.** Triangulation of the three data types showed that both institutions integrate federal agency multiyear exercise guidance overall in developing different types of exercises for the campus security plan. The HSEEP program, which is run by FEMA, was found in site documentation for both institutions, observations for institution Bravo, and during multiple interviews. Significant cross case synthesis was shown during triangulation

of the data for the four themes of exercise hindrances, recommendation, best practices, and vested interests.

The primary hindrance to fully implementing exercise guidance from FEMA is the overall lack of funding to support the preparedness cycle of four exercise types. Most exercises at both institutions were either workshop/seminars or table top exercises. These exercises are the simplest exercise types and least expensive to design. These exercises tend to require a limited amount of stakeholders, have simple objectives, and are not multifaceted with linking internal and external partners. The limited amount of functional and full scale exercises for campus TVI does not allow for the full benefit of the exercise preparedness cycle to design, exercise, develop lessons learned, and update the security plan in a systematic process. The lack of funding and limited staff dedicated to planning and exercises (e.g., a myriad of all hazards plans from point of distribution exercise for a pandemic, extreme weather events, sporting events, and TVI events) was the largest hindrance to completely meeting federal exercised guidance.

Second, numerous recommendations were triangulated between the three data collection methods for both institutions. The recommendation for the establishment of a long term exercise plan was supported by senior higher education administrators, staff, and faculty. It was recommended that senior administrators, faculty, staff, and students participate in exercises to the maximum extent possible. This is even more important with the large turnover of students and faculty changes within many IHEs across the country.

A significant best practice triangulated from the data was the importance of integrating the campus security plan and exercises with other stakeholders that may impact the IHE. State and local emergency management representatives, including police, fire, and medical response units, should be part of campus security exercise design teams, exercise participants, and

observers. Vested interest in campus exercises must stem from a multifaceted approach through security plan training activities before, during, and after exercises. IHE security planning partners who develop individual building playbooks must be engaged in the entire exercise campus security plan annually.

### **Research Question (b) Results**

**Research Question (b).** How are exercises of the campus security plan measured for overall preparedness to respond to a large-scale active shooter incident with multiple student injuries and loss of life?

**Site documentation review.** Exercises at Alpha Institution are in accordance with the exercise schedule prepared annually by the institution's Emergency Manager. Bravo Institution holds periodic TVI exercises and exercise corrective actions for administrative updates of the security plan are coordinated by campus emergency management representatives. Preparedness training activities at the Alpha Institution are measured by attendance at TVI trainings, activity in various campus preparedness communication platforms, and availability of campus preparedness information to students on the institution's website. TVI training requests at Bravo Institution tend to be very high following a TVI at another IHE, otherwise, attendance at regularly scheduled trainings is low. Preparedness training activities at the Bravo Institution were not specifically set with metrics to track effectiveness.

According to the exercise after action reports, the active shooter exercises held by Alpha Institution in 2013 and 2014 were measured at several key areas within the institutional security plan, including the Emergency Operations Center, the Incident Command Post, and activities of the Crisis Decision Team (CDT). The most recent active shooter exercise held at Bravo



Institution was measured at several key areas in the institutional security plan, including a large campus building. Multiple campus partners were invited and participated in the exercise.

**Observations.** Bravo Institution measured its exercise I observed in 2016 based on the pre-training given to participants and their ability to follow the plan as directed by exercise handouts provided for all participants. The objectives of the exercise were covered before it began. The functional exercise included students, staff, and faculty. The exercise was measured by how the exercise players carried out the required duties and responsibilities as laid out in the contingency plan.

**Interviews.** Tables 9-12 illustrate the responses to interview questions designed to answer Research Question (b). A description of the significant themes follows, along with meaningful quotes from some of the interviewees.

Table 9

*Responses to Administrator/Faculty Interview Question #2: What is your role on campus regarding an active shooter incident and the institution security plan (links to research question [b])?*

Key Phrase/Concept	Themes			
	Hindrance	Recommendation	Best Practice	Vested Interest
Dependence on emergency management for instructions during TVI	Alpha			
All Hazards Plan, and that Safety Council			Alpha	
Dependence on police for instructions during TVI	Bravo			

Measurement questions of campus security exercises showed a hindrance for lack of knowledge by some interviewees from administration and faculty at Alpha Institution.

Interviewee A9 stated: “I have no idea. That’s never even been discussed with me. I make the assumption just like any disaster preparedness thing that I would receive an email that would provide instructions for what I need or a text message” (A9 Interview, May 16, 2016). No recommendations were noted for this question. However, an administrator/faculty member at Alpha Institution, Interviewee A14, was very knowledgeable about their All Hazards Plan and Safety Council, both listed as best practices. This individual commented, “That Committee has a range of different people on it and it’s the right people to have at the table” (A14 Interview, May 17, 2016). No vested interest items were coded. Due to the low number of available administrator/faculty interviewees at Bravo Institution, no cross case synthesis was warranted.

Table 10

*Responses to Administrator/Faculty Interview Question #3: Have you ever participated in an active shooter exercise or training (links to research question [b])?*

Key Phrase/Concept	Themes			
	Hindrance	Recommendation	Best Practice	Vested Interest
Host National ALERRT training for active shooter			Alpha	
Have police department rep qualified as National ALERRT Trainer			Alpha	

No themes for hindrance, recommendations, or vested interested came from this interview question. A significant best practice identified among multiple interviews at Alpha Institution was having national Advanced Law Enforcement Rapid Response Training (ALERRT) for certain staff and even sending a relevant staff member to be trained to teach this system to others back at the institution. No cross case synthesis was possible given the lack of data from Bravo Institution for this interview question.

Table 11

*Responses to Emergency Manager/Police Interview Question #4: How does your institution measure the effectiveness of security plan exercises (links to research question [b])?*

Key Phrase/Concept	Themes			
	Hindrance	Recommendation	Best Practice	Vested Interest
Subject matter experts as observers from local partner agencies			Alpha	
Percentage of campus personnel signed up for alert warning system			Alpha	
Voluntary opt in alert warning system	Alpha			
Enterprise Risk Management Committee evaluates exercise After Action Reports			Bravo	
Exercise Hot Wash			Bravo	
Exercise standard evaluation parameters			Alpha	

A major hindrance identified by this interview question was Alpha Institution's voluntary policy for IHE staff, faculty, and students to opt in to the emergency notification system.

Despite this, a large number of campus personnel have opted in to the system. No recommendations or vested interest codes were identified. Using subject matter experts from local agencies as observers was identified as a best practice as it fosters those relationships and allows for plan knowledge growth. Interviewee A11 stated: “Your standard evaluation observer comments, and review and self-evaluations, and we use subject matter experts as our evaluators, offsite and onsite” (A11 Interview, May 16, 2016). Cross case synthesis showed the importance of completion of exercise after action reports or having an exercise hot wash, which is a short review post exercise, at both institutions.

Table 12

*Responses to Emergency Manager/Police Interview Question #6: How is ICS incorporated in the security planning process and what are any best practices (links to research question [b])?*

Key Phrase/Concept	Themes			
	Hindrance	Recommendation	Best Practice	Vested Interest
Number of individuals who sign up for the alert notification system				Alpha
Measurement is done by number of risks identified at the end of an exercise			Bravo	
Utilization of the Risk Management Committee			Bravo	
Review of risks and potential actions by Risk Management Committee			Bravo	
Hot wash			Bravo	

Items generated during a hot wash meeting after the exercise is a primary method of measuring exercise effectiveness. Additionally, the use of evaluators who are experts in the field

of campus security from other institutions or who are local stakeholders who know the campus security plan can help gauge the effectiveness of exercise participants.

**Research Question (b) summary.** The triangulation of data regarding how IHE campus security plans are measured to respond to a large-scale active shooter incident focused on feedback from exercise evaluators, observers, and hot wash items developed from participants after the exercise. Participation from administrators, faculty, staff, and students is another method used to measure overall preparedness to respond to an active shooter incident. Participation includes attendance metrics at preparedness training sessions in person and online, willingness to volunteer to participate in exercises, feedback given after an exercise during a hot wash, and overall willingness to implement exercise after action recommended items.

The greatest hindrance triangulated from the data was the overall high levels of apathy from campus stakeholders. For a short time, following a TVI event in another location, participation in various security preparedness activities increased; however, not long afterwards complacency and apathy set in. It was recommended that measurement methods of campus security preparedness be routinely briefed to senior administrators. Senior IHE administrators must ensure faculty and staff are aware of the negative consequences of being unprepared for a TVI regarding loss of life and significant recovery challenges (e.g., Department of Education enforcement penalties, lawsuits) for the IHE.

A best practice to measure campus security plan preparedness is to create institutional groups with key stakeholders to champion preparedness planning, exercises, and training. For instance, an All Hazards Plan and a Safety Council is utilized at Alpha Institution and an Enterprise Risk Management Committee is used at Bravo Institution. Security plan preparedness can be enhanced by administrators, faculty, and staff who receive training in national security

preparedness. A highly regarded national training program is the Advanced Law Enforcement Rapid Response Training (ALERRT). Vested interest measurement indicators of campus preparedness should center on interest from senior campus administrators and senior faculty (e.g., deans, department chairs) by participating in exercises. These stakeholders then actively engage to develop solutions to complicated exercise after action report items.

### **Research Question (c) Results**

**Research Question (c).** How are previous TVI exercise lessons used in follow-on exercises or updates to a campus security plan?

**Site documentation review.** Alpha Institution's base Emergency Operation Plan (EOP) has numerous hazard specifics including hurricane, winter weather, tornadoes, severe thunderstorms, flood, active shooter, and several other contingencies. Exercises are scheduled according to the multi-year training schedule and the institution had several active shooter exercises in the last three years. Lessons learned from previous exercises at Alpha Institution in the last three years were documented in the after action report improvement plan matrix. Certain action items had not been addressed to date and most of those included some type of funding to implement that specific action. Campus emergency management representatives from Bravo Institution forward after action requirements for additional resource corrective measures to institutional leadership for review, prioritization, and potential funding.

At Alpha Institution, lessons learned from previous preparedness training activities supporting the campus security plan are incorporated in future activities. For example, campus police training for active shooter incidents within campus buildings can be very disruptive during the day. As a result, campus police on the night shift conduct preparedness training activities, utilizing paint ball guns and various scenarios, throughout the campus buildings. At Bravo

Institution, lessons learned from previous preparedness training activities supporting the campus security plan are incorporated into future activities.

During my interview with a campus police representative at Alpha Institution, we discussed the active shooter after action report. The campus police department had made most of the recommended changes pertaining to campus police for active shooter policies and procedures. Bravo Institution's post active shooter exercise after action report activities included comprehensive evaluation of the institution's security plan, utilization of the HSEEP Exercise Evaluation Guides (EEGs), and exercise hot wash with players, controllers, and evaluators.

**Observations.** A meeting was held at Bravo Institution after the exercise I observed to gather lessons learned. The exercise design team and participants demonstrated excellent engagement in the hot wash to identify numerous problems and potential solutions to update the campus plan on that specific contingency. Some of the lessons learned pointed out by participants showed a lack of knowledge of the contingency plan being exercised and individual specific job aid requirements. The exercise director specifically showed interest in all of the feedback received and made participants feel part of the plan improvement process. Additional after action report items sent by the observer were taken with great interest and appreciation.

**Interviews.** Tables 13-17 depict the significant themes derived from interview questions designed to answer Research Question (c).

Table 13

*Responses to Administrator/Faculty Interview Question #4: What are best practices you have observed from campus active shooter training or exercises (links to research question [c])?*

Key Phrase/Concept	Themes			
	Hindrance	Recommendation	Best Practice	Vested Interest
Passive mode	Alpha			
Multifaceted			Alpha	
Prioritizing from the top down			Alpha	
Virtual messaging			Alpha	
Comprehensive security campaign: messaging and posters, could be everything from pedestrian safety, personal safety, active shooter		Alpha		
Looping videos through the campus network of monitors		Alpha		
Videos annual student leadership conference		Alpha		
Using ICS			Alpha	
Communication across disciplines			Alpha	
Multiple agency use of 800 Megahertz communication system			Alpha	
It's important to be able to evaluate proper actions in an active shooter incident			Bravo	
Key into first responder actions	Bravo			



One significant hindrance noted was that IHEs take a passive role in learning from exercise lessons learned. Interviewee A14 noted:

In 2004 when there were two murders here, we stood up the Care Office and we did all these things because it was necessary. You can easily fall into a reactive versus a proactive mode when it comes to all of this stuff. Which is a long way to say, right now it's not that we've forgotten about active shooter. We've maybe once in the last 10 years here had what I would refer to something close to an active shooter scenario and that was a robber from Kmart who was running leisurely through campus while armed. (A14 Interview, May 17, 2016)

This same interviewee recommended having a comprehensive security awareness campaign with multiple messaging options:

It's got to be multi-faceted. Any of those things would and could work, right? Prioritizing from the top down. We hit upon this with faculty at new faculty training. Because we're only less than 50% residential now, you can hit the students in the dorms but then you're only getting roughly 32% of your undergraduates so what are you doing for the other 68% in the way of pushing messages to them virtually as they're in their places off campus? (A14 Interview, May 17, 2016)

Communication among Alpha Institution's entities and partners was a critical best practice.

Interviewee A8 stated:

That way partner units that come in to help you. Everybody's working on the same page. Everybody's going by the same guidelines. Everybody knows what their role is based on their titles given. So running NIMS is really important. Luckily here in the county, we

can get on with everybody: Fire, EMS, all the local agencies. Interagency working relationships. (A8 Interview, May 16, 2016)

No significant cross case synthesis was possible given the lack of information for this interview question from Bravo Institution.

Table 14

*Responses to Administrator/Faculty Interview Question #5: What do you recommend to motivate students, staff, or faculty to be more invested in active shooter preparedness (links to research question [c])?*

Key Phrase/Concept	Themes			
	Hindrance	Recommendation	Best Practice	Vested Interest
Early student education		Alpha		
Active shooter training by experts				Alpha
Voluntary opt in notification systems have gaps for faculty, staff, etc.	Alpha			
Comprehensive security plan education new faculty		Alpha		
Smart classroom emergency communications			Alpha	
Active shooter training for community, open to anyone			Alpha	
Twice a month active shooter training at the police station			Alpha	
Police help security plan development			Alpha	
Monthly digital magazine training announcements not effective for participation		Alpha		
Role assignment for active shooter preparedness instills investment in safety				Bravo

As noted in a previous interview question, a hindrance to preparedness is the voluntary opt in emergency notification system for faculty, staff, and students at Alpha Institution. Smart classrooms were noted as a best practice that allows IHE faculty and staff direct communications

in emergency situations. A significant recommendation was building upon the students' active shooter training they likely received at high schools and before. A strong best practice was inviting community stakeholders and the general public in for active shooter training.

Additionally, searching out experts, if not already present on campus, to make presentations on campus security was a best practice. Interviewee A9 commented:

Again, I think getting them while they're freshman, while they're more receptive to receiving that information would be critical. And receiving it from someone other than a faculty member, perhaps someone who is a police officer. I don't think students would take it seriously if a faculty member with expertise in Biochemistry is trying to explain to them how to react to an active shooter or other forms of emergency preparedness. (A9 Interview, May 16, 2016)

No cross case synthesis was available from the data.

Table 15

*Responses to Administrator/Faculty Interview Question #6: Do you have any recommended best practices for campus security preparedness (links to research question [c])?*

Key Phrase/Concept	Themes			
	Hindrance	Recommendation	Best Practice	Vested Interest
New school year faculty training		Alpha		
Active shooter training included in faculty retreats		Alpha		
Experts give active shooter training		Alpha		
Training by major each year rather than every course is more efficient		Alpha		
Online training		Alpha		
Active Shooter Training at Annual Safety Symposium			Alpha	
Symposium varying formats from guest speaker to conference style			Alpha	
Writing something down			Bravo	
Make plan very accessible			Bravo	

No hindrance or vested theory coding was noted. The most significant recommendation for lessons learned was finding innovative ways to give active shooter training at other faculty trainings, retreats, and annual safety symposiums, plus providing incentives for voluntary attendance. Interviewee A10 noted: “That’s where it becomes an issue. How do you get them to do it? Do you give them a little carrot? By doing this you get a free coupon to go the donut shop or whatever or a coffee. Which possibly would make sure that they all do it” (A10 Interview,

May 16, 2016). Due to paucity of information from Bravo Institution for this interview question, no cross synthesis was possible.

Table 16

*Responses to Emergency Manager/Police Interview Question #5: How does your institution incorporate after action report lessons learned into updates to the campus security plan (links to research question [a])?*

Key Phrase/Concept	Themes			
	Hindrance	Recommendation	Best Practice	Vested Interest
Matrix tracking			Alpha	
Assign responsibility for action items			Alpha	
Current US culture has short attention span and moves on to the next thing	Alpha			
Review After Action Reports			Bravo	
Update policies and procedures			Bravo	
Exchange information between departments			Bravo	
Implementation of real world incidents lessons learned			Bravo	

*Note.* This question was moved from Research Question (a) to Research Question (c).

The short attention span pervasive in our culture is a hindrance, therefore, more accountability tools must be developed to ensure campus preparedness activities are executed at all IHEs. No recommendations or vested interest items were noted. Following the exercise lessons learned is a best practice. Interviewee A11 commented:

We review the After Action notes and come up with the After Action improvement planning from the AR and identify those points that are in the improvement plan to incorporate into the next cycle of planning. Then we review, train, and exercise again to see if improvements have been made. (A11 Interview, May 16, 2016)

Cross case synthesis showed the tracking of exercise lessons learned by assigning responsibility and by using exercise evaluation standards to real world events is a significant best practice.

Table 17

*Responses to Emergency Manager/Police Interview Question #6: How is ICS incorporated in the security planning process and what are any best practices (links to research questions [a-c])?*

Key Phrase/Concept	Themes			
	Hindrance	Recommendation	Best Practice	Vested Interest
ICS fully implemented			Alpha	
Crisis management under University Police			Alpha	
Consequence management post active shooter incident under other divisions			Alpha	
Senior management have more difficulty with ICS than first responders	Alpha			
ICS is sometimes a square peg in a round hole	Bravo			
Participation or join University and College Caucus of the International Association of Emergency Managers		Bravo		
Crisis Management Team engagement with Incident Commander issues	Bravo			
More hands on training			Bravo	
Providing examples of how things can happen at the institution			Bravo	
Basic ICS training for the President and the President's Cabinet		Bravo		

A hindrance pointed out by Interviewee A11 at Alpha Institution was that the national ICS framework is not always aligned with some state Emergency Support Functions frameworks:

Tactics such as response tactics, is governed through ICS, our emergency operations center is through ESF (Emergency Support Functions) and we use 16 ESFs that do not



mash up necessarily with FEMA's ESFs and the detail on that is in the EOP (Emergency Operation Plan). (A11 Interview, May 16, 2016)

A good recommendation for emergency managers to become more connected to their field was to join the University and College Caucus of the International Association of Emergency Managers. Numerous best practices were noted, with a significant one being the use of ICS response in lessons learned, as explained by Interviewee A16:

We actually use ICS in the model as a setup for every department as they set up their playbook, whether it be engineering and all their research. We try to get them to follow that whole model of identifying an Incident Commander, making sure you have planning, you have logistics. (A16 Interview, June 27, 2016)

Based on the complexity of decisions they will need to apply and discuss, Interviewee A16 made another outstanding recommendation to not rely solely on online training for senior IHE administrators. A16 recommended:

I don't believe that you can do the initial online. I think that you need to talk about. You need to give simple drills when you do it. Just from experience, I myself felt that just going online isn't always the best way to do these sorts of things and for busy people I don't think online they're going to pay attention. (A16 Interview, June 27, 2016)

Cross case synthesis revealed a major hindrance to campus security preparedness (i.e., via implementation of exercise lessons learned and planned updates) was a large knowledge gap among responders and IHE senior management.

**Research Question (c) summary.** Triangulation of the data revealed that both institutions collect and draft exercise after action reports. The implementation of exercise after action report action items were dependent on several factors and varied between the institutions.

These factors include the cost to implement the exercise lesson learned item, the feedback emergency management staff receive from institutional stakeholders on exercise after action reports, and the willingness of senior administrators, deans, and department chairs to discuss exercise after action report data, brain storm solutions and updates to the security plan, and support new requirements within the security plan.

Data analysis indicates that the greatest hindrance across multiple data collection methods was the lack of funding to implement lesson learned recommendations and to update the campus security plan. The lack of funding for campus security after action items was directly linked to a general level of apathy for involvement in campus preparedness activities from some administrators, faculty, staff, and students. It was recommended that senior administrators receive more campus security plan training. Incentive programs for participation in campus security exercises from IHE stakeholders could help increase awareness and commit to updating campus security plans.

Best practices in implementing exercise lessons learned included using a matrix to track exercise lessons learned, assigning responsibility for each action item, and conducting a periodic review of action items to ensure accountability for follow-up, whether the administration decides to implement or not to implement an item. Vested interest items were extremely limited for this research question.

### **Research Question (d) Results**

**Research Question (d).** How can the attitudes and behaviors of faculty, staff, and administrators consistently be focused on investing in active shooter overall campus preparedness?

**Site documentation review.** As mentioned above, Alpha Institution has had one active shooter exercise in the last three years to help get the campus community more invested in active shooter preparedness. Bravo Institution also has had one active shooter exercise in the last three years

Lessons learned from exercises at Alpha Institution are incorporated into other preparedness training activities. Attitudes of the campus police and emergency management staff are very focused on active shooter preparedness. Alpha Institution conducted an overview of campus safety following the TVI at Virginia Tech in 2007. It was noted that the institution is not immune to a TVI like that one. Alpha Institution will continue to develop a more comprehensive approach to student safety. The current chancellor is committed to increasing both the number and variety of emergency drill scenarios in which campus administrators practice institutional emergency response protocols.

At Bravo Institution, lessons learned from exercises are incorporated into other preparedness training activities including active shooter training and outreach. Attitudes of Bravo Institution campus police and emergency management staff are also quite focused on active shooter preparedness. Given Bravo Institution's location in a large metropolitan area, the institution also has numerous TVI possibilities, which the campus incorporates into preparedness activities.

Alpha Institution's active shooter after action report provides lessons learned to help focus faculty, staff, and administrators invest in overall campus preparedness. From the active shooter exercise, a spreadsheet appendix was created for a campus improvement plan broken down by capability, observation title, areas of improvement, implementation recommendation, primary responsible department, start date, completion date, and budget. As of May 2016, the

campus active shooter exercise improvement plan had not been updated since November 2014 and none of the 30 plus items requested had been funded per discussion with emergency management personnel at Alpha Institution. Bravo Institution's after action report for its most recent active shooter exercise also provides lessons learned to help focus faculty, staff, and administrators investing in overall campus preparedness.

**Observations.** The exercise director's and controllers' attitudes and behaviors were extremely positive and engaging during the exercise pre-brief, actual exercise, and post exercise hot wash. This enthusiasm was critical to get volunteers, many of whom did not volunteer for the role to which the contingency plan exercise had them assigned, to gain interest in the exercise. Besides being positive and engaging, the leadership shown by the exercise director gave participants who had minimal knowledge of exercise duties and responsibilities the confidence to ask questions, learn, and become more proficient.

**Interviews.** Tables 18-20 contain important themes found from the interview questions designed to answer Research Question (d).

Table 18

*Responses to Administrator/Faculty Interview Question #7: How can the attitudes and behaviors of administrators consistently be focused on investing in active shooter overall campus preparedness (links to research question [d])?*

Key Phrase/Concept	Themes			
	Hindrance	Recommendation	Best Practice	Vested Interest
Have to have a plan		Alpha		
People only want training after a TVI	Alpha			
Quarterly staff meeting discussion on active shooter	Alpha			
Assigning individual building security preparedness liaison as collateral duty		Alpha		
Need focus from leadership			Alpha	
Progressive security preparedness training at multiple administrative positions			Alpha	
Progressive security preparedness training at Department Chair, Dean, etc.			Alpha	
Numerous new senior administrative positions unfamiliar with security plan	Alpha			
Comprehensive Safety Survey			Alpha	
Survey focused on IHE attitudes and behaviors			Alpha	
Indecision on potentially scaring IHE community	Bravo			

A hindrance to IHE stakeholder attitudes is the changeover of new personnel without interest in or mandatory training on campus security preparedness. Furthermore, requests for training or attendance at trainings spike after a TVI event at another IHE. Interviewee A8 noted:

“They only want to talk about active shooter when it happens, when it’s the news article, but in between news articles it goes away” (A8 Interview, May 16, 2016). Interviewee A9 added, “I can’t imagine a time where I’ve heard, I could be wrong, any of our administrators from the Chancellor on down has ever talked about disaster preparedness” (A9 Interview, May 16, 2016).

A noteworthy recommendation was assigning a building security preparedness liaison as collateral duty within each IHE building to be responsible for developing building security playbooks. These individual building playbooks would periodically be exercised. One of the most important best practices mentioned was the establishment of progressive security preparedness training at multiple administrative positions. Interviewee A10 recommended:

When a professor goes from being a professor to say department chair to dean for example ... usually when they have a dean they have a look, now I’m administration now I’m going to move up to be a provost, you know that’s kind of the ladder, usually up to maybe the president of the university or chancellor. I do know that there are workshops those people go to. I don’t know what they are exactly, but they are how to be a dean workshop. At that workshop it would be very important that something like this should be covered too at whatever level as you move up through administration. (A10 Interview, May 16, 2016)

No vested interest items were coded. No significant synthesis between the two cases, all valid points.

Table 19

*Responses to Emergency Managers/Police Interview Question #7: What would you recommend to motivate administrators to be more interested in security preparedness (links to research question [d])?*

Key Phrase/Concept	Themes			
	Hindrance	Recommendation	Best Practice	Vested Interest
Improving preparedness culture	Alpha			
President or Chancellor stating importance of security preparedness in speeches, training, etc.				Alpha
Constant education				Alpha
Potential loss of income examples				Bravo
Practical examples are best motivators				Bravo
Incentives for exercise volunteers				Bravo
Little to no budget for emergency preparedness, active shooter, etc.	Bravo			
Establish requirements for faculty to review active shooter procedures with students at start of semester		Bravo		
First lecture of the year each professor reviews active shooter preparedness 30 minutes		Bravo		
Faculty are the gatekeepers for students			Bravo	
Personal relationships			Bravo	
Find faculty and staff with previous backgrounds in emergency preparedness (e.g., Boy Scouts, Volunteer Firefighter)				Bravo
Support education courses				Bravo
One on one training				Bravo
Prepare relevant, local, and engaging scenarios for active shooter training				Bravo

Having little to no specific budgets to support campus security preparedness is a remarkable hindrance. This lack of financial support leads to apathy. Interviewee A11 reported, “You’ve got to get rid of the apathy. You’ve got to make it a priority for them. To do that, they have to relate it to their own lives and own experiences” (A11 Interview, May 16, 2016).

Another hindrance is that the preparedness culture is relegated to the professionals (i.e., police and emergency managers). Faculty, staff, and administrators are focused on their primary roles in academics and other elements of the institution, and rely on others to take care of the security issues; however, it is each person’s responsibility to be prepared. This culture is due to lack of accountability for students, faculty, and administrators to be exposed to campus preparedness planning, training, engagement, and outreach. Interviewee A15 added:

They’ll say, “Oh, we’ve got to plan and we’ve got to do this” then our memory shorts or goes away after a fashion until another one happens. They’re focused on Academics. They’re focused on enrollment. They’re focused on getting the University further down the path. (A15 Interview, June 14, 2016)

An interviewee recommended the faculty should be required to train students at the beginning of the semester. A best practice is the inclusion of faculty in preparedness when possible, as they are the gatekeepers to students. Vested interest falls with the leader of the institution and is key to success. Interviewee A13 noted:

I hate to fall back on education, to build that culture ... One it’s going to take a senior management commitment to say “this is what we’re about and to pay attention to it” so one, it has to be an edict from above. (A13 Interview, May 17, 2016)

One of the best ways to get vested interest in campus preparedness is to do the research and find examples that hit home. For instance, Interviewee A7 described an incident on campus



involving a prolonged power outage in a research building, which resulted in the loss of multiple experiments due to inadequate cooling: “After the lost research grants for \$4 million that was not renewed because of the loss of research materials, I didn’t have to motivate them. They motivate me” (A7 Interview, March 15, 2016).

Cross case synthesis showed consistent engagement with multiple campus stakeholders can improve the attitudes of the IHE community. This relationship between consistent engagement and attitude is particularly evident among those who are interested in or who have a previous links to preparedness (e.g., Boy Scouts, Girl Scouts, and volunteer fire fighters) through training, symposiums, one on one discussions, and other outreach programs.

Table 20

*Responses to Emergency Manager/Police Interview Question #8: How can the attitudes and behaviors of students, faculty, staff, and administrators consistently be focused on investing in active shooter overall campus preparedness (links to research question [d])?*

Key Phrase/Concept	Themes			
	Hindrance	Recommendation	Best Practice	Vested Interest
Emphasize common sense and basic training			Alpha	
Reduction in faculty apathy for security preparedness			Alpha	
Engage with parents over summer before students attend orientation		Alpha		
Reduction in percentages of blissful ignorance or apathy				Alpha
Student Affairs models the way for safety to students				Alpha
Seek out guidance from Middle Eastern countries with higher terrorism rates		Alpha		
Active shooter training a priority for faculty orientation		Alpha		
Do not overdue training		Bravo		
Active shooter preparedness movie education		Bravo		
Make training accountability linked to student registration, Blackboard, etc.		Bravo		
Engagement with Resident Advisor, Resident Director, Counseling Department		Bravo		
Online training for different groups at IHEs for active shooter		Bravo		

Opt out system alert warning is vulnerability	Bravo
Campaign to improve opt out statistics, quality of contact information	Bravo
Big events can showcase Emergency Management system and benefits	Bravo
Executive level seminars to senior management by experts	Bravo

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The opportunity for faculty, staff, and students to opt out of the emergency notification system or not supply their contact information or connecting with the HR system with emergency notifications was a significant hindrance and vulnerability. Interviewee A16 described the outcry from faculty and staff that they were not notified of a threat on campus:

So we called IT. IT went into the system and found out that like 96% of the students never opted out, some students did. But less than 50% of faculty and staff didn't supply their cell numbers. They on their own didn't get it because they refused to supply. So we did a campaign. (A16 Interview, June 27, 2016)

A notable recommendation within this interview question was the suggestion that U.S. IHEs should look to international IHEs at high risk for violence (e.g., Israel) for lessons learned. Another good recommendation was to increase the number of IHE staff, faculty, and students interested in campus preparedness. Interviewee A13 commented:

Is it apathy or ignorance? They don't know and they don't care. I think it's blissful ignorance. "You know what, it's not something I'm worried about." I don't want to say all of them. There are a few that are very invested and committed. (A13 Interview, May 17, 2016)

It should be noted many faculty do care, but most interviewees concurred faculty interest and participation is minimal with regard to campus security. Communication engagement through exercises, security plan development, and preparedness training must be multifaceted, effective and properly marketed to administrators, faculty, staff, and students. Administrators, faculty, staff and students must be willing to make campus security preparedness a priority. Modeling the way was a significant best practice in campus security preparedness from leaders across the campus. Interviewee A13 noted, “I think it comes from who they view as authority, be it the staff, the faculty, the administrators, the Student Affairs staff in particular, that affect so many of them, they need to model that this is important” (A13 Interview, May 17, 2016).

Executive seminars for senior administrators and a series of training sessions over a semester for new faculty or staff were discussed as an excellent tool towards investing in campus security preparedness. Interviewee A13 stated:

What they’re discussing is rather than doing a two day cram session, they’re basically going to require a semester long faculty and staff lunch orientation and what they will do is they will meet like every other week or once every other week at lunch for a different session. Instead of having a two day cram session at the beginning, you’ll have a one day cram session but then every week once a week, every Thursday at lunch, let’s say, for a semester, or even possibly a year, there will be a different topic. They want to incorporate Emergency Preparedness and Safety into one of those. (A13 Interview, May 17, 2016)

No significant cross case synthesis was noted between either institutions for the four themes.

**Research Question (d) summary.** Having a robust exercise program which is in complete alignment with the HSEEP recommended exercise cycles and plan updates was the most significant finding regarding improving invested attitudes and behaviors of faculty, staff, and administrators on campus security preparedness. The next most important factor is engagement of senior leadership in campus security planning and exercises for TVI events. Campus security preparedness training for active shooter incidents, whether online or in person, that use examples that students can connect with, prior incidents, and engaging instructors can increase stakeholder investment in preparedness. Instructor or exercise directors must be innovative to engage exercise participants and model the way on why security preparedness is important on campus.

The greatest overall hindrance to faculty, staff, and administrators to focus on campus preparedness is a lack of consistent and dedicated resource support. TVI exercises require the investment of administrators, faculty, and staff to commit the resource time to develop exercise scenarios, and attend exercise planning meetings. Administrators, faculty, and staff have to commit the resource time to aiding in the development of an exercise after action report. Resource time and potential funding must be allocated to correct exercise after action items. Resource time must be given by administrators, faculty, and staff to attend training on new security plan updates from each exercise to maintain a maximum level of security preparedness.

Given the relative infrequency of active shooter incidents at the thousands of IHEs across the county, campus emergency management preparedness for TVIs can be an extreme challenge with the myriad of campus priorities and government requirements. One of the most significant recommendations to improve attitudes was to incorporate TVI preparedness training with an overview of the campus security plan for all administrators, faculty, and staff annually before the

start of the new school year. New administrators, faculty, and staff should be required to attend a more in-depth initial campus security preparedness orientation program. This training should not be incorporated with 20 other topics for campus training crammed into a one or two day program. One of the most powerful best practices found to increase attitudes on campus security is to have a training program for administrators and senior faculty to increase their responsibilities during an active shooter incident. The most significant vested interest action from the data was conducting executive level training seminars for selected senior administrators to ensure they are ready to execute the campus security plan during an incident.

### **Research Question (e) Results**

**Research Question (e).** Would new legislation that centralized federal agency IHE TVI security oversight, established across the board requirements for campus security plans and exercises, and targeted resource support improve campus preparedness?

**Site documentation review.** After a review of the campus security plans of both Alpha Institution and Bravo Institution, it is my professional opinion that additional legislative requirements for security plan updates and exercises would facilitate more security plan investment by senior leadership, exercise lessons learned implementation, and increase federal grant funding of security gaps. Both Alpha Institution and Bravo Institution have invested millions of dollars in campus preparedness training and security initiatives since 2004, including emergency call boxes, campus police preparedness, and improved campus communication. Low attendance by faculty, staff, and students at campus preparedness activities demonstrates a consistent lack of vested interest at both IHEs. New legislation and increased federal funding to support additional personnel in campus police and emergency management has the potential to increase TVI campus outreach and exercise support at both

Alpha Institution and Bravo Institution. New legislation with associated funding could create requirements to monitor institutional exercise after action reports, implementation of after action report items, and prioritizing potential federal funding support.

**Observations.** No applicable data were gathered during observations for this research question.

**Interviews.** Tables 21-23 contain the relevant themes associated with the interview questions designed to answer Research Question (e).

Table 21

*Responses to Administrator/Faculty Interview Question #8: Would new legislation that centralized federal agency IHE TVI security oversight improve campus security plans and exercises (links to research question [e])?*

Key Phrase/Concept	Themes			
	Hindrance	Recommendation	Best Practice	Vested Interest
Varying policies state to state	Alpha			
State institution vs. private institution requirements may differ	Alpha			
Legislation could increase accountability security preparedness		Alpha		
Fear new legislation requirements would mean more unfunded mandates	Alpha			
Increased partnerships with FEMA, DOE, etc.		Bravo		

Numerous hindrances were identified for developing new legislation, including the potential increased burden of creating unfunded mandates. Interviewee A9 commented: “That’s one of the difficulties with a lot of legislation is there are unfunded mandates where it says you

need to do this, but by the way figure out a way to do it on your own dime” (A9 Interview, May 16, 2016).

Another hindrance mentioned was potential differences in implementation from state to state and private versus public institutions. Despite the multitude of hindrances addressed, new legislation was supported by most interviewees for increased accountability and resources for campus security. A recommendation was the increased use of partnerships between FEMA and the Department of Education so campus preparedness had a more focused outreach to IHEs. No best practices or vested interest items were noted. No cross case synthesis was seen between either institutions.



Table 22

*Responses to Emergency Manager/Police Interview Question #9: Would new legislation that centralized federal agency IHE TVI security oversight improve resource support improve campus preparedness (links to research question [e])?*

Key Phrase/Concept	Themes			
	Hindrance	Recommendation	Best Practice	Vested Interest
Effective legislation		Alpha		
Move emergency response from DOE to FEMA		Alpha		
Example of Nuclear Regulatory Commission Exercises run by FEMA		Alpha		
Review of which agency emergency response fits in the federal government		Alpha		
Review how to integrate numerous DOE requirements: Clery, Title IX		Alpha		
Skepticism over new legislation	Alpha			
So many requirements already has led to significant confusion	Alpha			
Review accountability and enforcement tools for the Department of Education for campus security preparedness		Alpha		
Increase funding for training		Bravo		
Move emergency response requirements out of DOE, it is not their expertise		Bravo		
FEMA should manage IHE emergency management funds and grants		Bravo		

One hindrance to effective legislation is a lack of trust that any new requirements would be funded or that funding would be taken away in the future. A recommendation was for the

Department of Education to send Dear Colleague letters regarding campus preparedness and step up enforcement policies of the existing limited requirements and cutting financial aid to institutions that do not comply. No best practices or vested interest items were coded.

This interview question generated the most cross case synthesis. Cross case synthesis showed both institutions recommend campus emergency management be moved out of the Department of Education to FEMA or another more security plan and exercise centered agency. Interviewees agreed across the board that the Department of Education lacks the expertise to give guidance or hold agencies accountable to more requirements for campus security planning and exercises. Interviewee A11 stated:

That's kind of like having teachers tell an emergency manager what needs to be done. They're focusing on how to teach birds. People know what to do with birds. That doesn't necessarily transfer very well to teach about active shooters. You really need to move Consequence Management and Emergency Planning underneath FEMA or DHS and have an education liaison to be the oversight body for higher education emergency management. (A11 Interview, May 16, 2016)

The same Interviewee, A11, also noted that FEMA is already providing a similar role for the Nuclear Regulatory Commission: "There's a reason why the Nuclear Regulatory Commission does not manage off site Consequence Management. With the Radiological Emergency Preparedness Program FEMA manages the offsite consequence of the REPP program and NRC does on plant" (A11 Interview, May 16, 2016). Another strong comment supporting this recommendation was made by Interviewee A16: "They should stay with education. I think the drills and exercises of emergency management belong under FEMA or Department of Homeland

Security because that's what they specialize in. I think education should stay with education”  
(A16 Interview, June 27, 2016).

Both institutions made recommendations that any new funding should all be managed by another federal agency other than the Department of Education. Interviewee A16 commented:

I think the funding should also come through FEMA so it's focused into the drills and response those types of education for the emergency responders who are coming in. I think the Department of Education is branching a little too far out sometimes. I don't think that's where their field of expertise should be, it should be in education. (A16 Interview, June 27, 2016)

No data were gathered for Administrator/Faculty Interview Question #9: Is there anything else you would like to add regarding active student preparedness (links to research questions [a-e])? None of the interviewees had other comments to provide.

Table 23

*Responses to Emergency Manager/Police Interview Question #10: Is there anything else you would like to add regarding active student preparedness (links to research questions [a-e])?*

Key Phrase/Concept	Themes			
	Hindrance	Recommendation	Best Practice	Vested Interest
More outreach to student clubs and organizations		Alpha		
Active shooter are fast events, readiness for proper actions is important		Alpha		
Second tier of required training for students to carry weapons on campus		Alpha		
Police officers show up on scene with active shooter and shoot student or staff with weapon (concealed carry permit holder) who is engaging with active shooter	Alpha			
Holding a weapon and police show up, throw the weapon away from you as soon as possible			Alpha	
Virginia Tech has record enrollment in 2015				Bravo
Emergency Management and preparedness is at the end of a chain for administrators	Bravo			

A hindrance noted by one interviewee relates to the potential legislation to allow students or staff to carry weapons on campus. If someone with a permit to carry a weapon engages an active shooter, the police officers may shoot the wrong individual or both individuals in the confusion. Interviewee A13 explained:

“When I arrive on the scene with gun shots I’m probably going to shoot him.” That’s what every police officer says, “When I get to the scene and there’s a civilian with a gun, I have to assume he’s a bad guy...I have to assume he’s a bad guy and I’m taking him out.” And that’s where they all get really confusing. Oh, give the students and faculty members or the staff the right to carry firearms. Ok, fine. Even we have police officers say it’s fine, but then they look at you and go, “If I flip on the scene and you got a .357 in your hand and there’s some dead bodies on the ground, I’m just as likely to shoot you right there and ask questions later.” (A13 Interview, May 16, 2016)

On the other hand, Interviewee A13 also reported hearing a recommendation in creating advanced training requirements for individuals in states and on campuses where concealed carry is permitted:

I had a police officer tell me this past week, “I think if you step up to a higher level,” this is an ex-Marine, 15 year veteran of the police force said “I support concealed carry on campus.” Without me asking he said “I support it, readily encourage it if there is a second tier of training.” (A13 Interview, May 17, 2016)

Legislation in support of increased requirements could be hindered by many IHEs and other influential congressional groups that have not had a TVI incident on campus. Interviewee A11 stated, “Craig Fugate had a really good quote that he used during the cybersecurity hearing with Congress a couple of weeks ago. He said ‘We tend to prepare for what we’ve experienced, not what is possible’” (A11 Interview, May 16, 2016). Interviewee A11 also recommended proper training for first responders given the very fast nature of active shooter events:

If you look at all the active shooter cases, they are over in five minutes. From the time the first shots are fired to the time the assailant is dead is five minutes. It was like four minutes and 19 seconds at Virginia Tech. (A11 Interview, May 16, 2016)

More outreach to student clubs was also recommended. Nothing significant was revealed from cross case synthesis of the two institutions.

**Research Question (e) summary.** Triangulation of the data indicates new legislation that centralized federal agency IHE TVI security oversight, aligned exercise requirements with HSEEP, and increased resource support would improve campus security preparedness. The principal hindrance to new legislation for campus preparedness is the suspicion that government would implement these through unfunded mandates. Already, there are numerous requirements to report to the Department of Education for student safety and security. It was the general belief that further requirements or changes to existing ones would further complicate the morass of regulatory framework. Furthermore, transferring oversight of campus security exercises and plans from the Department of Education to FEMA or another agency was widely supported. In this framework, similar to what FEMA does for the Nuclear Regulatory Commission, IHEs would have the federal government exercise experts providing guidance, mentoring, and holding IHEs accountable, in conjunction with existing Department of Education requirements linking student safety with federal loan support. Another recommendation was requiring advanced training on police protocols and first responder priorities for students, faculty, or staff who are allowed to carry weapons on campus.

### **Summary**

The goals of this qualitative collective case study were to discover barriers to IHEs' security preparedness for TVI events with a focus on active shooter incidents and to make

recommendations for improvement. Qualitative data collected for this study were in the form of site documentation reviews, observation of an exercise, and interviews with campus personnel. The data from the interviews were analyzed with a qualitative data software package, from which I identified four themes: hindrances, recommendations, best practices, and vested interests. The three data types were triangulated and summarized for each of the five research questions (a-e). The major barriers to security preparedness were lack of resource funding for dedicated preparedness staff, security planning and exercises; apathy regarding campus security preparedness by administrators, staff faculty and students; multiple federal security preparedness guides; and the lack of requirements for robust security planning and exercises. Major recommendations identified from the interviews include increased funding for security preparedness training, planning, and exercises; IHE senior leadership must model the way; and the transfer of IHE campus security preparedness oversight to FEMA. A more thorough discussion of the findings follows in Chapter Five.

## **CHAPTER FIVE: CONCLUSION**

### **Overview**

The aim of this qualitative collective case study was to identify the barriers to campus security preparedness and discover best practices of universities and colleges conducting security preparedness activities for a TVI incident (TVI). Below I have summarized my triangulated analysis for each of the five research questions designed to achieve this aim. Following that, I discuss my findings in relation to the existing literature as reviewed in Chapter Two. Next I will discuss the methodological and practical implications for this study, including a large list of recommendations regarding oversight, funding, guidance, recommendations targeted to IHEs, and recommendations regarding training. The limitations section lists several potential flaws in the design of this study, followed finally by recommendations for future research.

### **Summary of Findings**

#### **Research Question (a)**

Research Question (a): How do institutions integrate federal agency multiyear exercise guidance of various types of exercises (workshop/seminar, tabletop, functional, and full scale) for the campus security plan?

Triangulation of the three data types showed that both institutions integrate federal agency multiyear exercise guidance in developing different types of exercises for the campus security plan. The HSEEP program, which is run by FEMA, was found in site documentation for both institutions, observations for Bravo Institution, and during multiple interviews.

The major hindrance to fully implementing the exercise guidance from FEMA is the overall lack of funding to support the preparedness cycle. Numerous recommendations were made, including the establishment of a long term exercise plan, and that senior administrators,



faculty, staff, and students participate in exercises to the maximum extent possible. This is even more important with the large turnover of students and faculty changes within many IHEs across the country. A significant best practice observed was the integration of the campus security plan with other stakeholders that may impact the IHE. Vested interest in campus exercises must stem from a multifaceted approach through security plan training activities before, during, and after exercises. IHE security planning partners who develop individual building playbooks must be engaged in the entire exercise campus security plan annually.

### **Research Question (b)**

Research Question (b): How are exercises of the campus security plan measured for overall preparedness to respond to a large-scale active shooter incident with multiple student injuries and loss of life?

The campus security plans to respond to a TVI are measured on feedback from exercise evaluators, observers, and hot wash items developed from participants after the exercise. Participation from administrators, faculty, staff, and students is another method used to measure overall preparedness to respond to an active shooter incident. Participation includes attendance metrics at preparedness training sessions in person and online, willingness to volunteer to participate in exercises, feedback given after an exercise during a hot wash, and overall willingness to implement exercise after action recommended items.

The greatest hindrance to preparedness was the overall high level of apathy from campus stakeholders. Several participants of the interview process recommended that measurement methods of campus security preparedness be routinely briefed to senior administrators. Senior IHE administrators then must ensure faculty and staff are aware of the negative consequences of

being unprepared for a TVI regarding loss of life and significant recovery challenges (e.g., Department of Education enforcement penalties, lawsuits) for the IHE.

A best practice to measure campus security plan preparedness is to consistently review the plan by institutional groups with key stakeholders to champion preparedness planning, exercises, and training. For instance, an All Hazards Plan and a Safety Council is in place at Alpha Institution, while Bravo Institution utilizes an Enterprise Risk Management Committee. These groups review exercise after action reports, determine priorities based on risk, and makes recommendations for funding to senior leadership. Vested interest measurement indicators of campus preparedness should center on participation of senior campus administrators and senior faculty (e.g., deans, department chairs) in exercises. These stakeholders then actively engage to develop solutions to complicated exercise after action report items.

### **Research Question (c)**

Research Question (c): How are previous TVI exercise lessons used in follow-on exercises or updates to a campus security plan?

While both institutions collect and draft exercise after action reports, the implementation of exercise after action report action items were dependent on several factors and varied between the institutions. These factors include the cost to implement the exercise lesson learned items; the feedback emergency management staff receive from institutional stakeholders on exercise after action reports; and the willingness of senior administrators, deans, and department chairs to discuss exercise after action report data, brain storm solutions and updates to the security plan, and support new requirements within the security plan.

The greatest hindrance to implementing lessons learned in exercises or updates to the security plan was the lack of funding. This lack of funding was directly linked to a general level

of apathy for involvement in campus preparedness activities from some administrators, faculty, staff, and students. It was recommended that senior administrators receive more preparedness training to enhance their knowledge base and to promote vested interest. Incentive programs for participation in campus security exercises could help increase awareness and commit to updating campus security plans.

Best practices in implementing exercise lessons learned included using a matrix to track exercise lessons learned, assigning responsibility for each action item, and conducting a periodic review of action items to ensure accountability for follow-up, whether the administration decides to implement or not to implement an item. My previous leadership experience and the research literature support the concept that engagement and interest from the president, chancellor, and other senior administrators is critical to ensuring exercise lessons learned are implemented in the campus security plan.

#### **Research Question (d)**

Research Question (d): How can the attitudes and behaviors of faculty, staff, and administrators consistently be focused on investing in active shooter overall campus preparedness?

Having a robust exercise program which is in complete alignment with the HSEEP recommended exercise cycles and plan updates was the most significant finding regarding improving invested attitudes and behaviors of faculty, staff, and administrators on campus security preparedness. The next most important factor is engagement of senior administrators, (e.g., chancellors and presidents) in campus security planning oversight, support, and leadership. Campus security preparedness training from engaging instructors using examples people can connect with can increase stakeholder investment in preparedness.

The greatest overall hindrance to faculty, staff, and administrators to focus on campus preparedness is a lack of consistent and dedicated resource support. Resource time must be afforded by administrators, faculty and staff for all to attend training to maintain a maximum level of security preparedness.

Recommendations to improve attitudes towards preparedness include training for all new administrators, faculty, staff, and students during their orientation, and follow up training for those not new to the institution. An innovative best practice found to increase attitudes on campus security is to assign roles or duties to administrators and senior faculty to increase their responsibilities during a TVI. These people also receive executive level training seminars to ensure they are ready to execute the campus security plan during an incident.

#### Research Question (e)

Research Question (e): Would new legislation that centralized federal agency IHE TVI security oversight, established across the board requirements for campus security plans and exercises, and targeted resource support improve campus preparedness?

Triangulation of the data indicates new legislation that centralized IHE TVI security oversight under one federal agency, aligned exercise requirements with HSEEP, and increased resource support would improve campus security preparedness. While there was a general consensus that new legislation would be beneficial in theory, in reality most feared it would result in more unfunded mandates and add to the confusing morass of existing federal guidance. Transferring oversight of campus security exercises and plans from the Department of Education to FEMA or another agency was widely supported. In this framework, similar to what FEMA does for the Nuclear Regulatory Commission, IHEs would have the federal government exercise

experts providing guidance, mentoring, and holding IHEs accountable, in conjunction with existing Department of Education requirements linking student safety with federal loan support.

### **Discussion**

Throughout this research, my goal was to discover barriers to and best practices for improving security preparedness at IHEs. What I discovered was more than the dichotomy of barriers and best practices. Through my data analysis, I identified four major themes: hindrances, recommendations, best practices, and vested interest. Hindrances generally comprise the “barriers,” while recommendations, best practices, and vested interest comprise the “recognized excellence in campus preparedness” I conceived of when I began the study. Many of the hindrances to campus security preparedness discovered from participant interviews relate to lack of funding for and interest in security preparedness. Other hindrances include lack of federal requirements for preparedness and the glut of confusing federal guidance. Recommendations include having one federal guideline for security preparedness and moving oversight of IHE security preparedness to another federal agency. Best practices include having IHE senior leadership lead the way when it comes to preparedness and partnering with local agencies on their security plans and exercises. Vested interest begins with the IHE senior leadership who can instill these tenets throughout their institutions through example, practice, and by making it pertinent to their populations.

Lack of funding or insufficient funding for IHE security preparedness was one of the greatest and most consistent hindrances reported by the interviewees. Note that these institutions both have robust planning and exercise programs. This finding is consistent with Schafer et al. (2010) who found that only 31% of colleges and universities have increased funding for campus safety since 2007. Funding deficits for campus IHE security preparedness have left significant

gaps in campus safety. One of the major recommendations in the Report of the Review to the President of the United States three months after the Virginia Tech shooting in 2007 was “Where we know what to do, we have to be better at doing it” (Leavitt et al., 2007, p. 16). Leaders clearly know what to do to improve security preparedness on campuses, but without resource commitment from IHEs, states, or the federal government, this is impractical.

Another significant hindrance found in the literature review indicated a general disinterest in security preparedness among many IHEs. Seo et al. (2012) found that only 25% of campuses believed their students understood or were prepared to respond to a crisis. Davis and Walker (2005) discussed the lack of focus of faculty and students on campus security preparedness, unless impacted by a past TVI or another event across the country. This sense of apathy was echoed throughout the interviews at both institutions, with particular emphasis on faculty and student disinterest in preparedness as noted by emergency managers and police representatives at both institutions. The interview data also validated research by Frazzano and Snyder (2014) regarding what can happen when instincts and a lack of training for security preparedness are the culture of an IHE. According to Interviewee A8, who is a member of the campus police, “We can’t even get them to evacuate the building without going through the front exit all the time. We’re hoping the common sense may kick in, but there’s a general level of apathy. With students, faculty, and staff, it’s not just related to students” (A8 Interview, May 16, 2016).

Data from interviews clearly showed a consensus from both case studies that the federal guidance documents for security preparedness are confusing and duplicative, creating yet another hindrance to preparedness. For instance, the Federal Emergency Management Agency’s (2003), “Building a Disaster-Resistant University” was one of the first post-Columbine and post 9/11

pieces of federal guidance for IHE security preparedness. Following the disasters left in the wakes of Hurricanes Katrina and Rita in 2005, the U.S. Department of Education (2007) published the “Practical Information on Crisis Planning: A Guide for Schools and Communities.” Note that this was published in January of 2007, before the shootings at Virginia Tech. However, not long after that horrific event, the U.S. Department of Homeland Security (2008) published “Active shooter: How to Respond.” The U.S. Department of Education (2010) published the “Action Guide for Emergency Management at Institutions of Higher Education.” Within the U.S. Department of Education, the Office of Postsecondary Education (2011) published the “Handbook for Campus Safety and Security Reporting.” Two years later, another office within the U.S. Department of Education, the Office of Elementary and Secondary Education, Office of Safe and Healthy Students (2013) published the “Guide for Developing High-Quality Emergency Operations Plans for Institutions of Higher Education.” The Federal Emergency Management Agency (2013a) published “Fire/Emergency Medical Services Department Operational Considerations and Guide for Active Shooter and Mass Casualty Incidents.” There is even an online course offered by the Federal Emergency Management Agency (2013b) entitled “IS-360 Preparing for Mass Casualty Incidents: A Guide for Schools, Higher Education, and Houses of Worship.” In 2013, the U.S. Department of Homeland Security (2013c) published what was most cited in the literature and among both institutions as the critical tool to security preparedness, the Homeland Security Exercise and Evaluation Program (HSEEP). Interviewees agreed that the numerous federal agency guidance documents were exceedingly confusing and frustrating.

Interviewees widely recommended the creation of a definitive IHE federal agency guidebook on campus security preparedness that consolidates information from the Department

of Education, Department of Homeland Security, Federal Emergency Management Agency, Federal Bureau of Investigation, and Secret Service. However, the lack of federal requirements for IHE security preparedness makes this a difficult task. Furthermore, and more alarmingly, it makes IHEs more vulnerable to targeted violence on campus depending on voluntary implementation of agency recommendations and their own vested interest in protecting their populations.

While not explicitly discussed in the literature, a majority of interviewees favored moving oversight of security preparedness out of the U.S. Department of Education and under the U.S. Department of Homeland Security, or more specifically, FEMA. The consensus among participants was that the DOE does not have the expertise to oversee security preparedness at IHEs, but that FEMA does and should be the responsible agency. What was not consistent was the push for new legislation requiring security preparedness at IHEs (i.e., to have a security plan for TVIs, exercise the plan, implement lessons learned from exercises into the plan). While most participants were in favor of more preparedness, many were fearful that new legislation would entail more unfunded mandates.

Gaining campus security accreditation from the International Association of Campus Law Enforcement Administrators is a relatively inexpensive, efficient, and effective method to significantly enhance IHE security preparedness. According to the International Association of Campus Law Enforcement Administrators (IACLEA; 2015), only a minority of IHEs have applied for campus security accreditation. Neither of the institutions participating in this study are accredited by IACLEA, however, one is accredited by the Commission on the Accreditation of Law Enforcement Agencies (CALEA) and the other is designated a “Disaster Resistant University” by FEMA.



Conducting exercises was noted as an extremely important element of campus security preparedness by the interviewees and in the literature (Eaker & Viars, 2014; Frazzano & Snyder, 2014; Han et al., 2015; Jenkins & Goodman, 2015). However, no regulatory requirements exist for IHEs to prepare or train for a TVI. Both institutions completed exercise after action reports and updated their security plans based on lessons learned; however, items requiring funding for improving the campus security plan and overall preparedness were difficult to implement based on shifting priorities, lack of interest, and limited or no funding support.

All hazards planning is very important to developing an overall framework for emergency preparedness activities (U.S. Department of Education, Office of Elementary and Secondary Education, Office of Safe and Healthy Students, 2013). This was reflected in comments from interviewees regarding the importance of preparing for a TVI, but at the same time, and perhaps more often, to prepare for other disasters on campus (e.g., fire/explosions at research buildings, pandemic events, and natural disasters). Whether there is a TVI, tornado, or fire, people need to be prepared to respond in order to increase survival. The tactics for an active shooter, however, are somewhat different than a fire. Fire drills are mandated by law, so why are active shooter drills not mandated? Although not required by law, both institutions included in this study demonstrated superior best practices and vested interest with regards to all forms of emergency preparedness. That is not to say that either institution has no room for improvement, however, budgetary constraints is the primary limiting factor towards that end. Note that I purposefully sampled these two institutions based on their high level of security preparedness. Smaller IHEs with smaller budgets and fewer resources may not be as prepared as these two institutions.

Collaboration between IHEs and federal, state, and local agencies was consistently stressed in the interview data as well as in the literature review as a best practice (Federal Emergency Management Agency, 2003, 2013a; U.S. Department of Education, Office of Elementary and Secondary Education, Office of Safe and Healthy Students, 2013; U.S. Department of Education, Office of Postsecondary Education, 2011). Interviewees reported they partnered with these agencies when possible, but without requirements for periodic meetings or formal committees, as are established under the Maritime Transportation Security Act for the maritime industry (U.S. Coast Guard, 2013), engagement activities are dependent on institutional priorities.

The importance of IHE senior leadership engagement was noted in The U.S. Department of Homeland Security (2015) report noting that college and university presidents and chancellors are the single most important factor in campus resilience and emergency planning. However, interviewees from both institutions reported varying levels of participation of senior leadership. Vested interest falls with the leader of the institution and is the key to its success (U.S. Department of Homeland Security, 2015). Interviewee A13 summed this up very well: “It’s going to take a senior management commitment to say ‘this is what we’re about and to pay attention to it’ so one, it has to be an edict from above” (A13 Interview, May 17, 2016). Indicators of vested interest in campus preparedness should center on interest from senior campus administrators and senior faculty who participate in exercises and ensure exercise lessons learned are implemented in the campus security plan. Furthermore, having a robust exercise program which is in alignment with the HSEEP recommended exercise cycles and plan updates was a significant finding regarding improving invested attitudes and behaviors of faculty, staff, and administrators on campus security preparedness. Additionally, training provided by

engaging instructors who use everyday examples that people can connect with can increase stakeholder investment in preparedness.

The selection of vested interest theory as the theoretical framework for this study has proven to be extremely relevant in predicting behavior that will improve overall security at IHEs (Miller et al., 2013). IHEs that have experienced TVIs first hand are intrinsically more vested in security preparedness based on the impacts to the IHE and the significant recovery needed by administrators, staff, faculty, and students.

This study bolsters much of the existing literature regarding negligible funding and apathy regarding security preparedness, but it also contributes new information regarding hindrances (i.e., barriers), best practices, and vested interests to improving security preparedness. Furthermore, based on recommendations gleaned from the literature, my data collection, and my own professional experience, I provide below many recommendations to enhance security preparedness at IHEs.

### **Implications**

The theoretical implications of this study validated that vested theory is an appropriate research theory for IHE security preparedness. Major stakeholders that are impacted by this study are federal agencies, IHEs (including all campus personnel), and local IHE partners. Using the triangulation method of data analysis of site documentation, observations and interviews, I have gleaned a multitude of insightful recommendations, best practices, and vested interests, as well as identified significant hindrances. Below is a list of recommendations designed to improve campus security preparedness.

## **Recommendations Regarding Oversight, Guidance, and Funding**

1. A Congressional review should be initiated to determine if moving oversight responsibility to another federal entity, such as the Federal Emergency Management Agency, would improve student safety.
2. The Department of Education or Congress should consider proposing legislation, similar to the Maritime Transportation Security Act (MTSA) of 2002, mandating IHE Security Committees, establishing exercise requirements with oversight from FEMA, and adding an IHE security specialist at each institution in the country, either private or public, regardless of the size. The chair of the IHE Security Committee would be either the president or chancellor of the IHE. This recommendation is in alignment with the HSAAC report, which noted the single most important element in campus security is the president or chancellor (U.S. Department of Homeland Security, 2015). Presidents and chancellors would be required to submit an annual report on campus security preparedness to FEMA, which would review, and submit a report to Congress annually.
3. The Department of Education should recommend legislation to establish an IHE Security Grant Program, similar to the Port Security Grant Program under the MTSA, that provides funding based on risk to IHEs for security preparedness improvements and annual training.
4. The U.S. Department of Education or other agency should establish one overall IHE security guidebook. FEMA would be the best fit for a federal agency to accomplish this task given its work with Disaster Resistant University Program and HSEEP oversight. The creation of a consolidated campus security guidebook would be extremely beneficial to campus security preparedness.

**Recommendations for IHEs**

1. IHEs should apply for accreditation of its campus security program through IACLEA or CALEA. Accreditation of the campus security program provides third party oversight by security planning professionals and greater credibility for student safety. The IACLEA accreditation utilizes 210 standards in collaboration with numerous state law enforcement accreditation agencies.
2. IHEs should have a dedicated campus security preparedness specialist that focuses on security plan development, outreach with campus stakeholders, and local emergency responders. The campus security specialist should implement the various phases of exercise develop according to HSEEP guidelines.
3. IHEs should follow HSEEP guidance, which includes developing a five year campus security exercise plan that maximizes participation from administrators, staff, faculty, and students.
4. IHEs should follow the ICS protocols that link with local, state, and federal first responders. The president or chancellor should receive Incident Commander training and participate in campus security exercises.
5. IHEs should require all campus personnel (administrators, faculty, staff, and students) to register for an emergency notification system. All who register must provide a phone number.
6. IHEs should establish a safety committee, with membership from administration, staff, faculty, and students to review after action reports, determine priorities based on risk, and make recommendations for funding to senior leadership.

7. IHEs should partner with local community stakeholders such as police, fire, EMS, hospitals, etc. to use all available resources for the campus security plan.
8. IHEs should not rely on a single marketing source to advertise training. Publish information about trainings in campus newspapers (online or print), but also have senior leadership (e.g., president, chancellor, provost, deans, department chairs, etc.) send mass email to their respective populations advertising training and emphasizing importance of training. Research demonstrates modeling the way from senior leadership improves investment in security preparedness.
9. IHEs should invest in smart classroom emergency notification systems so that the proper authorities can be notified immediately in the event of an emergency in the classroom.
10. Emergency managers at IHEs should consider joining the University and College Caucus of International Association of Emergency Managers to stay abreast in their area of expertise.
11. IHEs should register with the list serve for Oregon Disaster Resistant University <https://lists.uoregon.edu/mailman/listinfo/dru>. Oregon University has taken the lead as a Disaster Resistant University to share information among other institutions with the same certification on campus emergency management and business continuity.

### **Recommendations Regarding Training**

1. Training should be conducted by experts in the field. For instance, the national training program, Advanced Law Enforcement Rapid Response Training (ALERRT), is an excellent resource to train law enforcement and emergency management professionals in security preparedness as well as provides certification so that these individuals can train the general campus population.

2. IHE senior leadership (e.g., chancellors, provosts, presidents, vice presidents, deans, and assistant deans) should complete FEMA's online course, *IS-360 Preparing for TVI incidents: A guide for schools, higher education, and houses of worship*.
3. All new campus personnel (administrators, faculty, staff, and students) should be required to complete campus preparedness security training. Employment and/or enrollment should be contingent upon completion of this training.
4. Established campus personnel should be required to complete a brief refresher course (online or in person) annually. Salaries and/or release of grades could be used as a tool for gaining compliance.
5. Campus personnel participating in a training should be instructed on the security plan updates before an exercise to maximize the learning potential.
6. Training should be multifaceted, targeted to each audience, effective, and efficient. The participants will remember it and be less resentful at having been required to do something
7. Trainings should be offered at multiple times, dates, and locations to accommodate a multitude of busy schedules.
8. Do not overdo training! Too much will be exhausting for everyone involved and lead to over saturation, boredom, and further apathy.
9. Inquire whether campus law enforcement officials are eligible to apply for funding for active shooter training under the new POLICE Act of 2016.

### **Limitations**

Several limitations were identified in this research study. First, I encountered difficulty accessing targeted interviewees during the scheduled data collection period at the end of the

spring term and beginning of the summer term. Several interviewee targets' schedules were too full to allow for an interview and others were not available via email as they were not teaching during the summer term. Additionally, I was unable to collect observation data for Alpha Institution, as no exercise was scheduled during my data collection phase. Lack of this observation data may have impacted a thorough triangulation of the data.

Purposeful sampling identified institutions from the literature review meeting metrics of IHEs with very proactive campus security programs. Consequently, institutions with very little focus on campus security preparedness were not represented in the study. An examination of such an institution could identify additional hindrances, recommendations, best practices, vested interests, or something entirely new. Community colleges were not included as part of the research study which could also have unique campus security issues and perspectives.

### **Recommendations for Future Research**

Additional qualitative case studies are recommended to further contribute to the body of knowledge regarding security at IHEs. The following is a list of topics recommended for future research:

1. Case studies using the same framework of this study, but that include community colleges and IHEs in different locales (e.g., West Coast, Midwest).
2. Case studies using the same framework of this study, but at IHEs with a lesser emphasis on security than what was found with Alpha and Bravo Institutions
3. Examine the relationship or effect of a robust and proactive mental health and/or counseling program and the incidence of TVIs on campus?
4. Would more guns on campus deter TVIs? Should anyone with a gun permit, other than law enforcement, be allowed to carry a gun on campus?



5. What has Virginia Tech, or other IHE that has suffered a mass active shooter event, done to recover and improve security preparedness on campus?
6. A legal analysis of the U.S. Department of Education's authority to hold IHEs accountable for minimum 34 CFR 688.46 requirements would also contribute to the research. Analyze what fines were issued to Virginia Tech and why. Why were the fines overturned? Is the U.S. Department of Education's authority to penalize a non-compliant IHE too weak, or were other forces at play?
7. Would FEMA's Training and Education Division be the best fit as a center for IHE TVI preparedness? Or would it be better for oversight to rest at FEMA's Regional Offices?

### **Summary**

A thorough review of the literature revealed inconsistent and often inadequate security preparedness for TVIs at IHEs. This is not surprising given the lack of federal or state requirements to do so. The aim of this study was to identify barriers to and best practices for improving security preparedness for TVIs at IHEs. Data collection consisted of site documentation review, observation of an exercise, and interviews with campus personnel. I identified four themes from the data with regard to campus security preparedness: hindrances, recommendations, best practices, and vested interests. The major barriers to improving security preparedness were lack of resource funding for dedicated preparedness staff, security planning and exercises; apathy regarding campus security preparedness by administrators, staff, faculty, and students; multiple federal security preparedness guides with no clear directive of which one should be used; and the lack of federal or state requirements for robust security planning and exercises. Major recommendations identified from the data include increased funding for

security preparedness training, planning, and exercises; IHE senior leadership must model the way; and the transfer of IHE campus security preparedness oversight from DOE to FEMA.

The big question is would you want your loved ones to attend or work at an IHE with a weak security preparedness program? TVIs are no longer rare and shocking. During this research study, the number and severity of active shooter events in numerous locations in the U.S. and worldwide became so overwhelming I stopped looking into each one. That was until September 28, 2016, when a 14-year-old child gunned down a teacher and three young children playing outside at recess at an elementary school near my hometown in South Carolina. The school had conducted an active shooter drill not two days before the incident. If not for that security training and the heroism of a nearby volunteer fire fighter who tackled the shooter, the number of injured or dead would likely be much higher. It is no longer a matter of if, but when you or a loved one may be faced with such a scenario. Thinking it cannot happen to you or hoping things work out are not strategies for success. It is not sufficient to say security preparedness is important. Building vested interest and committed attitudes is a top down approach. Leadership must take proactive steps and make stakeholders engaged and accountable, with or without federal mandates. We owe our students, faculty, and staff the due diligence to ensure IHEs can respond successfully to TVIs.

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## **APPENDIX A: Dissertation Timeline**

Submit chapters 1-3 to the research consultant	01Nov15
Edit, make suggestions, return Chapters 1- 3(allow 2 weeks)	
Make revisions and resubmit to chair	
Provide Chair with Most Recent Manuscript (Chapters 1-3)	01Dec15
Edit, make suggestions, return (allow 2 weeks)	
Submit chapters 1-3 to committee	18Dec15
Edit, make suggestions, return Chapters 1- 3(allow 2 weeks)	
Make revisions and resubmit	
Approve to send to research consultant or recycle above process	
<b>EDUC 989 Proposal, Spring Term (Semester 1)</b>	
Approve for proposal defense or make additional edits	10Jan16
Submit materials to committee for proposal defense (15 minute Power Point presentation via GoTo Meeting application), with the following slides: Introduction, Abstract, Literature Review, Data Collection, etc.	10Jan16
Proposal defense	14Jan16
Submit IRB application	15Jan16
Wait for IRB approval/ suggested revisions (allow at least 1 month)	15Feb16
Execute research/ Collect Data at Bravo School	15Feb-15Apr16
Execute research/Collect Data at Alpha School	15Mar-01Jun16
<b>EDUC 989 Data Collection, Summer Term (Semester 2)</b>	
Data Analysis	01 June - 01 Aug 16
Submit chapter 4	01Sep16
Edit, make suggestions, return Chapter 4(allow 2 weeks)	
Make revisions and resubmit	
Approve to send to committee or recycle above process	
Submit chapter 5	15Aug16
Edit, make suggestions, return Chapter 5 (allow 2 weeks)	
Make revisions and resubmit	
Approve to send to committee or recycle above process	

**EDUC 990 Defense, Fall Term**

Submit chapters 1-5 to committee	01Sep16
Edit, make suggestions, return Chapters 1- 5(allow 2 weeks)	
Make revisions and resubmit	
Approve to send to research consultant or recycle above process	
Submit chapters 1-5 to the research consultant	10Sep16
Edit, make suggestions, return Chapters 1- 5 (allow 2 weeks)	
Make revisions and resubmit to chair	
Approve for editing or make additional edits	
Send to Editor (allow at least 1 month)	17Sep16
Make all edits suggested by the editor and resubmit to chair	
Approve for defense or make additional edits	10Oct16
Submit materials to committee and other LU staff needed for defense	5Oct16
Dissertation Defense	17Oct16

## APPENDIX B: Open Ended Interview Questions

### Dean or Assistant Dean of Student Affairs Questions

1. Does your institution have a regular program for conducting campus preparedness exercises in accordance with the federal agency guidance (*links to research question (a)*)?
2. What is your role on campus regarding an active shooter incident and the institution security plan (*links to research question (b)*)?
3. Have you ever participated in an active shooter exercise or training (*links to research question (b)*)?
4. What are best practices you have observed from campus active shooter training or exercises (*links to research question (c)*)?
5. What do you recommend to motivate students, staff, or faculty to be more invested in active shooter preparedness (*links to research question (c)*)?
6. Do you have any recommended best practices for campus security preparedness (*links to research question (c)*)?
7. How can the attitudes and behaviors of administrators consistently be focused on investing in active shooter overall campus preparedness (*links to research question (d)*)?
8. Would new legislation that centralized federal agency IHE TVI security oversight improve campus security plans and exercises (*links to research question (e)*)?
9. Is there anything else you would like to add regarding active student preparedness (*links to research questions (a-e)*)?

### **Campus Emergency Managers and Senior Police Representative Questions**

1. How does your institution conduct faculty and administrative staff training on the security plan (*links to research question (a)*)?
2. How does your institution involve multiple partners (local emergency management, local responders) in the security planning process (*links to research question (a)*)?
3. Does your institution have a regular program for conducting campus preparedness exercises (*links to research question (a)*)?
4. How does your institution measure the effectiveness of security plan exercises (*links to research question (b)*)?
5. How does your institution incorporate after action report lessons learned into updates to the campus security plan (*links to research question (a)*)?
6. How is ICS incorporated in the security planning process and what are any best practices (*links to research questions (a-c)*)?
7. What would you recommend to motivate administrators to be more interested in security preparedness (*links to research question (d)*)?
8. How can the attitudes and behaviors of students, faculty, staff, and administrators consistently be focused on investing in active shooter overall campus preparedness (*links to research question (d)*)?
9. Would new legislation that centralized federal agency IHE TVI security oversight improve resource support improve campus preparedness (*links to research question (e)*)?
10. Is there anything else you would like to add regarding active student preparedness (*links to research questions (a-e)*)?



**APPENDIX C: Interview Protocol**

*Interview Protocol Project: Campus Security Preparedness*

Time of interview:

Date:

Place:

Interviewer:

Interviewee:

Position of the Interviewee:

Questions: (See Appendix B for questions per type of interview)

**APPENDIX D: Observation Record**

## Exercise or Security Planning Meeting Observation Record

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Name: \_\_\_\_\_

Date and Time: \_\_\_\_\_

Subject being Observed: \_\_\_\_\_

Observations of events and behaviors:

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Comments/Summary:

## APPENDIX E: Liberty University IRB Permission Template

*[This permission request template is provided for your convenience. Recommended information is included in italicized brackets. Please select the desired information, remove the italics and brackets, and remove the information that does not apply to your research. It may also be necessary to highlight the entire document when you have finished making your changes and select a font so that the font will be uniform throughout.]*

Date: *[Insert Date]*

*[Recipient]*

*[Title]*

*[Company]*

*[Address 1]*

*[Address 2]*

*[Address 3]*

Dear *[Recipient]*:

As a graduate student in the *[department]* at Liberty University, I am conducting research as part of the requirements for a *[n]* *[degree]*. The title of my research project is *[title]* and the purpose of my research is *[purpose]*.

I am writing to request your permission to *[conduct my research in/at [school district/school name, church name, business name, organization name, etc.]]**[utilize your membership list to recruit participants for my research]]**[contact members of your staff/church/organization to invite them to participate in my research study]]**[access and utilize student/staff test data/records]*. *[Select the appropriate phrase.]*

*[Select the appropriate sentence.]* Participants will be asked to *[go to [webpage] and click on the link provided/complete the attached survey/contact me to schedule an interview/etc.]*. *[or]* The data will be used to *[include explanation here]*. Participants will be

presented with informed consent information prior to participating. Taking part in this study is completely voluntary, and participants are welcome to discontinue participation at any time.

Thank you for considering my request. If you choose to grant permission, *[please provide a signed statement on approved letterhead indicating your approval][or][respond by email to [researcher's email address]. [Select the appropriate clause. For education research, school/district permission will need to be on approved letterhead with the appropriate signature(s)].*

Sincerely,

*[Your Name]*

*[Your Title]*

**APPENDIX F: Liberty University IRB Approval****LIBERTY UNIVERSITY**  
INSTITUTIONAL REVIEW BOARD

March 9, 2016

Tim A. Gunter

IRB Approval 2417.030916: Qualitative Collective Case Study of Mass Casualty  
Preparedness in Higher Education Institutions

Dear Tim,

We are pleased to inform you that your study has been approved by the Liberty IRB. This approval is extended to you for one year from the date provided above with your protocol number. If data collection proceeds past one year, or if you make changes in the methodology as it pertains to human subjects, you must submit an appropriate update form to the IRB. The forms for these cases were attached to your approval email.

Thank you for your cooperation with the IRB, and we wish you well with your research project.

Sincerely,

G. Michele Baker, MA, CIP  
*Administrative Chair of Institutional Research*  
The Graduate School

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UNIVERSITY

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